U.S. Department of Justice

Office of Legislative Affairs

Office of the Assistant Attorney General

Washington, D.C. 20530

MAR 20 2012

The Honorable Patrick J. Leahy
Chairman
Committee on the Judiciary
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

The DNA Analysis Backlog Elimination Act of 2000 as amended directs the Attorney General to submit a report to Congress no later than 90 days at the end of each Fiscal Year that includes: (1) the aggregate amount of Debbie Smith DNA Backlog Grant Program grants made to each state or unit of local government for that Fiscal Year; (2) a summary of the information provided by states or units of local government receiving such grants under this section; and (3) a description of the priorities and plan for awarding grants among eligible states and units of local government, and how such plan will ensure the effective use of DNA technology to solve crimes and protect public safety. We apologize for our delay in submitting the attached report for Fiscal Year 2011.

The Office of Justice Programs' National Institute of Justice (NIJ) has primary responsibility for the administration of assistance programs related to DNA and forensics. NIJ has assembled the enclosed Report and accompanying attachments, which provide the information required by the Act.

As shown in the Report, the DNA funding authorized for FY 2011 was dispersed within the broad categories shown in the table below. The Report addresses each of these categories in detail. The funding for each solicitation/program/expenditure is broken out for each of the broad categories in Tables 1-7. Each table contains the solicitation name, the number of awards made, and total funding provided. Each solicitation/program is described and reference is made to an Attachment which contains the solicitation (which provides the plan and priorities for each program), the listing of all awards made (detailing the agency name, award number, and funding provided), and the abstracts submitted for each award.

DNA Funding for FY 2011

Category	FY 11 Funds	FY 10 Carryover Funds
Awards to states and units of local government	$93,062,929	
Discretionary awards for forensic applied and basic research and development	$14,039,193	$1,948,044
Discretionary awards for training and technical assistance	$10,629,156	$2,573,631
Federal Partnerships	$256,559	
Social Science Research on Forensic Science	$999,391	
Dissemination, Outreach, and Program Support	$2,839,428	$ 6,076
Congressional Reprogramming (S&E/OAAM 3712 Base requirements)	$2,749,988	
TOTALS	**$124,320,085**	**$4,527,751**

A total of $759,255 in FY 2011 funds were not obligated.

The Report also includes information on the distribution of the $4,599,676 in FY 2010 COPS DNA/Forensics carry-over funds. Details of how these funds were allocated can be found in Tables 1-6. A total of $71,925 in FY 2010 carryover funds were not obligated in FY 2011.

We hope you will find this report useful and informative. Please do not hesitate to contact this office if we may provide additional assistance regarding this or any other matter.

Sincerely,

Ronald Weich
Assistant Attorney General

Enclosure

U.S. Department of Justice

Office of Legislative Affairs

Office of the Assistant Attorney General

Washington, D.C. 20530

MAR 20 2012

The Honorable John Conyers, Jr.
Ranking Minority Member
Committee on the Judiciary
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Conyers:

The DNA Analysis Backlog Elimination Act of 2000 as amended directs the Attorney General to submit a report to Congress no later than 90 days at the end of each Fiscal Year that includes: (1) the aggregate amount of Debbie Smith DNA Backlog Grant Program grants made to each state or unit of local government for that Fiscal Year; (2) a summary of the information provided by states or units of local government receiving such grants under this section; and (3) a description of the priorities and plan for awarding grants among eligible states and units of local government, and how such plan will ensure the effective use of DNA technology to solve crimes and protect public safety. We apologize for our delay in submitting the attached report for Fiscal Year 2011.

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Ronald Weich
Assistant Attorney General

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U.S. Department of Justice

Office of Legislative Affairs

Office of the Assistant Attorney General

Washington, D.C. 20530

MAR 20 2012

The Honorable Lamar Smith
Chairman
Committee on the Judiciary
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

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Washington, D.C. 20530

MAR 20 2012

The Charles E. Grassley
Ranking Minority Member
Committee on the Judiciary
United States Senate
Washington, D.C. 20510

Dear Senator Grassley:

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Sincerely,

Ronald Weich
Assistant Attorney General

Enclosure

Table 1: Awards to states and units of local government

Category	Solicitation Name	Number of Awards	Total Award Amount
Formula awards to states and local units of government	FY 11 DNA Backlog Reduction Program (Attachments 1-3)	116	$88,707,086
Discretionary awards to states and units of local government	NIJ FY 11 Solving Cold Cases with DNA (Attachments 4-6)	11	$4,355,843
	Total awards to states and units of local government		**$93,062,929**

Formula awards to states and local units of government

NIJ released the FY 2011 DNA Backlog Reduction Program solicitation on April 5, 2011. This program furthers the Department's mission by offering an opportunity for States and units of local government with existing crime laboratories that conduct DNA analysis to handle, screen, and analyze forensic DNA casework samples and/or DNA database samples, as well as to improve forensic DNA and DNA database laboratories infrastructure and analysis capacity so that DNA samples can be processed efficiently and cost effectively. These improvements are critical to preventing future DNA backlogs and to helping the criminal justice system use the full potential of DNA technology**.** Information regarding the priorities and plan for awarding grants to States and units of local government through this program is provided in "Attachment 1: FY 2011 DNA Backlog Reduction Program Solicitation."

In FY 2011, NIJ made 116 awards totaling $88,707,086 to States and units of local government through the FY 2011 DNA Backlog Reduction Program solicitation. The aggregate amount of grants made to each State or unit of local government in FY 2011 is listed in "Attachment 2: FY 2011 DNA Backlog Reduction Program Grant Awards." Also, the program abstracts provided by each State and unit of local government which received grants through the FY 2011 DNA Backlog Reduction Program is provided in "Attachment 3: FY 2011 DNA Backlog Reduction Program Abstracts."

Discretionary awards to states and local units of government

NIJ released the FY 2011 Solving Cold Cases with DNA Program solicitation on January 7, 2011. This program furthers the Department's mission by offering assistance to States and units of local government to identify, review, and investigate Uniform Crime Report (UCR) Part 1 Violent Crime "cold cases" that have the potential to be solved through DNA analysis, and to locate and analyze biological evidence associated with these cases. Information regarding the priorities and plan for awarding grants to States and units of local government through this program is provided in "Attachment 4: FY 2011 Solving Cold Cases with DNA Program Solicitation."

In FY 2011, NIJ made 11 awards totaling $4,355,843 to States and units of local government through the FY 2011 Solving Cold Cases with DNA Program solicitation. The aggregate amount of grants made to each State or unit of local government in FY 2011 is listed in "Attachment 5: FY 2011 Solving Cold Cases with DNA Program Grant Awards." The program abstracts provided by each State and unit of local government which received a grant through the FY 2011 Solving Cold Cases with DNA Program is provided in "Attachment 6: FY 2011 Solving Cold Cases with DNA Program Abstracts."

Table 2 - Discretionary awards for forensic science applied research and development and basic scientific research

Solicitation Name	Number of Awards	FY 11 Funds	FY 10 Carryover Funds
NIJ FY 11 Applied Research and Development in Forensic Science for Criminal Justice Purposes (Attachments 7-9)	20	$7,387,850	$296,365
OIFS Continuation award (Attachments 10-11)	1	$139,732	
Strategic Approaches to Sexual Assault Kit (SAK) Evidence: An Action Research Project – Phase 1 (Attachments 12-14)	2		$378,076
Strategic Approaches to Sexual Assault Kit (SAK) Evidence: An Action Research Project – Phase 2 (Attachments 15-16)	2	$571,815	$549,999
NIJ FY 11 Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes (Attachments 17-19)	11	$5,939,796	$723,604
	TOTAL	**$14,039,193**	**$1,948,044**

Discretionary awards for forensic science research and development

FY 2011 Applied Research and Development in Forensic Science for Criminal Justice Purposes

NIJ released the FY 2011 Applied Research and Development in Forensic Science for Criminal Justice Purposes solicitation on January 5, 2011 (see Attachment 7). This solicitation sought proposals for applied research and development projects that would: (1) increase knowledge or understanding necessary to guide forensic science policy and practice, or (2) result in the production of useful materials, devices, systems, or methods that have the potential for forensic application. The intent of the Applied Research and Development in Forensic Science for Criminal Justice Purposes Program is to direct the findings of basic scientific research, research and development in broader scientific fields applicable to forensic science, and ongoing forensic science research toward the development of highly discriminating, accurate, reliable, cost-

effective, and rapid methods for the identification, analysis, and interpretation of physical evidence for criminal justice purposes.

In FY 2011, NIJ made 20 cooperative agreements totaling $7,387,850 through the FY 2011 Applied Research and Development in Forensic Science for Criminal Justice Purposes Program solicitation. The aggregate amount of grants made in FY 2011 is listed in "Attachment 8 – FY 2011 Applied R&D Awards." Also, the program abstracts provided by each grantee which received funding under the FY 2011 Applied Research and Development in Forensic Science for Criminal Justice Purposes Program is provided in "Attachment 9 – FY 2011 Applied R&D Abstracts."

Applied Research Continuation

NIJ awarded $139,732 in supplemental funding for FY 2011 to the Las Vegas Metropolitan Police Department to continue to support research to develop a robust and useful presumptive field identification system for methamphetamine, cocaine, marijuana, and possibly other controlled substances using Raman handheld detectors under cooperative agreement # 2010-DN-BX-K201. The FY 2011 funding for this award would allow them to complete their project. The amount of this cooperative agreement made in FY 2011 is listed in "Attachment 10 – FY 2011 Other OIFS R&D Awards." Also, the program abstract provided by the grantee which received funding under the FY 2011 OIFS Continuation Program is provided in "Attachment 11 – FY 2011 Other OIFS R&D Abstracts."

Sexual Assault Action Research Project

NIJ released the FY 2011 Strategic Approaches to Sexual Assault Kit (SAK) Evidence: An Action Research Project solicitation on October 27, 2010 (see attachment 12). The solicitation sought applications for funding to participate in an action research project designed for State and local jurisdictions that are struggling with large quantities of untested sexual assault kits. The purpose of this study is to understand the underlying nature of the problem and to identify effective and sustainable solutions.

NIJ made two awards under this solicitation, both of which were funded in two phases. The two sites combined received $378,076 of FY 2010 COPS DNA/Forensics carryover funds in the first phase (see attachment 13) and a total of $1,621,814 in the second phase (see attachment 15). The program abstracts can be found in attachments 14 and 16.

Discretionary awards for basic scientific research to support forensic science

NIJ released the FY 2011 Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes solicitation on January 12, 2011 (see Attachment 17). This solicitation sought proposals for funding basic scientific research in the physical, life, and cognitive sciences that is designed to increase the knowledge underlying forensic science disciplines intended for use in the criminal justice system. Basic scientific research proposals submitted to this solicitation were designed to lead to subsequent applied research and advanced technology developments in forensic science-related technologies intended for use in the criminal justice system, and/or new and improved crime laboratory functional capabilities that result in faster, more robust, more informative, less costly, or less labor-intensive identification, collection, preservation, and/or analysis of evidence.

In FY 2011, NIJ made 10 cooperative agreements totaling $5,939,796 and one outgoing reimbursable agreement totaling $355,000 through the FY 2011 Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes Program solicitation. The aggregate amount of grants made in FY 2011 is listed in "Attachment 18 – FY 2011 Basic R&D Awards." Also, the program abstracts provided by each grantee which received funding under the FY 2011 Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes Program is provided in "Attachment 19 – FY 2011 Basic R&D Abstracts."

Table 3 – Discretionary awards for training and technical assistance

Solicitation Name	Number of Awards	FY 11 Funds	FY 10 Carryover Funds
NIJ FY 11 Forensic Science Training Delivery and Research Program (Attachments 20-22)	9	$3,529,156	$1,079,000
NIJ FY 11 Forensic Science Technology Center of Excellence (Attachments 23-25)	1	$4,500000	$1,494,631
NIJ FY 11 The National Missing and Unidentified Persons System (NamUs) (Attachments 26-28)	1	$2,600,000	
	TOTAL	**$10,629,156**	**$2,573,631**

Forensic Science Training Delivery and Research Program

NIJ released the FY 2011 Forensic Science Training Delivery and Research Program solicitation on January 12, 2011 (see Attachment 20). The solicitation for FY 2011 sought proposals for funding to support forensic science education projects that will: (1) increase the number of no-cost educational opportunities for public crime laboratory personnel and practitioners in forensic science disciplines and provide forensic science training to other relevant criminal justice partners and professionals involved in treating victims of sexual assault, and (2) support targeted research of formal and informal forensic science training programs employed by the forensic science community at the State and local levels. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and justice, particularly at the State and local levels.

In FY 2011, NIJ made 9 awards totaling $4,608,156 to grantees through the FY 2011 Forensic Science Training Delivery and Research Program solicitation. The aggregate amount of grants made in FY 2011 is listed in "Attachment 21 – FY2011 Forensic Science Training Awards." Also, the program abstracts provided by each grantee which received grants through the FY 2011 can be found in Attachment 22.

Forensic Science Technology Center of Excellence

NIJ released the FY 2011 Forensic Science Technology Center of Excellence solicitation on January 3, 2011 (see Attachment 23). This program furthers the Department's mission by establishing and operating a Forensic Science Technology Center of Excellence (FTCoE) to support NIJ's research, development, testing and evaluation (RDT&E) process in all areas of forensic science, particularly at the State and local levels. The FTCoE will accomplish this goal by providing scientific and technical support to NIJ's research and development efforts; facilitating the demonstration, transfer, and adoption of appropriate technology into practice by crime laboratories, forensic service providers, law enforcement, and other criminal justice agencies; assisting in the development and dissemination of technology guidelines and standards; providing technology assistance, information, and support to the above law enforcement and other appropriate criminal justice agencies; and, granting access to resources for research, education and outreach to the forensic science and criminal justice communities. Information regarding the priorities and plan for awarding this grant through FTCoE program is provided in "Attachment 23: FY 2011 Forensic Science Technology Center of Excellence Solicitation."

In FY 2011, NIJ made one award totaling $5,994,631.00 to Research Triangle Institute International (RTI) through the FY 2011 Forensic Science Technology Center of Excellence solicitation. The amount of the grant made to RTI in FY 2011 is listed in "Attachment 24: FY 2011 Forensic Science Technology Center of Excellence Grant Award." Also, RTI's program abstract is provided in "Attachment 25: FY 2011 Forensic Science Technology Center of Excellence Abstract."

National Missing and Unidentified Persons System (NamUs)

NIJ released the FY 2011 National Missing and Unidentified Persons System (NamUs) on January 3, 2011. NamUs responds to the need to assist State and local law enforcement, medical examiners and coroners, allied professionals, and the general public with resolving missing and unidentified persons cases. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and justice, particularly at the State and local levels. Information regarding the priorities and plan for the operation and management of the NamUs program is provided in "Attachment 26: FY 2011 NamUs Program Solicitation."

Currently in the United States, thousands of people are searching for those who are missing. NamUs was developed to provide national assistance in this search, for those living and deceased, in hopes of resolving these cases. In FY 2011, NIJ made 1 award totaling $2,600,000 to the University of North Texas, Health Science Center (UNTHSC), as seen in "Attachment 27: FY 2011 NamUs Program Grant Award." UNTHSC will partner with NIJ to administer and manage NamUs, support ongoing NamUs programs, continue national outreach efforts, provide national assistance, and oversee the forensic services provided through NamUs; the program abstract for the UNTHSC is provided in "Attachment 28: FY 2011 NamUs Program Abstract."

Table 4 – Federal Partnerships

Federal Partner	Number of Awards	FY 11 Funds	FY 10 Carryover Funds
National Institute of Standards and Technology (NIST) Attachments 29-30)	1	$256,559	
Totals		**$256,559**	

FY 2011 Outgoing Reimbursable Agreement for Research and Development

In FY 2011, NIJ made one ongoing reimbursable agreement with the Department of Commerce National Institute of Standards and Technology (NIST). This agreement will fund continued efforts in the five areas of Project 1 from IAA #2010-DN-R-7121: (1) projects to aid compromised DNA analysis including mixture interpretation and low-level DNA, (2) projects to support better understanding of DNA variation, (3) resources and training materials for state and local laboratories, (4) work to assist other NIJ-funded projects, and (5) examination of rapid DNA processing to aid potential biometric applications. The amount of this reimbursable agreement contributed by the FY 2011 DNA Initiative is $256,550, and this is listed in "Attachment 29– FY 2011 Federal Partners." The project plan provided by NIST is provided in "Attachment 30 – FY 2011 Federal Partner Abstract."

Table 5 – Social Science Research on Forensics

Category	Solicitation Name	Number of Awards	Total Award Amount
Social Science Research on Forensics (Attachments 31-33)	FY 2011 Social Science Research on Forensic Science	4	$999,391

Social Science Research in Forensics

NIJ released the FY 2011 Social Science Research on Forensic Science solicitation on November 22, 2010 (see attachment 31). The solicitation sought applications for funding for social science research that will improve public safety and advance the administration of justice by helping to improve the use of forensic evidence in the criminal justice system and ensure the integrity of forensic processes. This year's solicitation requested that applicants focus on one or more of the research questions identified by a recently completed study that examined the role and impact of forensic evidence in the criminal justice process.

In FY11, NIJ made four awards using DNA funds under this solicitation. The aggregate amount of grants made in FY 2011 is listed in "Attachment 32 – FY 2011 Social Science Research on Forensic Science Awards." Also, the program abstracts provided by each grantee which received DNA funding under the this solicitation is provided in "Attachment 33 – FY 2011 Social Science Research on Forensic Science Abstracts."

Table 6 – Dissemination, Outreach, and Program Support

Category	FY 11 Funds	FY 10 Carryover Funds
Dissemination/Outreach/Program Support (Attachment 34)	$2,839,428	$6,076
Totals	**$2,839,428**	**$6,076**

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding for the FY 2011 DNA Backlog Reduction Program. This single solicitation combines the DNA Backlog Reduction Program and the Convicted Offender and/or Arrestee DNA Backlog Reduction Programs offered in the past into a single program. This program furthers the Department's mission by funding States and units of local government with existing crime laboratories that conduct DNA analysis to process, record, screen, and analyze forensic DNA and/or DNA database samples, and to increase the capacity of public forensic DNA and DNA database laboratories to process more DNA samples, thereby helping to reduce the number of forensic DNA and DNA database samples awaiting analysis.

Solicitation:
FY 2011 DNA Backlog Reduction Program

Eligibility

Eligible applicants are State and units of local government that meet the eligibility requirements detailed on page 3.

Deadline

Registration for this funding opportunity is required prior to application submission, by selecting the "Apply Online" button associated with the solicitation title in OJP's Grants Management System (GMS). (See "How to Apply", page 14.) All registrations and applications are due by 11:59 p.m. eastern time on May 19, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants Management System Support Hotline at 888-549-9901, option 3 or via e-mail to GMS.HelpDesk@usdoj.gov. The GMS Support Hotline hours of operation are Monday-Friday from 6:00 am to midnight eastern time, except for Federal holidays.

For assistance with any other requirement of this solicitation, contact Mark Nelson, Senior Program Manager, at 202–616–1960 or by e-mail to Mark.S.Nelson@usdoj.gov, or Minh Nguyen, Program Manager, at 202–305–2664 or by e-mail to Minh.Nguyen@usdoj.gov.

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FY 2011 DNA Backlog Reduction Program
CFDA No. 16.741

Overview

The goal of NIJ's FY 2011 DNA Backlog Reduction Program is to assist eligible States and units of local government to process, record, screen, and analyze forensic DNA and/or DNA database samples, and to increase the capacity of public forensic DNA and DNA database laboratories to process more DNA samples, thereby helping to reduce the number of forensic DNA and DNA database samples awaiting analysis.

Under this FY 2011 program, in general, eligible applicants are given the opportunity, based on their individual needs, to determine what portion of their anticipated funding should be used for capacity building purposes and what portion should be used for analysis of forensic DNA and/or DNA database samples. Supplemental funding anticipated to be made available under this program to applicants that operate State-designated DNA database laboratories is expected to be used to meet unfunded needs of the DNA database laboratory, but these supplemental funds may be used for other allowable purposes (e.g., forensic DNA sample analysis or laboratory capacity enhancement), should the needs of the DNA database laboratory be satisfied by other means.

All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law. As of the posting date of this solicitation, no full-year appropriation for the Department of Justice for FY 2011 has been enacted. No final decision as to the amount of funds, if any, to be provided under this FY 2011 program should be expected until after a full-year appropriation is enacted. Applicants are strongly encouraged to check for updates to this solicitation prior to submitting applications.

Deadlines: Registration and Application

Registration for this funding opportunity is required prior to submission. The deadline to register in GMS is 11:59 p.m. eastern time on May 19, 2011 and the deadline to apply for funding under this announcement is 11:59 p.m. eastern time on May 19, 2011. Please see the “How to Apply” section on page 15 for more details.

Eligibility

Eligible applicants are States[1] and units of local government with existing crime laboratories that conduct forensic DNA and/or DNA database sample analysis and:

- Participate in external audits, not less than once every two years, to demonstrate compliance with the requirements of the Quality Assurance Standards established by the Director of the Federal Bureau of Investigation.
- Are accredited by a nonprofit professional organization actively involved in forensic science that is nationally recognized within the forensic science community.
- Participate in the National DNA Index System (NDIS) or have an agreement with an NDIS participating laboratory to upload their data.

Program-Specific Information—FY 2011 DNA Backlog Reduction Program

Depending on what may be provided in terms of the FY 2011 appropriation for the Department of Justice, NIJ expects to award up to $90 million under the FY 2011 DNA Database Reduction Program to States and units of local government that operate forensic DNA laboratories and/or State-designated DNA database laboratories.

All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.

A. Estimated Amounts for Awards to State and Local Applicants That Operate DNA Laboratories

Up to $80 million of these FY 2011 program funds are expected to be awarded to States and units of local government that operate DNA laboratories. In general, the aggregate amount of FY 2011 funds expected to be awarded to eligible applicants from each State (including the State and its units of local government) will be based on:

1. The number of Uniform Crime Report (UCR), Part 1 Violent Crimes[2] reported to the FBI for 2009 (the most current year for which such data are available).[3]
2. A minimum aggregate amount available to eligible applicants from each State. For FY 2011, if the aggregate amount, based on the number of UCR, Part 1 Violent Crimes reported to the FBI, is less than $150,000, NIJ expects to increase that aggregate amount to $150,000.

[1] For purposes of this announcement, the term "State" includes the District of Columbia and the Commonwealth of Puerto Rico. The U.S. territories of American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Virgin Islands also may be eligible for funding. Please contact NIJ at 202-616-1960 for additional information, including information on allocation of funds.

[2] UCR Part 1 Violent Crimes statistics are published on the FBI Web site at www2.fbi.gov/ucr/cius2009/data/table_05.html.

[3] Although violent crime cases are expected to be the priority for forensic casework conducted under this solicitation, States and units of local government may use FY 2011 program funds to process, record, screen, and analyze any criminal forensic DNA sample awaiting analysis.

The number of State and local applicants also may affect funding allocations.

See "Appendix A: Estimated Aggregate Amounts for Awards to State and Local Applicants that Operate DNA Laboratories, by State – FY 2011" for a chart, by State, of estimated aggregate amounts for awards to public DNA laboratories in each State.

If there is more than one public DNA laboratory within a State, funds generally are expected to be allocated among the eligible applicants on the basis of UCR, Part 1 Violent Crimes in a fashion that ensures that the total funding requested by all applicant agencies from each State does not exceed the aggregate level listed in "Appendix A: Estimated Aggregate Amounts for Awards to State and Local Applicants that Operate DNA Laboratories, by State – FY 2011". NIJ encourages applicants from States with multiple eligible applicants to coordinate among themselves to set a minimum level of funding for each applicant so that, if practicable, each eligible applicant within the State receives a minimum of $100,000, regardless of whether its proportion of available funding based on UCR Part 1 Violent Crimes rises to that level. NIJ will provide each State with more than one eligible applicant with a spreadsheet that will assist in properly allocating the estimated funding among the eligible applicants. The State should complete the spreadsheet and submit it to the appropriate NIJ Program Manager for review. Upon NIJ approval, eligible applicants within the State may then apply for their portion of the estimated funds.

B. Estimated Supplemental Amounts for Awards to Applicants that Operate a State-Designated DNA Database Laboratory

NIJ expects to award a total of up to $10 million of supplemental funding under the FY 2011 DNA Backlog Reduction Program for the primary purpose of supporting State-designated database laboratories. Only States and units of local government that operate State-designated DNA database laboratories may apply for these supplemental funds. In general, the estimated funding allocated to each eligible State is based on the number of convicted offender/arrestee profiles uploaded to NDIS by each State as posted on the FBI CODIS Web site[4] on March 8, 2011 (data as of January 2011), with a minimum of $50,000. See "Appendix B: Estimated Supplemental Amounts for Awards to Applicants that Operate a State-Designated DNA Database Laboratory, by State – FY 2011" for a chart of the estimated funds available.

C. Restrictions on Access to Award Funds in Certain Circumstances

Awards to eligible applicants with unexpended funds from prior DNA Backlog Reduction Program awards for the analysis of backlogged forensic DNA casework samples[5] will be subject to a special condition that will prevent (until the condition is lifted by NIJ) obligation, expenditure, or drawdown of any funds awarded under this FY 2011 program for either:

- Expenses of supplies for in-house forensic DNA casework analyses, or
- Expenses of obtaining, through an accredited DNA laboratory**,** DNA analyses of forensic casework samples.

[4] The number of offender profiles uploaded to NDIS is published by the FBI at www.fbi.gov/about-us/lab/codis/ndis-statistics .
[5] FY 2008 – FY 2010 DNA Backlog Reduction Program award funds directly associated with DNA casework analysis.

D. Specific Program Requirements

The following requirements apply to DNA analyses conducted under this FY 2011 program:

- Applicants must enter all eligible DNA profiles obtained with funding from this program into CODIS and, where applicable, upload these profiles into NDIS.
- Applicants must follow NDIS DNA Data Acceptance Standards for all profiles uploaded to NDIS.
- Applicants must maintain DNA analyses and resulting profiles conducted under this program pursuant to all applicable Federal privacy requirements, including those described in 42 U.S.C. § 14132(b)(3).

E. Length of awards:

The project period for awards under this FY 2011 program is expected to be October 1, 2011 to March 31, 2013. Applicants should be aware that the total period for an award, including one that receives a project period extension, ordinarily will not exceed 3 years.

Budget Information

A. Specific Requirements for Applicants That Propose to Use Funds for In-House Analysis of Forensic DNA Cases

In general, budget requests for in-house processing, recording, screening, and testing of forensic DNA cases will be reviewed on the basis of the estimated number of forensic DNA cases that will be analyzed during the 18-month project period of this program (October 1, 2011, to March 31, 2013) using the Federal funding requested under this FY 2011 program.

States or units of local government that are awarded funds for in-house laboratory processing, recording, screening, and DNA analysis of forensic DNA cases will be expected to document the number of forensic DNA cases analyzed during the reporting period (see “Performance Measures” section below). **The expected total number of forensic DNA cases analyzed in-house during the entire project period should be based on a per-case estimate of no more than $1,000 in costs for overtime and supplies.**

Example: An FY 2011 award with <u>$N allocated specifically to overtime and supplies for in-house processing of forensic DNA casework</u> in the proposed budget would be expected to process N/1,000 cases over the course of the project period. Therefore, if N = $20,000, a minimum of 20 cases would be expected to be analyzed in-house during the project period.

B. Specific Requirements for Applicants That Propose to Use Funds for In-House DNA Database Sample Analysis

In general, budget requests for in-house processing, recording and testing of DNA database samples will be reviewed on the basis of the estimated number of samples that will be analyzed during the 18-month project period of this program (October 1, 2011, to March 31, 2013) using the Federal funding requested under this FY 2011 program.

DNA database laboratories that are awarded funds for in-house laboratory processing, recording, and analysis of DNA database samples will be expected to document the number of DNA database samples analyzed during the reporting period (see "Performance Measures" section below). **The expected total number of DNA database samples analyzed in-house during the entire project period should be based on actual cost estimates to analyze the sample and upload the profile to NDIS. Requests may not exceed $40 per sample when averaged over all DNA database samples to be processed.**

C. Permissible Uses of Funds—For Forensic DNA laboratories and DNA Database Laboratories

Under this FY 2011 program, in general, eligible applicants are given the opportunity, based on their individual needs, to determine what portion of their anticipated funding should be used for capacity building purposes and what portion should be used for analysis of forensic DNA and/or DNA database samples. Supplemental funding anticipated to be made available under this program to applicants that operate State-designated DNA database laboratories is expected to be used to meet unfunded needs of the DNA database laboratory, but these supplemental funds may be used for other allowable purposes (e.g., forensic DNA sample analysis or laboratory capacity enhancement), should the needs of the DNA database laboratory be satisfied by other means.

Applicant agencies that operate both a forensic DNA laboratory (or laboratories) and a State-designated DNA database laboratory should submit a single application that reflects both their estimated portion of the funds from "Appendix A: Estimated Aggregate Amounts for Awards to State and Local Applicants that Operate DNA Laboratories, by State – FY 2011" and their estimated portion of the supplemental funds from "Appendix B: Estimated Supplemental Amounts for Awards to Applicants that Operate a State-Designated DNA Database Laboratory, by State – FY 2011".

Permissible uses of funds provided under this program may include:

1. **Salary and benefits of additional laboratory employees:** Funds may be used to hire **additional** full-time or part-time laboratory employees to directly process, record, screen, and/or analyze forensic DNA and/or DNA database samples. Funds may also be used to hire **additional** full-time or part-time laboratory employees to directly perform capacity enhancement-specific activities, such as validating new DNA analysis technologies for the forensic DNA laboratory and/or the laboratory responsible for analysis of DNA database samples. Funds are subject to applicable restrictions on supplanting[6] and may be used to retain full-time or part-time laboratory employees for the above purposes if there are no other funding sources allocated for the retention of

[6] See OJP Financial Guide, Part II, Chapter 3, Standards for Financial Management Systems.

such personnel (e.g., personnel acquired through previous Federal assistance). Matching funds are not required.

Note: NIJ makes no assurance that funds will be available for this purpose in future award announcements.

2. **Overtime for existing laboratory staff:** Funds may be used to pay overtime for existing laboratory employees to directly process, record, screen, and/or analyze forensic DNA and/or DNA database samples. Funds may also be used to pay overtime for existing laboratory employees to directly perform capacity enhancement-specific activities such as validating new DNA analysis technologies for the forensic DNA or DNA database laboratory. Any payments for overtime must be in accordance with the applicable provisions of the OJP Financial Guide, available at www.ojp.usdoj.gov/financialguide/.

3. **Training:** Funds may be used for appropriate training of forensic DNA and DNA database laboratory personnel.

   - **Existing members of the DNA Unit:** "Appropriate training" includes internal or external training, continuing education/training opportunities, and/or applicable graduate-level coursework **that is directly related to the applicant's forensic DNA or DNA database laboratory operation and is for members of the DNA laboratory**. (Reasonable travel expenses directly associated with training may be paid in accordance with the provisions of the OJP Financial Guide.)

     Funds used towards travel and registration expenses for appropriate continuing education/training opportunities that are associated with professional meetings and conferences (including workshops provided at such meetings and conferences) are limited to no more than 5 percent of the total award. Funds used towards travel expenses, registration fees, and tuition and required learning aids (e.g., textbooks) for appropriate training and continuing education opportunities that are not associated with professional meetings and conferences are not subject to the 5-percent cap. In general, funds used for training are intended to aid existing members of the DNA laboratory to meet continuing education requirements mandated in the DNA Quality Assurance Standards established by the Director of the Federal Bureau of Investigation.

   - **New members of the DNA Unit:** States and units of local government that wish to use funds to train new employees to process, record, screen, and/or analyze forensic DNA and/or DNA Database samples should submit a detailed plan in their proposal. There is no fixed-percentage cap on use of funds for this purpose.

4. **Travel (Limited):** Funds may be used for travel to conduct required site visits to public or private accredited laboratories that will be conducting DNA analyses on behalf of the applicant agency to review procedures and practices prior to initial sample shipment; funds may also be used to make one additional unannounced site visit.

   Funds may be used for travel associated with DNA training, described in "3," above. Travel expenses must be reasonable and must comply with the applicable provisions of the OJP Financial Guide.

5. **Equipment:** Funds may be used to upgrade, replace, or purchase laboratory equipment, instrumentation, and computer hardware for the forensic DNA and/or the DNA database laboratory.

6. **Laboratory supplies for validation:** Allowable supply expenses include the purchase of laboratory supplies that can be directly attributed to the validation of new DNA analysis technologies.

7. **Supplies for DNA database sample collection:** Convicted offender and/or arrestee-related sample collection kits may be purchased.

8. **Laboratory supplies for in-house processing, recording, screening, and analysis of forensic DNA casework and/or DNA database samples.**[7]

9. **Renovation:** Funds may be used to renovate existing space within the crime laboratory, **if it can be demonstrated that the renovation will directly and specifically improve the efficiency of the analysis of forensic DNA samples and/or DNA database samples.** Expenses that may be allowable include the purchase or upgrade of benches, cabinets, interior dividing walls, plumbing, HVAC systems, electrical wiring, evidence examination and preparation rooms, evidence storage rooms, drying rooms, walk-in freezers, and extraction or amplification rooms.

10. **Contracts for analysis of forensic DNA casework samples or DNA database samples by public or private accredited DNA laboratories:**[8] Funds may be used to send forensic DNA and/or DNA database samples to fee-for-service laboratories to conduct DNA analyses. Funds may also be used to enter into agreements with government-owned laboratories to conduct forensic DNA and/or DNA database sample analyses, perform data review, enter eligible DNA profiles into CODIS and, where applicable, upload to NDIS.

    Every laboratory that is contracted to conduct forensic DNA or DNA database sample analyses under this program must undergo an external audit, not less than once every 2 years, in order to demonstrate compliance with the requirements of the Quality Assurance Standards for Forensic DNA Testing Laboratories and/or the Quality Assurance Standards for DNA Database Laboratories established by the Director of the Federal Bureau of Investigation, and must be accredited by a nonprofit professional organization actively involved in forensic science that is nationally recognized within the forensic science community.

    Note: All contracts and procurements made under this program are subject to the standards set forth in 28 C.F.R. section 66.36 and other applicable Federal law, including the provisions of 28 C.F.R. section 66.36 that relate to competition. Prior approval from OJP is required for all sole-source procurements in excess of $100,000. Approval may be obtained in the form of a sole-source request with adequate justification submitted directly to GMS with the application for funding.

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[7] Awards to applicants with unexpended funds from prior NIJ awards for analysis of backlogged forensic DNA casework samples may contain special conditions that restrict access to FY 2011 funds for certain types of expenses (see section C of "Program-Specific Information," above).
[8] See footnote 7.

11. **Additional contracts and contractor services:** Contracts may be developed to purchase and install Laboratory Information Management Systems (LIMS), to procure process mapping or process improving assistance, in-house training, or for validation testing. Funds may be used to hire contract staff to process, record, screen, and analyze forensic DNA casework; to process, record, and analyze DNA database samples; or to validate new DNA analysis technologies.

12. **Direct administrative expenses or indirect costs:** Up to 3 percent of the Federal portion of an award under this program may be used for either: (1) direct administrative expenses specifically related to grant administration and management, or (2) indirect costs. **Applicants may not request both direct administrative expenses and indirect costs.**

D. Expenses That Are Not Permitted

Federal funds awarded under this program may only be used for the permissible uses of funds outlined above. Among other things, they may not be used for:

1. Salaries and benefits for existing staff, other than as discussed in section E (Permissible Uses of Funds), paragraphs 1 and 2.
2. Travel, other than authorized travel expenses associated with appropriate DNA training and visits to outsourcing laboratories as discussed in section E (Permissible Uses of Funds), paragraphs 3 and 4.
3. Construction.
4. Direct administrative expenses and/or indirect costs that exceed 3 percent of the Federal portion of the award.
5. Accreditation costs**.**
6. Office supplies.
7. Work that is funded under another Federal award.

E. Limitation on Use of Award Funds for Employee Compensation; Waiver

With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2011 salary table for SES employees is available at www.opm.gov/oca/11tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Assistant Attorney General (AAG) of the Office of Justice Programs. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

F. Match Requirement

This solicitation does not require a match.

Performance Measures

To assist in fulfilling the Department's responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the "Data Grantee Provides" column so that OJP can calculate values for the "Performance Measures" column. Performance measures for this solicitation are as follows:

Forensic DNA laboratories will provide the following data for performance measures:

Objective	Performance Measure(s)	Data Grantee Provides
To improve the DNA analysis capacity of existing State and local government crime laboratories that conduct forensic DNA analysis.	Increase in DNA analysis throughput for the laboratory	1. Average number of forensic DNA samples analyzed per analyst per month at the beginning of the award period. 2. Average number of forensic DNA samples analyzed per analyst per month at the end of the reporting period.
	Reduction in response time for requests	1. Average number of days between the submission of a request for forensic DNA analysis to the laboratory and the delivery of the test results at the beginning of the award period. 2. Average number of days between the submission of a request for forensic DNA analysis to the laboratory and the delivery of the test results at the end of the reporting period.
To reduce backlogged forensic DNA casework in State and local government crime laboratories.	Percent decrease in DNA backlog[9]	1. Number of backlogged forensic DNA cases at the beginning of the award period. 2. Number of backlogged forensic DNA cases at the end of the reporting period. 3. Number of backlogged forensic DNA cases analyzed using funds provided under this announcement.
	Number of DNA profiles resulting in a CODIS match	1. Number of DNA profiles from forensic analyses entered into CODIS as a result of the funds provided under this announcement. 2. Number of CODIS hits attributable to the forensic analyses funded under this announcement.

[9] A backlog is defined as a forensic DNA case that has not been completed within 30 days of receipt in the laboratory.

DNA database laboratories will provide the following data for performance measures.

Objective	Performance Measure(s)	Data Grantee Provides
To improve the capacity of laboratories that conduct DNA analysis on convicted offender and/or arrestee DNA samples (DNA database samples).	Increase in DNA analysis throughput for the laboratory	1. Average number of DNA database samples analyzed per analyst per month at the beginning of the award period. 2. Average number of DNA database samples analyzed per analyst per month at the end of the reporting period.
	Reduction in response time for requests	1. Average number of days between the submission of a database sample to the laboratory and the upload of the profile to CODIS at the beginning of the award period. 2. Average number of days between the submission of a database sample to the laboratory and the upload of the profile to CODIS at the end of the award period.
To reduce the backlog of convicted offender and/or arrestee DNA samples (DNA database samples).	Percent decrease in DNA backlog[10]	1. Number of backlogged DNA database samples at the beginning of the award period. 2. Number of backlogged DNA database samples at the end of the award period. 3. Number of DNA database samples analyzed using funds provided under this announcement.
	Number of DNA profiles resulting in a CODIS match	1. Number of DNA profiles from DNA database samples entered into CODIS as a result of the funds provided under this announcement. 2. Number of CODIS hits resulting from DNA database profiles developed using funds provided under this announcement.

Performance measure data is not required for the application. Instead, applicants should discuss in their application their proposed methods for collecting data for performance measures. Please refer to the section “What an Application Should Include” (below) for additional information.

To assist NIJ in determining baseline national backlogs, all applicants are asked to supply the baseline backlog data requested in the following table as part of their program narrative. If the applicant has State DNA database laboratory responsibilities, the request encompasses backlog data for the database laboratory, regardless of whether assistance is being sought for the database operation.

[10] A backlog is defined as a DNA database sample that has not been completed within 30 days of receipt in the laboratory.

Baseline Backlog Data

Casework Laboratories	
Number of **backlogged requests** for **DNA** as of January 1, 2010.	
Please estimate percentage of these requests that were from property crimes.	
Number of new **requests** for **DNA** received in 2010.	
Please estimate percentage of these **requests** that were from property crimes.	
Total number of **requests** completed in 2010.	
Please estimate percentage of these **cases** that were property crimes.	
Number of **backlogged request**s for **DNA** on December 31, 2010.	
The average number of days needed to complete (including peer review and report) current load of non-priority forensic cases. Please indicate violent crime time with a **"V"** and the nonviolent crime time with **"NV."** If you cannot separate violent and nonviolent cases, please mark your response with **"X."**	
Database Laboratories	
The number of **backlogged requests** for **DNA** of convicted offender samples as of January 1, 2010.	
The number of new convicted offender samples received in 2010.	
The total number of offender samples completed in 2010.	
Average number of days to complete current load of convicted offender samples (including upload to CODIS).	
The number of **backlogged requests** for **DNA** of arrestee samples as of January 1, 2010.	
The number of new arrestee samples received in 2010.	
The total number of arrestee samples completed in 2010.	
Average number of days to complete current load of arrestee samples (including upload to CODIS).	

Definitions for Requested Baseline Backlog Data

Backlogged request—A request that has been submitted to a specialized area of the crime laboratory (e.g., DNA laboratory) and is not completed within 30 days.

Case—All physical evidence from a single criminal investigation submitted for crime laboratory analysis.

DNA—For the purposes of determining baseline national backlogs for casework laboratories, "DNA" will be considered to be biology screening (the location, screening, identification, and characterization of blood and other biological stains and substances) and/or DNA analysis (the identification and comparison of DNA in biological samples). For the purpose of determining baseline national backlogs for database laboratories, "DNA" will be considered the identification of DNA in biological samples collected from convicted offenders and/or arrestees, and subsequent upload to CODIS databases.

Request—Submission of physical evidence from a case to a single specialized area of a crime laboratory. Multiple submissions of new evidence from the same case would count as separate requests.

Average number of days needed to complete (including peer review and report) current load of non-priority forensic cases – Laboratory turnaround time for DNA cases.

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding. Reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at www.fsrs.gov.

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications are submitted through OJP's Grants Management System (GMS). GMS is a Web-based, data-driven computer application that provides cradle to grave support for the application, award, and management of awards at OJP. Applicants must register in GMS for each specific funding opportunity and should begin the process immediately to meet the GMS registration deadline, especially if this is the first time using the system. Complete instructions on how to register and submit an application in GMS can be found at www.ojp.usdoj.gov/gmscbt/. If the applicant experiences technical difficulties at any point during this process, please e-mail GMS.HelpDesk@usdoj.gov or call 888–549–9901 (option 3), Monday – Friday from 6:00 a.m. to midnight eastern time, except federal holidays. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants should complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required to submit an application in GMS. In general, the Office of Management and Budget requires that all applicants (other than individuals) for federal funds include a DUNS (Data Universal Numbering System) number in their application for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving federal funds. The identifier is used for tracking purposes and to validate address and point of contact information for federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity. Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. The CCR database is the repository for standard information about federal

financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire a GMS username and password**. A new user must create a GMS profile by selecting the "First Time User" link under the sign-in box of the GMS home page. For more information on how to register in GMS, go to www.ojp.usdoj.gov/gmscbt/.

4. **Verify the CCR registration in GMS.** OJP requests that all applicants verify their CCR registration in GMS. Once logged into GMS, please click the "CCR Claim" link on the left side of the default screen. Click the submit button to verify the CCR registration.

5. **Search for the funding opportunity on GMS.** After logging into GMS or completing the GMS profile for username and password, go to the "Funding Opportunities" link on the left side of the page. Please select "National Institute of Justice" and then "FY 2011 DNA Backlog Reduction Program."

6. **Register by selecting the "Apply Online" button associated with the solicitation title.** The search results from step 5 will display the solicitation title along with the registration and application deadlines for this funding opportunity. Please select the "Apply Online" button in the "Action" column to register for this solicitation and create an application in the system.

7. **Submit an application consistent with this solicitation by following the directions in GMS.** Once submitted, GMS will display a confirmation screen stating the submission was successful. **Important:** In some instances, an applicant must wait for GMS approval before submitting an application. Applicants are urged to submit the application **at least 72 hours prior** to the due date of the application.

Note: OJP's Grants Management System (GMS) does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen GMS Technical Issues

If an applicant experiences unforeseen GMS technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical difficulties. The applicant should e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and GMS Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the GMS Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow GMS instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with GMS, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," or "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. Information to Complete the Application for Federal Assistance (SF-424)

The SF-424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant", if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

- **Item 8**: Type of Application—"New."
- **Item 9**: Name of Federal Agency—"National Institute of Justice."
- **Item 10**: Catalog of Federal Domestic Assistance (CFDA)—For this program, the number is 16.741.
- **Item 11**: Descriptive Title of Applicant's Project—"FY 2011 DNA Backlog Reduction Program"—[*YOUR AGENCY NAME*]."
- **Item 13**: Proposed Project Dates—For this program, the proposed project dates should be "October 1, 2011, to March 31, 2013."
- **Item 16**: Is Application Subject To Review By State Executive Order 12372 Process?—A listing of States that have participated in this process can be found at www.whitehouse.gov/omb/grants/spoc.html.

2. Program Narrative

Applicants are strongly encouraged to use the form for the program narrative posted with this solicitation on the NIJ Web site (www.nij.gov/funding/welcome.htm).

If the program narrative form provided is not used, the program narrative section of the application should not exceed 20 double-spaced pages in 12-point font with 1-inch margins. Abstract, table of contents, charts, figures, appendices, and government forms do not count toward the 20 page limit for the narrative section.

a. **Project Abstract:** The proposal abstract should serve as a succinct and accurate description of the proposed work. Applicants should concisely describe project goals and objectives, project plans, and methods for achieving the goals. Once an award has been granted, the abstract is computerized and serves as a summary available to all interested parties for the duration of the grant.
b. **Narrative Body:** (20 page limit) - The program narrative should address the objectives, expected results, and the implementation approach.
c. **Plan for Collecting the Data Required for Performance Measures:** The data collection plan is a description of the applicant's plan for collecting the data required for performance measures. Applicants **s**hould discuss this plan in their applications. The plan should describe how the performance measure data will be derived, state who will be responsible for collecting the data, and state that the data will be available for review three (3) years post award, as required. The data collection plan should be rigorous to ensure that the performance measure data provided are accurate, auditable, and correctly measure the impact of the Federal funds provided.

   The data collection plan should clearly describe both the method for the collection and tracking of performance measure data produced as a result of Federal assistance provided under this solicitation as well as the method for reporting such data on a semi-annual basis. For projects that include forensic DNA casework and/or DNA database sample testing activities and objectives, the data collection plan should also include an explanation of how the tracking and reporting methods will avoid the possibility of "double counting" forensic DNA cases and/or DNA database samples affected by Federal funds.

In the body of the narrative, applicants are to provide information showing that they meet the eligibility requirements indicated on page 3. **Applicants should provide a detailed plan showing how they intend to use FY 2011 DNA Backlog Reduction Program funds to meet the goals of the program: reducing DNA sample turnaround time, increasing the throughput of the public DNA laboratory, and reducing the number of forensic DNA and/or DNA database samples awaiting analysis.** Applicants should discuss how they intend to identify and address bottlenecks in the DNA analysis process.

The body of the program narrative should also include the following:

For all applications:

- A statement of the current average length of time it takes to process, record, screen and analyze a forensic DNA case from submission of a request to the laboratory to delivery of the forensic DNA test results and, if applicable, the current average length

of time it takes from receipt in the laboratory of a DNA database sample to analyze and upload a DNA database sample to CODIS
- A statement of the average number of forensic DNA samples and/or DNA database samples currently analyzed per analyst per month
- Descriptions of any observed and/or anticipated increases in DNA submissions that would be expected to significantly impact the DNA laboratory's backlog and/or capacity and that may negatively impact a project's expected results

For applications seeking funds for processing, recording, screening, and analysis of forensic DNA and/or DNA database samples:

- A statement of the estimated number of forensic DNA cases and/or DNA database samples that can be processed, recorded, screened, and analyzed within the 18-month award project period using the Federal funding requested under this FY 2011 program. This number should represent the number of forensic DNA cases and/or DNA database samples to be analyzed above and beyond the number that can be analyzed within 18 months using other sources of funding. The 18-month award project period begins October 1, 2011.

3. Appendix to Program Narrative

- Curriculum vitae, resumes or biographical sketches of key personnel

4. Budget Detail Worksheet and Budget Narrative

a. Budget Detail Worksheet

A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf.
If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

A Microsoft Office Excel spreadsheet-format Budget Detail Worksheet template is available for use in lieu of the Adobe PDF-format template available at the above link. **Use of the Excel version is encouraged so that cost information may be better detailed and automatically calculated, thereby reducing the potential for manual arithmetic errors.** Please contact either of the Program Managers listed on page 1 to obtain a copy of the Excel template.

NOTE: Budget detail worksheets/budget narrative should identify clearly the amounts requested for supplies and contracts for forensic DNA analyses (if any), as access to these funds may be restricted in certain circumstances. See section C of "Program-Specific Information," above.

For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

b. Budget Narrative

The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were

estimated and/or calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

5. **Indirect Cost Rate Agreement** (if applicable)

Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

6. **Additional Attachments—Proof of DNA Laboratory Accreditation**

Acceptable types of documentation of current accreditation include: an electronic (scanned) copy of the current accreditation certificate(s), a digital photograph of the current accreditation certificate(s), or a letter from the accrediting body that includes the certificate number. Additionally, if a certificate references another document that contains key information on the type or scope of the accreditation, please provide a copy of that supplemental documentation.

7. **Other Standard Forms**

Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds).

b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded).

c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded).

d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds).

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

An application must satisfy the specific requirements outlined in this announcement including eligibility, allocation of funds, permissible expenses, timeliness, and responsiveness to the scope of the solicitation, the general requirements for NIJ and OJP grants, and all other applicable legal requirements. (Submission of the baseline backlog data requested in the table under "Performance Measures" will not be considered in review.)

Absent explicit statutory authorization or written delegation of authority to the contrary, all final award decisions will be made by the Assistant Attorney General (AAG).

All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds
- Criminal Penalty for False Statements

- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006
- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

Reporting Requirements: Each award recipient must submit, among other things, semi-annual performance measure data, semi-annual progress reports, and quarterly financial status reports. Progress report narratives should include a summary of project goals, the activities performed during the reporting period, and the effects of these activities toward achieving each goal. Narratives should also include descriptions of any observed increases in evidence submissions as well as issues which may negatively impact goals. Each award recipient also must submit a final report. The report must include a summary and assessment of the program carried out with the FY 2011 award, including cumulative performance measure data over the entire project period.

Application Checklist

FY 2011 DNA Backlog Reduction Program

This application checklist has been created to assist in developing an application.

What an Application Should Include:

_____ Application for Federal Assistance (SF–424) (see page 16)
_____ Program Narrative (see page 17)
_____ Appendix to the Program Narrative: (see page 18)
    _____ Curriculum vitae, resumes or biographical sketches of key personnel
_____ Budget Detail Worksheet (see page 18)
_____ Budget Narrative (see page 18)
_____ Indirect Cost Rate Agreement (if applicable) (see page 19)
_____ Program Narrative/Abstract Format: (see page 17)
    _____ Double-spaced
    _____ 12-point standard font
    _____ 1" standard margins
    _____ Narrative is 20 pages or less
____ Accreditation Certificate(s) (see page 19)
____ Other Standard Forms as applicable (see page 19), including:
    ____ Disclosure of Lobbying Activities (if applicable)
    ____ Accounting System and Financial Capability Questionnaire (if applicable)

Applicants are strongly encouraged to use the form for the program narrative posted with this solicitation on the NIJ Web site at www.nij.gov/funding/welcome.htm.

Appendix A

Estimated Aggregate Amounts for Awards to State and Local Applicants that Operate DNA Laboratories, by State—FY 2011[11]			
Alabama	$ 1,268,787	Nebraska	$ 303,073
Alaska	$ 264,852	Nevada	$ 1,111,828
Arizona	$ 1,613,256	New Hampshire	$ 150,000
Arkansas	$ 896,160	New Jersey	$ 1,624,759
California	$ 10,451,450	New Mexico	$ 745,253
Colorado	$ 1,016,994	New York	$ 4,503,627
Connecticut	$ 629,511	North Carolina	$ 2,272,242
Delaware	$ 337,580	North Dakota	$ 150,000
District of Columbia	$ 483,516	Ohio	$ 2,296,385
Florida	$ 6,801,989	Oklahoma	$ 1,106,736
Georgia	$ 2,508,938	Oregon	$ 583,741
Hawaii	$ 213,212	Pennsylvania	$ 2,873,476
Idaho	$ 211,474	Puerto Rico	$ 628,552
Illinois	$ 3,845,181	Rhode Island	$ 159,355
Indiana	$ 1,282,266	South Carolina	$ 1,832,938
Iowa	$ 503,046	South Dakota	$ 150,000
Kansas	$ 675,640	Tennessee	$ 2,518,583
Kentucky	$ 668,511	Texas	$ 7,288,859
Louisiana	$ 1,668,372	Utah	$ 354,894
Maine	$ 150,000	Vermont	$ 150,000
Maryland	$ 2,014,279	Virginia	$ 1,071,091
Massachusetts	$ 1,805,381	Washington	$ 1,321,326
Michigan	$ 2,968,251	West Virginia	$ 323,262
Minnesota	$ 769,336	Wisconsin	$ 870,640
Mississippi	$ 497,474	Wyoming	$ 150,000
Missouri	$ 1,763,925		
Montana	$ 150,000	**TOTAL**	**$ 80,000,000**

– ALL AWARDS ARE SUBJECT TO THE AVAILABILITY OF APPROPRIATED FUNDS –
(See text of solicitation for additional information)

[11] Units of local government that meet the eligibility requirements may apply directly to NIJ for a portion of the estimated funds allocated for awards to their State.

Appendix B

Estimated Supplemental Amounts for Awards to Applicants that Operate a State-designated DNA Database Laboratory, by State — FY 2011					
Alabama	$	221,179	Nebraska	$	50,000
Alaska	$	50,000	Nevada	$	69,670
Arizona	$	215,531	New Hampshire	$	50,000
Arkansas	$	133,952	New Jersey	$	259,743
California	$	1,550,715	New Mexico	$	63,422
Colorado	$	156,579	New York	$	422,524
Connecticut	$	91,765	North Carolina	$	223,480
Delaware	$	50,000	North Dakota	$	50,000
Florida	$	862,124	Ohio	$	441,409
Georgia	$	247,093	Oklahoma	$	111,834
Hawaii	$	50,000	Oregon	$	154,107
Idaho	$	50,000	Pennsylvania	$	277,893
Illinois	$	454,216	Puerto Rico	$	50,000
Indiana	$	189,954	Rhode Island	$	50,000
Iowa	$	75,492	South Carolina	$	177,295
Kansas	$	84,912	South Dakota	$	50,000
Kentucky	$	50,000	Tennessee	$	149,850
Louisiana	$	124,900	Texas	$	634,352
Maine	$	50,000	Utah	$	62,979
Maryland	$	108,832	Vermont	$	50,000
Massachusetts	$	99,944	Virginia	$	376,267
Michigan	$	340,539	Washington	$	227,006
Minnesota	$	119,714	West Virginia	$	50,000
Mississippi	$	61,990	Wisconsin	$	165,455
Missouri	$	243,286	Wyoming	$	50,000
Montana	$	50,000			
			TOTAL	$	10,000,000

– ALL AWARDS ARE SUBJECT TO THE AVAILABILITY OF APPROPRIATED FUNDS –
(See text of solicitation for additional information)

Attachment 2: FY 2011 DNA Backlog Reduction Program Grant Awards

FY11 Recipient Name	Award Number	Award Amount
Alaska Department of Public Safety	2011-DN-BX-K418	$314,852
Alabama Department of Forensic Sciences	2011-DN-BX-K423	$1,489,966
Arkansas State Crime Laboratory	2011-DN-BX-K420	$1,030,056
Arizona Criminal Justice Commission	2011-DN-BX-K429	$862,102
Arizona Department of Public Safety	2011-DN-BX-K411	$966,685
California Department of Justice	2011-DN-BX-K466	$4,128,334
City And County of San Francisco	2011-DN-BX-K437	$388,669
City of Los Angeles	2011-DN-BX-K450	$1,570,465
City of Oakland	2011-DN-BX-K484	$443,201
City of San Diego	2011-DN-BX-K442	$386,972
Contra Costa County	2011-DN-BX-K448	$264,767
County of Alameda, California	2011-DN-BX-K441	$286,820
County of Kern	2011-DN-BX-K440	$319,182
County of San Bernardino	2011-DN-BX-K474	$654,937
County of San Mateo	2011-DN-BX-K472	$213,288
County of Santa Clara	2011-DN-BX-K465	$327,077
County of Ventura	2011-DN-BX-K443	$131,862
Fresno County Sheriff Department	2011-DN-BX-K451	$306,263
Los Angeles County Sheriff's Department	2011-DN-BX-K482	$1,200,000
Orange County Sheriff Coroner Department	2011-DN-BX-K444	$484,711
Sacramento County	2011-DN-BX-K436	$586,429
San Diego County	2011-DN-BX-K477	$309,000
City and County of Denver	2011-DN-BX-K492	$213,569
Colorado Department of Public Safety	2011-DN-BX-K503	$960,004
Metropolitan Police Department	2011-DN-BX-K431	$483,515
Delaware Health and Social Services	2011-DN-BX-K426	$387,580
Broward Sheriff’s Office	2011-DN-BX-K486	$571,367
Florida Department of Law Enforcement	2011-DN-BX-K461	$4,834,486
Miami Dade County	2011-DN-BX-K454	$1,190,348
Palm Beach County of	2011-DN-BX-K447	$482,941
Pinellas County	2011-DN-BX-K487	$414,921
St. Lucie County Sheriff's Office	2011-DN-BX-K476	$94,500
Georgia Bureau of Investigation	2011-DN-BX-K414	$2,756,031
City and County of Honolulu	2011-DN-BX-K416	$263,212
Iowa Department of Public Safety	2011-DN-BX-K490	$461,560
Idaho State Police	2011-DN-BX-K509	$261,474
DuPage County Sheriff's Office	2011-DN-BX-K517	$349,561
Illinois State Police	2011-DN-BX-K498	$3,600,275
Northeastern Illinois Regional Crime Laboratory	2011-DN-BX-K495	$349,561
Indiana State Police	2011-DN-BX-K500	$959,314
Indianapolis-Marion County Forensic Services Agency	2011-DN-BX-K516	$512,906

Attachment 2: FY 2011 DNA Backlog Reduction Program Grant Awards

FY11 Recipient Name	Award Number	Award Amount
Johnson County Kansas	2011-DN-BX-K493	$156,000
Kansas Bureau of Investigation	2011-DN-BX-K508	$604,552
Commonwealth of Kentucky	2011-DN-BX-K480	$718,511
Louisiana State Police	2011-DN-BX-K428	$1,793,272
City of Boston	2011-DN-BX-K424	$371,006
Massachusetts State Police	2011-DN-BX-K434	$1,534,319
Anne Arundel County MD	2011-DN-BX-K435	$184,709
City of Baltimore	2011-DN-BX-K463	$669,143
Maryland State Police	2011-DN-BX-K452	$758,796
Montgomery County	2011-DN-BX-K478	$140,798
Prince George's County	2011-DN-BX-K456	$369,620
Maine State Police	2011-DN-BX-K433	$200,000
State of Michigan	2011-DN-BX-K518	$3,308,790
Hennepin County, Minnesota	2011-DN-BX-K494	$130,787
Minnesota Department of Public Safety	2011-DN-BX-K506	$758,263
Board of Police Commissioners	2011-DN-BX-K491	$487,635
Missouri State Highway Patrol	2011-DN-BX-K505	$790,074
Saint Charles County	2011-DN-BX-K504	$100,000
St. Louis County	2011-DN-BX-K489	$187,969
St. Louis Metropolitan Police Dept	2011-DN-BX-K512	$441,533
Mississippi Department of Public Safety	2011-DN-BX-K430	$559,464
Montana Department of Justice	2011-DN-BX-K501	$200,000
City of Charlotte	2011-DN-BX-K507	$365,831
NC Department of Justice	2011-DN-BX-K497	$2,129,891
North Dakota	2011-DN-BX-K511	$200,000
Nebraska State Patrol	2011-DN-BX-K496	$353,073
New Hampshire Dept. of Safety	2011-DN-BX-K413	$200,000
County of Union	2011-DN-BX-K470	$90,000
New Jersey Department of Law And Public Safety	2011-DN-BX-K462	$1,741,523
New Mexico Department of Public Safety	2011-DN-BX-K464	$808,675
Las Vegas Metropolitan Police Department	2011-DN-BX-K439	$839,498
Washoe County Sheriff's Office	2011-DN-BX-K460	$342,000
City of New York, Office of Chief Medical Examiner	2011-DN-BX-K469	$1,500,000
County of Erie	2011-DN-BX-K479	$597,722
County of Suffolk	2011-DN-BX-K458	$264,319
County of Westchester	2011-DN-BX-K473	$267,323
Monroe County	2011-DN-BX-K485	$315,381
Nassau County	2011-DN-BX-K471	$258,312
New York State Police	2011-DN-BX-K453	$1,542,876
Onondaga, County of	2011-DN-BX-K467	$180,218
City of Columbus	2011-DN-BX-K468	$272,315

Attachment 2: FY 2011 DNA Backlog Reduction Program Grant Awards

FY11 Recipient Name	Award Number	Award Amount
City of Mansfield	2011-DN-BX-K446	$237,476
Cuyahoga County Office of Medical Examiner	2011-DN-BX-K445	$123,718
Hamilton County	2011-DN-BX-K475	$164,543
Montgomery County	2011-DN-BX-K483	$298,563
Stark, County of	2011-DN-BX-K438	$130,000
State of Ohio Office of The Attorney General	2011-DN-BX-K481	$1,511,159
City of Oklahoma City	2011-DN-BX-K405	$306,000
City Of Tulsa	2011-DN-BX-K403	$254,549
Oklahoma State Bureau of Investigation	2011-DN-BX-K417	$654,135
Oregon State Police	2011-DN-BX-K499	$737,848
Allegheny County Pennsylvania	2011-DN-BX-K419	$341,929
City of Philadelphia	2011-DN-BX-K425	$1,146,517
Pennsylvania State Police	2011-DN-BX-K410	$1,662,908
Instituto de Ciencias Forenses	2011-DN-BX-K488	$678,552
Health, Rhode Island Department of	2011-DN-BX-K457	$209,355
Richland County Government	2011-DN-BX-K404	$195,000
South Carolina Law Enforcement Division	2011-DN-BX-K432	$1,815,233
South Dakota Office of The Attorney General	2011-DN-BX-K510	$200,000
Tennessee Bureau of Investigations	2011-DN-BX-K459	$2,346,924
City of Austin	2011-DN-BX-K409	$240,532
City of Houston Police Department	2011-DN-BX-K427	$1,532,118
County of Bexar	2011-DN-BX-K412	$335,751
Dallas County	2011-DN-BX-K415	$849,881
Harris County	2011-DN-BX-K422	$690,850
State of Texas	2011-DN-BX-K407	$3,304,246
Tarrant County	2011-DN-BX-K406	$314,879
University of North Texas Health Science Center At Fort Worth	2011-DN-BX-K408	$654,539
Utah Department of Public Safety	2011-DN-BX-K455	$417,873
Virginia Department of Forensic Science	2011-DN-BX-K421	$1,447,358
Vermont Department of Public Safety	2011-DN-BX-K515	$200,000
Washington State Patrol	2011-DN-BX-K513	$1,548,332
Wisconsin Department of Justice	2011-DN-BX-K514	$1,036,095
West Virginia State Police	2011-DN-BX-K449	$373,262
Wyoming Office of the Attorney General	2011-DN-BX-K502	$200,000
	TOTAL FUNDING	**$88,707,086**

Attachment 3: FY 2011 DNA Backlog Reduction Program Abstracts

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FY11 Recipient Name: Alaska Department of Public Safety
Award Number: 2011-DN-BX-K418
Award Amount: $314,852
Abstract: The State of Alaska's Scientific Crime Detection Laboratory (SCDL), the only crime laboratory in the state, receives requests to perform biological testing on more than 400 forensic cases per year, with approximately 75% of those continuing on for DNA analysis. The laboratory also receives approximately 400 convicted offender and arrestee samples per month for DNA analysis and entry into the Combined DNA Index System (CODIS). These services are available at no cost to all law enforcement agencies within the State.

The primary objective of this program is to decrease the Alaska SCDL's backlog (requests for DNA analysis exceeding 30 days) of forensic DNA casework. The laboratory is requesting to utilize the $50,000 available for database samples for casework analysis as the database function of the laboratory currently has no un-met needs, and is meeting its mission of analysis in 30 days or less. The laboratory intends to achieve this by using funds from this award to purchase consumables and reagents for forensic DNA casework analysis, purchase of a liquid handler, and calibrate pipettes used in DNA casework analysis.
By October 2011, the number of fully trained casework DNA analysts will have increased from 4 to 6 and therefore, the laboratory expects to see a decrease in forensic DNA sample turnaround time and an increase in the capacity of the laboratory. Both of these outcomes will serve to decrease the backlog of forensic DNA cases. The laboratory anticipates that at least 252 requests for DNA analysis can be completed using funds from this award.

FY11 Recipient Name: Alabama Department of Forensic Sciences
Award Number: 2011-DN-BX-K423
Award Amount: $1,489,966
Abstract: The State of Alabama - and ADFS specifically - continues to face serious budgetary constraints, already having experienced a 32% reduction in State level funding for forensic services over the last 3 years. ADFS is also beginning to see the reality of increased database sample submissions arising from the implementation of an 'all felony arrestee' DNA testing statute, which was implemented on September 30, 2010.

The Federal funding from this award will greatly offset these serious shortfalls, and will be used to realize the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime and the purchase of Biology supplies.

2. Reducing the DNA database sample backlog through analyst overtime and the purchase of database supplies.
3. Increasing the capacity of the statewide DNA laboratory system by purchasing equipment which will further streamline the DNA testing process; specifically a genetic analyzer, thermal cyclers, and robotic DNA platforms, as well as service contracts for the genetic analyzers and robotic platforms.
4. Providing the required continuing education for Forensic Scientists to maintain their continuing education compliance in accordance with the FBI Director's Quality Assurance Standards.

The ADFS expects to reduce the statewide DNA case backlog by at least 485 cases by the end of the award period. The ADFS DNA Database laboratory also expects to process at least 4,730 DNA database samples (which includes 430 QC samples) using Federal funding. The statewide turnaround time on Biology casework is expected to be reduced by an additional 20 days, with the analyst throughput in the casework sections expected to increase a minimum of 7%.

FY11 Recipient Name: Arkansas State Crime Laboratory
Award Number: 2011-DN-BX-K420
Award Amount: $1,030,056
Abstract: The Arkansas State Crime Laboratory Forensic Serology and DNA Sections analyze evidence submitted by law enforcement agencies for the state of Arkansas. These two sections complement one another in the screening and DNA analysis of biological evidence. The Arkansas State Crime Laboratory is proposing to utilize the "FY 2011 DNA Backlog Reduction Program" to update CODIS computers and software, to renovate existing laboratory space and purchase the necessary equipment to process human remains samples, to purchase additional equipment and software for the Forensic DNA Section and to continue to fund the 3 Forensic Serologists and 2 Forensic DNA Analysts that were originally funded from the FY2010 Backlog Reduction Program.

The goals of this program are to:
1. Improve the infrastructure of the CODIS Section.
2. Improve the capability and capacity of the Forensic DNA Section.
3. Decrease the backlog in the Forensic Serology and DNA Sections.

FY11 Recipient Name: Arizona Criminal Justice Commission
Award Number: 2011-DN-BX-K429
Award Amount: $862,102
Abstract: This application for use of the DNA Backlog Reduction Program grant funding is submitted by the Arizona Criminal Justice Commission acting as the State Administering Agency for the Department of Justice on behalf of the following local laboratories through these police departments: Mesa, Phoenix, Scottsdale and Tucson. These agencies are committed to establishing the highest standards of laboratory analysis of evidence and are working as a collaborative group focused on establishing improved procedures and reducing DNA case backlog. Funding is currently allocated to each participating agency based upon the number of Uniform Crime Report (UCR), Part 1 violent crimes reported to the Federal Bureau of Investigation (FBI) for 2009. The Commission will provide grant oversight and be responsible for reporting to the National Institute of Justice (NIJ) on the progress of this grant.

The State of Arizona is facing major budgetary constraints and shortfalls that impacts all of the municipalities and, as a result, adds to each municipality's deficit. The Federal funding from this award will be used for the following goals:

Goals:
1. Reduce the number of backlogged DNA criminal cases through analyst, lab technician and crime scene specialist overtime and outsourcing.
2. Increase the laboratories' capacity by purchasing equipment (genetic analyzers and robotic instruments)
3. Provide required continuing education for analysts.

Results: The four crime laboratories represented in this application can expect to reduce the overall backlog by 490 cases (250 in-house and 240 outsourced) by the end of the grant period. The laboratories expect to increase capacity by 10 percent with the use of the multi-capillary genetic analyzers and the robotic instrument. The laboratories expect to increase throughput by 10 percent with the new equipment, use of overtime and outsourcing.

FY11 Recipient Name: Arizona Department of Public Safety
Award Number: 2011-DN-BX-K411
Award Amount: $966,685
Abstract: The Arizona Department of Public Safety (AZ DPS) Crime Laboratory System provides complete DNA profiling services from three of its Regional Crime Laboratories: the Central Regional Crime Laboratory, Phoenix; the Southern Regional Crime Laboratory, Tucson; and the Northern Regional Crime Laboratory, Flagstaff.

These DNA services, include STR analysis of autosomal nuclear DNA, Y-STR analysis of the Y chromosome and mitochondrial DNA analysis of evidence submitted by 295 law enforcement and prosecutorial agencies statewide, including municipal police departments, county sheriffs, tribal police, and state law enforcement. Also, the AZ DPS Crime Laboratory, by statute, maintains the DNA Database for the State of Arizona and has been processing convicted offender DNA samples since 1993 and DNA arrestee samples for those arrested for certain violent crimes beginning in 2008.

The AZ DPS Crime Laboratory System for the last three years has faced severe budget reductions due to the dire economic conditions in the State of Arizona. As a result, the AZ DPS Crime Laboratory DNA programs have been reduced as follows:

- The DNA Arrestee Database Program has 100% elimination of funds – a loss of $980,000 per year.
- The DNA convicted offender database program has a 49% reduction in funds – a loss of $1,852,419 per year.
- The DNA casework program received a 12% reduction in funds – a loss of $593,584 per year.
- In addition to the above, a hiring freeze has resulted in a 24% vacancy factor, with 11 DNA positions vacant.

Therefore, the Federal funding from this Grant request would be utilized to accomplish the following goals eliminating bottlenecks and producing the expected results below:

- Reduce the projected backlog of DNA Database samples by utilizing two laboratory technicians to free DNA analysts to concentrate solely on DNA sample processing. Over the eighteen month period of the Grant and with DNA supplies purchased from the Grant funds, 12,800 DNA database samples will be processed which otherwise would have been backlogged.
- Reduce the number of DNA casework samples backlogged by utilizing a combination of capacity enhancement projects to increase sample throughput. 1,600 samples out of the current backlog of 3,249 will be processed over the 18 months of the Grant, reducing the current DNA casework backlog by 49%.

FY11 Recipient Name: California Department of Justice
Award Number: 2011-DN-BX-K466
Award Amount: $4,128,334
Abstract: The California Department of Justice (CA DOJ) Bureau of Forensic Services (BFS) seeks funding for casework backlog reduction of $3,111,279.20 and funding for sample backlog reduction by the CA DOJ BFS Jan Bashinski DNA Laboratory's (JBDL) Data Bank Program of $1,017,054.78 from the National Institute of Justice (NIJ) FY2011 Forensic DNA Backlog Reduction Program. This funding includes an initial allocation

for casework of $2,577,618.49 with a shift of an additional $533,660.71 from the data bank allocation of $1,550,715. All work is to be accomplished in the eighteen month period of the award sought.

The purpose of the program is to:

- reduce the overall turnaround time for the handling, screening, and analysis of forensic DNA samples;
- increase the throughput of evidence by DNA laboratories;
- reduce existing DNA casework backlogs;
- reduce the number of backlogged requests for analysis of convicted offender/arrestee samples for the offender database;
- reduce the number of backlogged requests for Familial Searches by the Data Bank Program's CODIS Unit (SDIS for California);
- build capacity for the anticipated demand in these services; and
- build capacity and enhance the efficiency of the Data Bank Program by validating two direct STR amplification methods for the Data Bank, PowerPlex 18D and Identifiler Direct.

The CA DOJ BFS proposes to fulfill the grant requirements by:

- hiring and training or continuing the employment of 15 limited-term Criminalists funded by the FY2010 DNA Backlog Reduction Program allocated as follows:
  - Ten positions to handle, screen, and analyze forensic DNA samples in order to reduce DNA casework turnaround times,
  - Four positions to expand the Familial Search capacity,
  - One position to validate two direct STR amplification methods
- funding the purchase of DNA amplification kits and supplies;
- providing overtime for DNA casework and Data Bank backlog reduction;
- implementing a rapid DNA service (RADS) program;
- purchasing high-throughput DNA analysis equipment;
- purchasing additional GeneMapper ID-X (GMID-X) software to reduce data analysis time;
- purchasing computers to effectively use the GMID-X software; and,
- renovating existing DNA laboratory spaces to increase and improve sample handling and analysis.

The CA DOJ BFS expects to complete 675 additional DNA cases using grant funding by the end of the award period and reduce casework turnaround time by 10%. The JBDL expects to work 12,000 database samples using grant funding, double familial search capacity, and increase the efficiency of data bank sample handling and processing.

FY11 Recipient Name: City and County of San Francisco (CA)
Award Number: 2011-DN-BX-K437
Award Amount: $388,669
Abstract: The San Francisco Police Department is the agency that is responsible for analyzing evidence items associated with criminal investigations for local law enforcement agencies. SFPD has one Criminalistics Laboratory that primarily services the City and County of San Francisco Police Department, as well as the Sheriff's Department and other local law enforcement agencies operating within the City and County of San Francisco.

SFPD is facing budgetary constraints related its operational budget for equipment purchases, laboratory instruments, training and hiring staff. The Federal funding from this award will be used for the following goals:

Reduce the forensic DNA case backlog through hiring a temporary contract laboratory staff, increase the capacity of the laboratory by purchasing equipment (sequence detection systems), and by hiring a contractor for LIMS development, and provide the required continuing education for each analyst through training.

SFPD can expect to reduce the DNA case backlog by at least 75 cases by the end of the award period. The turnaround time is expected to be reduced to 90 days or less.

FY11 Recipient Name: City of Los Angeles (CA)
Award Number: 2011-DN-BX-K450
Award Amount: $1,570,465
Abstract: The Los Angeles Police Department Serology/DNA Unit (LAPD SDU) intends to reduce its backlog by 550 cases and increase its laboratory capacity to meet existing and future demand for Deoxyribonucleic Acid (DNA) screening and testing. To accomplish its objectives, the LAPD will provide training, purchase equipment, utilize analyst overtime, and procure contract laboratory services for DNA analysis and validations. Moreover, this strategy reduces bottlenecks that have in the past, prevented the LAPD from meeting its goals.

Training will ensure that Criminalists acquire the skills necessary to perform DNA typing, and will enable those who are already trained, to meet continuing education requirements that are necessary to keep the laboratory's accreditation. Independent of this or any grant, the City has hired additional criminalists in support of DNA testing. Once these newly hired Criminalists are trained, they can perform evidence screening that will improve efficiency and reduce turnaround time. Those Criminalists who are

already trained to perform DNA typing will be able to increase the number of samples that they analyze, further reducing turnaround time.

To improve the overall capacity of the DNA analysis, the LAPD SDU continues to reorganize the testing process. The acquisition of additional robotic platforms will further increase capacity, increase sample throughput capabilities, and improve our casework analysis efficiency. In order to fulfill the robotic needs, the following instruments will be purchased with funds from this grant: one additional high capacity, high throughput DNA extraction, purification and quantification robot; two high capacity, high throughput DNA amplification set-up and normalization robots; two high capacity, high throughput DNA differential extraction robots; and, one high capacity Real Time PCR quantitation instrument. Grant funds will be used for method validation of the new robotic platforms.
During this grant period, a new LAPD policy will be instituted requiring that all sexual assault evidence be screened and have the DNA analysis performed in-house. This is a departure from past protocols when much of our sexual assault evidence was sent to contract laboratories for analysis, both screening and DNA. This will increase our monthly case load significantly, which will require more overtime for the analysis of backlogged cases in-house.

The LAPD SDU will also reduce its backlog by providing Criminalists with overtime to screen and/or type samples; to send out casework to City approved contract laboratories; and, to perform CODIS review prior to uploading profiles. Because screening and/or DNA typing of samples from active cases takes priority over other duties, Criminalists now scramble to find the time to analyze and upload results from the contract labs to the CODIS database. By providing overtime, the LAPD will ensure that the Criminalists can perform the CODIS review.

With the addition of our new policy related to in-house analysis of sexual assault cases, contract laboratory services will allow the LAPD SDU to reduce the resulting increase in backlog of non-sexual assault related cases, as well as the existing backlog that continues to grow due to an increasing demand for DNA analysis. The use of contract laboratory services will ensure that the Criminalists have the time to receive training and work on active cases. Services to be provided by the contract laboratory will include DNA typing but will not include the data review for CODIS upload. Since Criminalists will have the opportunity to work on active cases, the number of cases that will eventually become part of the backlog will be fewer. The LAPD SDU will also utilize contract laboratory services to validate equipment and analytical platforms. The LAPD SDU intends to validate new polymerase chain reaction (PCR) technologies that will provide an improvement in sensitivity and resilience against sample inhibition.

FY11 Recipient Name: City of Oakland (CA)
Award Number: 2011-DN-BX-K484
Award Amount: $443,201
Abstract: Forensic Biology casework capacity and case completion turnaround times at the Oakland Police Department's Criminalistics Laboratory have improved significantly over the years as a result of grant funds received from the National Institute of Justice's DNA Backlog Reduction and Capacity grant programs. Forensic Biology Unit staffing has increased to a level that allows the Unit to evaluate, analyze, and submit probative DNA profiles into CODIS on the majority of sexual assault kits collected in Oakland. The implementation of electronic sample documentation and the automated DNA processes as a result of the acquisition of DNA extraction robots, DNA sample manipulation robots, real-time PCR for human DNA quantitation, and higher capacity capillary electrophoresis instruments and computer software to aid the Criminalists in data interpretation have resulted in an increase in the number of biological samples analyzed. It is clear that these processes significantly increase our capabilities.

Through enactment of the proposed FY 2011 DNA Backlog Grant initiative, the Laboratory will analyze one hundred (100) of the backlogged case requests. This will be accomplished by:

1. Reducing the forensic DNA case backlog through Criminalist overtime and purchasing supplies
2. Increasing the capacity of the Laboratory by purchasing an in-house bench-top ultra pure water filtration system and dishwasher
3. Increasing Biology Unit staff by hiring 1.0 newly trained Criminalist and 1.0 Forensic DNA Technician
4. Providing the required continuing education for each Criminalist and Technician

The Forensic Biology Unit scientific staff's continuing education is needed to comply with the Laboratory's ASCLD-LAB accreditation, individual scientist's certification, NDIS requirements for CODIS data entry, and the FBI DNA Quality Assurance Standards' mandatory educational requirements. The Laboratory does not have an independent budget for training. It is anticipated that case completion time would improve to less than 100 days on average upon the attendance of conferences, implementation of the new technologies learned, and training of new Forensic Biology Unit staff.
The Forensic Biology Unit case completion time for the year 2010 was 220 business days; based on the date of the request from the investigator to the publication of the report. This is higher than previous years due to the assignment of a Criminalist to conduct the validation and complete revamping of the DNA processes to incorporate all of the robotic instrumentation and electronic documentation of samples and the learning

curve needed to reach full capacity. If awarded the FY11 DNA Backlog Reduction grant, a grant-funded Forensic Technician will be trained to operate the automated DNA processes. Thus, increasing the number and capacity of available Criminalists that will be devoted to data interpretation and case completion.

in 2010, one Biology Unit Criminalist position was permanently reassigned to fill a more critical need in a different unit in the Laboratory; this decreased the Biology Unit's capacity by one Criminalist without a replacement plan. Even with this, the Biology Unit still increased the number of completed case requests by 8% in 2010 as compared to 2009. Additionally, the Biology Unit was able to complete the analyses on 28 rush cases in approximately 18 business days. The ultimate goal of the Oakland Police Department's Criminalistics Laboratory's request for FY 2011 DNA Backlog Reduction grant funds is to continue to decrease the Biology Unit's turnaround time on non-rush DNA analyses; ideally to less than 100 business days. The addition of a Criminalist will increase the Unit's capacity to complete case requests. This decrease in turnaround time and the increase in the number of DNA samples analyzed will enable the Lab to increase the number of cases completed annually by approximately fifteen percent. The DNA profiles obtained from probative evidence will be entered into CODIS. Based upon past experience with DNA profiles obtained from cases without suspects, we anticipate a 35% 'Hit-Rate'.

FY11 Recipient Name: City of San Diego (CA)
Award Number: 2011-DN-BX-K442
Award Amount: $386,972
Abstract: The demand for DNA typing services in the City of San Diego continues to increase steadily. Homicide and sex crime submissions remain steady; however, there has been a dramatic increase in submission of lesser felonies and property crimes. It is our goal to utilize these grant funds to increase the efficiency of casework output in our DNA laboratory, and to provide the funding to allow additional cases to be worked on overtime. The combination of these two things should result in a decrease in backlogged cases. We seek $386,972 in grant funds in an attempt to achieve some important specific results.

1. Reduce the average turnaround time on DNA cases from 84 days to 75 days.
2. Increase the average number of samples analyzed per analyst per month from 34 samples (currently) to 38 samples per month.
3. Reduce the backlog (cases over 30 days) by approximately 10% from 313 to 280.
4. Provide mandated training to all analysts in the DNA laboratory.
5. Purchase equipment that will increase casework efficiency.

6. Increase casework throughput by DNA analysts by providing them support staff via the addition of a full time screener and 2 interns.

In the absence of the expenditures outlined in this grant proposal, the implications for turnaround time and the backlog are grave. Funding from this proposal will allow the laboratory to continue to offer DNA analysis in all criminal investigations where it is deemed important. The increased personnel, money, and equipment will increase our efficiency and case output, thereby allowing us to better serve the citizens of San Diego.

FY11 Recipient Name: Contra Costa County (CA)
Award Number: 2011-DN-BX-K448
Award Amount: $264,767
Abstract: The Contra Costa County Office of the Sheriff Forensic Services Division is the agency responsible for analyzing evidential material associated with criminal investigations for twenty five routine law enforcement clients and other governmental agencies in Contra Costa County, CA. The population served by the Forensics Services Division exceeds one million. The Forensic Service Division includes the Forensic Biology Unit which is a full service DNA unit within the laboratory. The DNA staffing has increased due partially to the support from previous Federal awards, however, overall unit efficiency is poor due to lack of automated equipment, bottlenecks at targeted tasks, a discontinuous workflow and no comprehensive integrated sample management system.

The Federal funding from this award will be used for the following goals:

1. Increase the casework capacity of the laboratory by purchasing equipment (DNA extraction robot) to automate DNA workflow from sample preparation to assay set-up.
2. Increase the casework capacity of the laboratory by purchasing two microscopes equipped with photo capability to eliminate bottlenecks during the cytology examinations (sperm cell searches) and allow for rapid image capture.
3. Increase overall efficiency of the Forensic Biology Unit by evaluating and implementing a DNA laboratory management plan, such as lean six sigma, through the direction of a consultant team.
4. Increase overall efficiency of the Forensic Biology Unit by evaluating, purchasing and implementing an integrated DNA sample management system, such as the JusticeTrax DNA Module.

The Forensic Biology Unit can expect an increase to sample throughput by 20% resulting in faster turnaround times and a DNA backlog reduction of at least 300 cases by the end of the award period.

FY11 Recipient Name: County of Alameda, California (CA)
Award Number: 2011-DN-BX-K441
Award Amount: $286,820
Abstract: The Alameda County Sheriff's Office (ACSO) Crime Laboratory is responsible for processing all evidence submitted to the laboratory associated with criminal investigations from local law enforcement agencies throughout Alameda County excluding the City of Oakland.

In order to continue meeting the needs of our user agencies in providing DNA analysis in a timely manner, grant funds from this award will be used to continue funding two positions (Criminalist and DNA Technical Lead) in the DNA Unit and pay for annual maintenance contracts for DNA instrumentation. Although these grant funds will not completely finance the two positions, local funds will be used to continue funding in order to complete this program.

The funding from this award will be used for the following goals:

1. Maintain case throughput
2. Reduce case backlog
3. Reduce case turn around time to 45 days or less

The DNA Unit expects to maintain monthly case productivity as well as reduce the case backlog. The DNA Unit expects to reduce turn around time to 45 days or less. The funded Criminalist will be responsible for conducting DNA casework and performing technical reviews of casework. The DNA Technical Lead will be responsible for the technical aspects of the DNA Unit as well as oversight of day-to-day quality assurance and accreditation compliance activities. The DNA Technical Lead will perform technical and administrative reviews of casework, conduct and review validations as necessary, and perform casework at least 25% of their time.

FY11 Recipient Name: County of Kern (CA)
Award Number: 2011-DN-BX-K440
Award Amount: $319,182
Abstract:
Problem the grant will help to alleviate:
The Crime Lab has demonstrated improvements in TAT and Backlog reduction over the last several years with the infusion of funds provided by the DNA Capacity and Backlog grants. DNA Grant funds have provided for the hiring and training of two new Forensic Laboratory Technicians; improved the DNA Section's automation with the purchase of instrumentation and equipment, such as the 3130 Genetic Analyzer, microscopes,

robotics and liquid handler; and provided training funds for the required continuing education of staff.

However, due to County budgetary constraints the Crime Lab has had to redirect those funds to provide salaries and benefits to retain trained and experienced DNA analysts, who were slated for lay-off. This year the County is proposing the lay-off of four (4) of 18 Criminalists, or 22% of seasoned analysts. (Refer: Attached letter to the County Administrative Officer)

The Crime Lab's DNA Unit is in jeopardy. Due to the difficulty in recruiting DNA Scientists and the mandatory Civil Service rules regarding layoffs the DNA Criminalists are the most vulnerable for elimination. A lay-off of this magnitude would jeopardize the level of trained staff and unit functionality that currently exists in the DNA Unit of the Crime Lab.

Proposed goals and objectives:
The Goals are to increase capacity and throughput, improve TAT and reduce backlog. The objectives are the retention of qualified, experienced DNA Analysts and to provide the DNA Unit with much needed support for non-analytical duties of the unit.
Summary of the implementation plan:

With funding provided by the 2011 DNA Backlog Reduction Program grant the Crime Lab will have the resources to retain two qualified and experienced DNA scientists, and hire a Laboratory Assistant to assist the DNA Unit with meeting their goals.

Expected results:
The Crime Lab expects an improvement in throughput and TAT and a reduction in the backlog. However, as law enforcement become more familiar with DNA evidence collection and the impact that DNA evidence analysis has on the prosecution of cases, the Crime Lab anticipates an ever increasing demand for DNA analysis. A challenge, equipped with proper staffing and equipment, the Crime Lab gladly accepts.

FY11 Recipient Name: County of San Bernardino (CA)
Award Number: 2011-DN-BX-K474
Award Amount: $654,937
Abstract: The San Bernardino County Sheriff's Department - Scientific Investigations Division (Crime Laboratory) is part of a unit of local government. We are responsible for analyzing evidential material associated with criminal investigations for local law enforcement agencies within the county of San Bernardino. The overall goals of the San Bernardino County Sheriff's Department Crime Laboratory are to increase the throughput of our DNA laboratory, reduce DNA casework backlog and reduce DNA case turnaround time. Our objectives will be to fund overtime and supplies to complete

backlogged DNA cases, fund necessary training, fund a new genetic analyzer and fund a DNA Analysis Module (DAM) to significantly enhance the communication between DNA instrumentation and tracking of casework samples. A DNA Analysis Module is similar to a LIMS but will be designed and customized to fit our DNA lab protocols and procedures. It will assist with DNA sample tracking, case management, standardized case documentation, sample chain of custody, reagent and chemical quality control tracking/inventory, and provide statistical data related to DNA casework. The DNA Analysis Module will allow our lab to improve our DNA process by reducing hand written documentation in notes, worksheets and instrument log pages, reducing typographical errors in sample itemization and calculations, and providing a measure of quality control in regards to reagents and supplies. We expect the DNA Analysis Module to standardize and streamline our entire DNA process resulting in increased case output. We would also like to purchase an AB 3500 Genetic Analyzer to replace our older 3130 Genetic Analyzer which would double the number of samples analyzed at one time on this type of instrumentation. Our Crime Laboratory has experienced an increase in staff that has created limited space for expansion. The projected plans will incorporate the most prudent and efficient use of equipment, allowance for overtime, supplies and training which will allow us to reach our goals.

FY11 Recipient Name: County of San Mateo (CA)
Award Number: 2011-DN-BX-K472
Award Amount: $213,288
Abstract: The County of San Mateo is located in Northern California. It is positioned just south, and adjacent to, the City of San Francisco. It has a population over 730,000 and comprises 450 square miles, 25% of which is urban space.

Forensic Services for the County are provided by the San Mateo County Sheriff's Office. The San Mateo County Sheriff's Office Forensic Laboratory services approximately thirty law enforcement and law enforcement related agencies in the County of San Mateo. These agencies include San Mateo County Departments: Sheriff's Office, District Attorney, Probation, Coroner, Parks and Recreation, and Animal Control, as well as the California Highway Patrol, local police departments, California Fish and Game, and local transportation authorities. The San Mateo County Sheriff's Office Forensic Laboratory also provides forensic services, by contractual agreement, to the City of Vallejo (Solano County), and the City of Concord (Contra Costa County).

On May 11, 2005, the San Mateo County Sheriff's Office Forensic Laboratory began performing STR DNA analysis.

On September 11, 2010, the San Mateo County Sheriff's Office Forensic Laboratory was accredited by the American Society of Crime Laboratory Directors/Laboratory

Accreditation Board International (ASCLD/LAB). The San Mateo County Sheriff's Office Forensic Laboratory undergoes external audits, not less than once every 2 years, to demonstrate compliance with the DNA Quality Assurance Standards established by the Director of the Federal Bureau of Investigation.

The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case turnaround times through Criminalist overtime and purchasing supplies.
2. Increasing the capacity of the laboratory by purchasing equipment (Qiagen EZ1 Advanced XL) and by continuing to employ one (1) contract Criminalist and three (3) contract Forensic Biology Processing Technicians.
3. Providing the required continuing education for four Criminalists.

The San Mateo County Sheriff's Office does anticipate a reduction in the DNA case backlog; however, this reduction will not occur until two (2) of the remaining four (4) Criminalists in training have completed their training in February 2012. The Laboratory does expect to complete at least 151 cases by the end of the award period. The turnaround time is expected to be reduced to 200 days or less, and the Criminalist throughput for samples analyzed per month per analyst is expected to increase to 20 samples. Currently, three (3) qualified examiners are responsible for working on DNA cases and the Laboratory anticipates the completion of training for two (2) additional Criminalists. The addition of these two (2) Training Examiners will assist in decreasing the turnaround time of all casework submitted to the Forensic Biology Section.

FY11 Recipient Name: County of Santa Clara (CA)
Award Number: 2011-DN-BX-K465
Award Amount: $327,077
Abstract: The Crime Laboratory, under the Office of the Santa Clara County District Attorney, is the regional laboratory responsible for the analysis of physical evidence collected within Santa Clara County; it serves over 30 criminal justice agencies, including the sheriff, medical examiner, and all municipalities within the County. Crimes reported for the county in calendar year 2008, included 5,452 violent crimes, 23,472 property crimes, 28,347 instances of larceny-theft, and 498 cases of arson. This information was obtained from the website of the Office of the Attorney General for the State of California Department of Justice, and has been provided as an attachment. We are a full-service DNA laboratory providing biological screening of evidence, autosomal STR analysis and YSTR analysis.

The SCCCL is currently facing budgetary constraints in California, which makes assistance through Federal funding essential to decrease the laboratory's backlog. We are hoping to use the Federal award to achieve the following goals:

1. Reducing the overall DNA backlog through the purchase of supplies and funding two full-time analyst positions.
2. Purchasing small ticket equipment items (UV cross-linker and thermal cycler probe) to expedite laboratory processes.
3. Providing the required continuing education for analysts and send one analyst to the annual CODIS conference.

The SCCCL can expect to complete approximately 660 cases during the grant period. The turnaround time is expected to reduce to 80 days or less, and the analyst casework throughput is expected to increase by at least 10% at the end of the award through the assistance of two grant-funded positions to an existing full-trained staff.

FY11 Recipient Name: County of Ventura (CA)
Award Number: 2011-DN-BX-K443
Award Amount: $131,862
Abstract: In this grant application the Forensic Sciences Laboratory (FSL) is requesting funds to continue funding a fixed term DNA position to help reduce the backlog. The DNA position was established three years ago through this grant.

Senior examiners have been required to perform screening tests, which could equally well be performed by a junior person. The FSL would like to continue employment of a Forensic Scientist I/II in the DNA section, thereby allowing the senior staff to concentrate on the more complex DNA cases. This individual will help screen evidence and conduct DNA analysis.

The overall objective of this grant is to improve DNA analysis capacity and to reduce the number of backlogged DNA cases. The laboratory’s goals are 1) to reduce the turn around time by ten percent (from 136 days to 122 days) between submission of a DNA sample to the laboratory to having a report written for the submitting agency. 2) To reduce the number of pending cases by the major metropolitan areas of San Francisco and Los Angeles in the Central San sixty in a one year period of time. This will result in an additional 25 to 35 DNA profiles being entered into CODIS with an anticipated result of eight to ten CODIS hits.

FY11 Recipient Name: Fresno County Sheriff Department (CA)
Award Number: 2011-DN-BX-K451
Award Amount: $306,263
Abstract: The geographic location of Fresno County is approximately an equal distance between Joaquin Valley. From east to west, the County's boundaries extend 135 miles, encompassing a geographical area of 6,007 square miles with the Coast Mountain Range to the west and the Sierra Nevada Mountain Range to the east. Fresno County has a population of 899,348 that is expected to grow 3.4% annually in the future.

The Fresno County Sheriff's Department Forensic Laboratory provides services for the Sheriff's Department. The forensic laboratory has two Criminalists that are trained and qualified to perform STR analysis, one currently for casework and one as the DNA Technical Lead. We also have two Criminalists currently in our DNA training program. Due to staffing needs and the growing demand for DNA analysis, the Fresno County Sheriff's Department Forensic Laboratory needs to find a way to reduce backlogged DNA casework and increase capacity. The Sheriff's Department has over 35 unsolved homicide/rape cases that need to be examined for potential DNA evidence. DNA cases can take ten to twelve month from request to final report, due to the size of our staff and ageing non-efficient equipment.

The forensic laboratory is seeking $306,263 in federal funds to decrease the backlog of cases from the DNA unit and purchase updated equipment to increase the capacity of the DNA unit. Increased capacity will be accomplished by using grant funds to purchase one Applied Biosystems 3500 genetic analyzer, two Barnstead NanoPure water purification units, four laptop computers, one data storage computer/server, and sending backlogged DNA cases out to be analyzed by accredited fee-for-service vendors for analysis of evidence that may contain DNA.
The expected result will be a reduction in the number of days from request to issuing final DNA results to our clients and a reduction of in the numbers of backlogged DNA cases.

FY11 Recipient Name: Los Angeles County Sheriff's Department (CA)
Award Number: 2011-DN-BX-K482
Award Amount: $1,200,000
Abstract: The Los Angeles County Sheriff's Department, Scientific Services Bureau (LASD-SSB) Crime Lab exists under the County of Los Angeles and is responsible for analyzing evidence from criminal investigations for the entire County, excluding the City of Los Angeles and the area it serves.

The LASD-SSB is under severe budget constraints and overtime is nearly eliminated department wide. In the upcoming fiscal year the department has been notified of further budget cuts. The Federal funding from this award will be used for the following goals:

1. Reduce and prevent casework backlog through analyst overtime and purchasing supplies.
2. Increase capacity of the biology section by purchasing equipment (extraction robots, DNA mixture interpretation software, pipettes, copier, CODIS computer system upgrade, and laptop computers).
3. Provide the required continuing education for 26 analysts.

The LASD-SSB can expect to reduce the DNA case backlog by 663 cases by the end of the award period. The turnaround time is expected to be reduced to 120 days or less, and the analyst throughput for casework is expected to increase by 25%.

FY11 Recipient Name: Orange County Sheriff Coroner Department (CA)
Award Number: 2011-DN-BX-K444
Award Amount: $484,711
Abstract: The goals and objectives of this project are to use the 2011 Backlog Reduction and Capacity Enhancement Program Grant funds to retain two full-time Forensic Scientists and one Forensic Technician who are currently employed in the DNA Section of our Crime Laboratory. These employees were hired during the implementation of the 2009 DNA Unit Efficiency Improvement Grant and their salaries and benefits have been funded by that grant 100%. The 2011-2012 budget forecast for the Orange County Sheriff-Coroner Department shows that there are no local funding sources to continue paying the salary and benefits for these employees after the 2009 Efficiency Grant ends. Without the funding that the FY 2011 DNA Backlog Reduction and Capacity Enhancement Program Grant provides, these three positions in the DNA Section would be terminated.

Retaining at least three of the five laboratory staff who were hired and trained with funds from the 2009 DNA Unit Efficiency Improvement Grant will allow the Orange County Crime Laboratory to continue its “Property Crime DNA Program”. The “Property Crime DNA Program” consists of two teams of DNA Analysts dedicated to analyzing property crimes, a High Volume DNA Analysis Line that is comprised of state-of-the-art DNA robotics and instrumentation, and work request triage. The Property Crime DNA Program and High Volume DNA Analysis Line has allowed our Crime Laboratory to reduce our casework backlog, decrease turnaround times, and increase the capacity of our laboratory to analyze more DNA cases.

FY11 Recipient Name: Sacramento County (CA)
Award Number: 2011-DN-BX-K436
Award Amount: $586,429
Abstract: The Sacramento County District Attorney Laboratory of Forensic Services (hereafter referred to as the crime laboratory) is to continue partnering with local police agencies and the District Attorney to target and solve those criminal cases that will have the most significant impact on the prosecution of violent crimes. The emphasis of the crime laboratory's 2011 backlog reduction operations will be on the timely analysis of DNA-related evidence from violent crime cases and the remediation/prevention of a backlog of DNA cases across the spectrum of reported crimes.

The objectives of the crime laboratory to be completed during the eighteen month operation of the FY 2011 Forensic DNA Backlog Reduction Program includes directing the two grant-funded DNA analysts to conduct the screening and DNA profiling of biological evidence recovered from at least 40 DNA cases (20 DNA cases per analyst), and upload the eligible profiles to CODIS. Likewise two consultants will be involved in backlog reduction and DNA case turnaround time projects.

The crime laboratory has prepared an implementation plan that funds two DNA analysts, two consultants, continuing education and training opportunities for DNA analysts in the Crime Laboratory's Biology Unit, and equipment to improve the Biology Unit's overall productivity. The Project Director will closely monitor the grant to ensure progress is being made in all aspects of the grant.

In order to achieve the goal and objectives outlined for this grant period the crime laboratory will employ two (2) criminalists who will each be responsible for screening evidence associated with designated crime cases for probative evidence and profiling samples; and, uploading profiles to CODIS developed from those cases that screened positive for biological fluids.

Two (2) consultants will be funded to assist in backlog reduction and casework turnaround time projects (one to conduct administrative reviews of DNA casework reports prior to release to the investigating agencies. The second to review and screen evidence from backlogged DNA cases identified by law enforcement agencies as critical homicide or rape-homicide cases. There is no crime scene collection component to this grant.

As with previous DNA grants, the FY 2011 Forensic DNA Backlog Reduction Program will provide funds for training and continuing education of the DNA analysts per the FBI's quality assurance standards for forensic testing laboratories. Providing continuing education and advanced training to the laboratory's experienced DNA analysts will

ensure that the crime laboratory delivers the best possible, most efficient, and timely forensic DNA analytical services to Sacramento County.
Remaining funds will be used to add equipment that is used by all DNA analysts in an effort to improve casework production.

FY11 Recipient Name: San Diego County (CA)
Award Number: 2011-DN-BX-K477
Award Amount: $309,000
Abstract: The San Diego Sheriff's Regional Crime Laboratory (the Lab) is a full-service, ASCLD-LAB accredited forensic science facility. The Lab's forensic biology section provides casework DNA analysis services to law enforcement agencies in the County of San Diego, California (exclusive of the City of San Diego).

The Lab faces a steadily increasing workload of DNA analysis requests, occasioned by our recent focus on property crime cases and the expectations of our clients. This increase will further strain our already stretched financial and personnel resources. We hope to minimize the resulting impact on our operation by pursuing the following goals:

1. Reducing our backlog of work requests by providing overtime and supplies for additional casework.
2. Improving our analysis capacity by replacing obsolete pipettors and alternate light sources, providing service contracts for critical DNA analysis equipment, and obtaining a lease on a copier.
3. Providing required continuing education for some of the Lab's DNA analysts.

FY11 Recipient Name: City and County of Denver (CO)
Award Number: 2011-DN-BX-K492
Award Amount: $213,569
Abstract: The Denver Police Department (DPD) Crime Laboratory serves the City and County of Denver and aims to use forensic technology to solve crime, thereby increasing public safety. The DPD Crime Laboratory DNA and Forensic Biology (DNA/FBIO) units seek federal support in order to reduce the number of cases backlogged throughout the 2011 year, as well as to increase the efficiency and effectiveness of the analysts working in the laboratory, by way of the following goals:

1) To retain one trained, grant-funded analyst for 18 months of the 2011 grant period to process the equivalent of 144 DNA cases (or 720 DNA samples, assuming an average of 5 samples per DNA case).
2) To retain one trained, grant-funded analyst for 5 months of the 2011 grant period to process 25 forensic biology cases.

3) To fund a part-time laboratory technician for 12 months to support FBIO and DNA analysts and perform necessary laboratory processes, such as equipment maintenance and QA/QC duties.
4) To fulfill the continuing education requirements specified in the DNA Quality Assurance Standards for five DNA/FBIO analysts.
5) To replace a broken, non-repairable 96-well plate centrifuge that will aid in maintaining and increasing the capacity of the laboratory.
6) To replace an old set of hand-held pipettes with a new, ergonomic set of light touch pipettes.

By implementing these goals, the DPD Crime Laboratory will target specific bottlenecks that have been identified in the laboratory process and the lab will continue to comply with national quality assurance standards regarding continuing education.

FY11 Recipient Name: Colorado Department of Public Safety (CO)
Award Number: 2011-DN-BX-K503
Award Amount: $960,004
Abstract: The Colorado Bureau of Investigation – Forensic Services Division (CBI-FSD) is the state agency responsible for analyzing evidential material associated with criminal investigations for all state and local criminal justice agencies. CBI-FSD maintains five regional laboratories located in Denver, Durango, Grand Junction, Greeley and Pueblo. The facilities located in Denver, Grand Junction and Pueblo have DNA analysis capabilities.

Senate Bills 06-150 and 09-241 designate the CBI-FSD as the agency responsible for conducting DNA analysis on all biological samples collected from all felony convicted offenders and all adult felony arrestees. The CBI-FSD is responsible for storing and maintaining the resultant profiles in the CODIS DNA database. The Denver regional laboratory maintains the DNA Database Unit.

In accordance with SB09-241, the CBI-FSD began receiving biological samples from all adult felony arrestees within the state of Colorado beginning September 30, 2010. SB09-241 requires adult arrestees to be charged with a felony before the biological sample can be processed and entered into the CODIS DNA database, therefore not all arrestee samples collected are processed. However, SB09-241 runs concurrently with all previous legislation requiring collection and processing of all felony convictions. Since the start of SB09-241, September 30, 2010, CBI-FSD has increased its total of required processed database samples by approximately 184%.

The downturn in the nation's economy has not spared the State of Colorado, and the CBI-FSD has seen its budgets reduced for the last two budget cycles. Current expectations for the 2011-2012 budget cycle, which starts July 1, 2011, are for an additional 5 to 12% reduction in operating budgets.

The four goals of the FY 2011 DNA Backlog Reduction Program are to:

Goal 1: Increase the capacity of the CBI-FSD DNA Casework Unit
Goal 2: Increase the throughput capacity of the CBI-FSD DNA Database Unit
Goal 3: Reduce the backlog of DNA forensic samples
Goal 4: Provide required continuing education

FY11 Recipient Name: Metropolitan Police Department (DC)
Award Number: 2011-DN-BX-K431
Award Amount: $483,515
Abstract: In 2008, the DC Metropolitan Police Department developed the capability to perform forensic DNA testing by establishing a crime laboratory which includes a forensic biology unit. The MPD Crime Laboratory was accredited in November 2008 and assumed forensic DNA testing of all District of Columbia cases in early 2009. The MPD Crime Laboratory was granted CODIS access in 2009.

The MPD Crime Laboratory will use FY11 Forensic DNA Backlog Reduction grant funding for the following goals:

1. Reducing the forensic DNA casework backlog through analyst overtime and outsourcing.
2. Increasing the database capacity of the laboratory by purchasing equipment (genetic analyzer).
3. Providing the required continuing education for all analysts assigned to the Forensic Biology Unit.

FY11 Recipient Name: Delaware Health and Social Services (DE)
Award Number: 2011-DN-BX-K426
Award Amount: $387,580
Abstract: The Office of the Chief Medical Examiner - Forensic Sciences Laboratory is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the state of Delaware. Delaware Code (Title 29, Chapter 47) designates the DE OCME as the agency responsible for conducting DNA analysis on DNA samples collected by the Delaware Department of Correction from all convicted felons; the DE

OCME is responsible for storing and maintaining the resultant DNA profiles in the Delaware State DNA Index System.

The DE OCME is facing budgetary constraints and the number of forensic DNA casework and DNA database samples are increasing (~20% Casework Section and ~50% CODIS Section). The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through overtime and purchasing supplies.
2. Reducing the DNA database sample backlog through overtime and purchasing supplies.
3. Increasing the capacity of the laboratory by purchasing equipment (updated refrigerators and freezers and a temperature monitoring system).
4. Increasing the capacity of the laboratory by purchasing modules and extended services for LIMS (Batch Processing and DNA Databank modules).
5. Improving document management, process management, training management, and reporting by purchasing Qualtrax compliance software.
6. Providing the required continuing education for each analyst and purchasing a subscription to the Forensic Science International (FSI) Journal.

The DE OCME - DNA Unit can expect to reduce the DNA case backlog by at least 122 cases by the end of the award period. The agency also expects to work at least 1,800 DNA database samples using Federal funding. The turnaround time is expected to be reduced to 90 days or less, and the analyst throughput in the casework sections is expected to increase 20%.

FY11 Recipient Name: Broward Sheriff's Office (FL)
Award Number: 2011-DN-BX-K486
Award Amount: $571,367
Abstract: At the current time, the Broward Sheriff's Office has a backlog of approximately 350 cases. We are requesting funding so that the unit can perform in-house analysis on these cases. This funding will assist in keeping the backlog from growing and will be utilized to work cases that are being requested or those that have court dates in the foreseeable future. In addition, cases which lack suspects will also be worked. Funding is being requested for kits, consumables and personal protection equipment.

As part of the DAB requirements, every DNA analyst must attend training on a yearly basis. This has always presented a challenge due to budget restraints; this has not

changed and will continue to be more difficult as we have been asked to cut our budget drastically and training has historically been one of the first places that get hit. As a result, funding for training is being requested so that we can circumvent this continuing critical issue.

As part of this grant proposal we would like to hire two (2) additional individuals. By bringing these individuals on line, not only will we be able to increase our throughput and decrease our backlog, but it will also allow analysts the time to work on other things such as validations.
By renovating the existing DNA section and being able to branch out into what used to be the Trace section (it was shut down last year), we will be able to enhance the analysis flow by positioning the necessary rooms parallel to one another and by not having to mix analyst work areas with lab areas. This will only enhance the analysis work flow.

FY11 Recipient Name: Florida Department of Law Enforcement
Award Number: 2011-DN-BX-K461
Award Amount: $4,834,486
Abstract: Florida Department of Law Enforcement (FDLE), as mandated by Chapter 943 Florida Statutes, operates a statewide forensic crime laboratory system to provide timely, expert and professional examination of evidentiary materials to aid in the investigation, prosecution and/or exclusion of criminal offenses in the state of Florida. The Biology/DNA needs of Florida's criminal justice community are serviced by a network of FDLE laboratories and five local laboratories that comprise the Florida crime laboratory system. FDLE has six internationally accredited DNA laboratories that provide Biology/DNA analysis services.

The heavy demand for Biology services continued in 2010, with over 20,500 incoming service requests. The large volume of requests has been attributed to a number of factors including Florida's 18 million population and continued high volume of reported crime (770,518 index crimes reported in 2010). Increased law enforcement awareness of the crime-solving value of Florida's DNA database also contributes to requests for Biology/DNA service that would not have been submitted a few years ago. Requests related to cold cases, and requests for touch DNA are on the rise. During 2011, Florida will begin collecting DNA from persons arrested for violent felony offenses. Moving from the current conviction-based criteria to include arrestees is expected to not only increase submissions to the database, but to increase case work demand as well. Based on these factors, FDLE anticipates that incoming service requests for Biology will continue to be significant over the next several years.

The Federal funding from this award will be used for the following goals:

1. Reduce the forensic DNA case backlog.
2. Increase DNA analysis throughput.
3. Increase the capacity of the laboratory.
4. Provide the required continuing education for each analyst.

FY11 Recipient Name: Miami Dade County (FL)
Award Number: 2011-DN-BX-K454
Award Amount: $1,190,348
Abstract: The National Institute of Justice has allocated $6,801,989 to the State of Florida as part of the FY 2011 Forensic DNA Backlog Reduction Program. The Miami-Dade Police Department (MDPD) Forensic Services Bureau (FSB)Crime Laboratory has, through data obtained from the 2009 Florida Uniform Crime Report (UCR), been offered $1,190,348 as its portion of the formula grant. The FSB Crime Laboratory proposes to use these funds to continue to increase the laboratory's capacity to analyze DNA samples, reduce the DNA sample turnaround time, and reduce the number of backlogged DNA cases awaiting analysis.

Improvements to the FSB Crime Laboratory infrastructure will continue to increase the capacity for in-house DNA analysis. Funds will be utilized by the FSB Crime Laboratory to purchase and validate instruments that will automate the extraction of DNA from casework evidence samples. The validation and implementation of new DNA test kits will further increase the efficiency of the entire DNA analysis procedure and increase the laboratory's capacity for in-house DNA analysis with a more fully automated DNA workflow.

The Forensic Photographer will continue to enhance case documentation by photographing each evidence package upon submission to the laboratory. The Police Property and Evidence Specialist (PPES) will continue to aid in evidence storage and retrieval, removing these duties from FSB Criminalists who can focus more time on analyzing evidence items. Also, the laboratory's capacity to analyze DNA samples will benefit directly from the addition of another Criminalist.

Funds are being requested to reduce the backlog of DNA cases by outsourcing casework to a commercial DNA laboratory. These cases will include cold homicide and sexual battery cases and current property crime cases. To maximize the number of cases that can be outsourced for DNA analysis, funds are requested to pay overtime to FSB Crime Laboratory Criminalists to conduct the initial examination and screening of the evidence for potential biological material, prepare the DNA samples to be shipped and conduct the DNA technical review required to determine whether the criteria are met for DNA database entry. The commercial laboratory will conduct the DNA analysis,

issue a court-ready report and provide testimony in any future judicial proceedings. Travel and registration funds are also requested to enable FSB Criminalists to meet continuing education requirements and to receive training on specialized instrumentation.

The FSB Crime Laboratory has identified these goals for this project and has formulated a detailed plan to accomplish these goals. Ultimately, through funding from this award, the FSB Crime Laboratory will be able to increase its capacity to analyze DNA cases and reduce its backlog. This will generate more DNA profiles for database entry and more investigations will be assisted, thus contributing to the safety of Miami-Dade County's residents.

FY11 Recipient Name: Palm Beach, County of (FL)
Award Number: 2011-DN-BX-K447
Award Amount: $482,941
Abstract: There are three main objectives for this FY11 Backlog Reduction Grant: 1) decrease the FBU case backlog through continued salary support for two Forensic Scientists, 2) replace aged instruments with updated instruments and outsource new instrument validation and 3) increase laboratory services to the customer through Y-STR testing and progressing to a paperless document system. The Forensic Biology Unit (FBU) has been in the forefront of forensic laboratory automation for nearly a decade. The efficiency of the laboratory has been positively significantly impacted by using validated high throughput automated platforms . Although functional, many of the original 2002 robotics and 2005 PCR instruments in the laboratory are ageing, becoming obsolete and must be replaced. In fact, the vendors are either discontinuing the robotics or the cost of upgrading prohibitive. Replacement of these instruments is critical to sustaining the level of service offered to the county's law enforcement agencies. In addition to maintaining automation within the laboratory, the FBU has determined it is now cost effective to offer Y-STR technology for testing casework evidence and through the FY11 grant funding, validation and training of analysts will provide additional technology to the customers. The laboratory has used grant funding for the past two grant cycles to move towards a paperless document archived program in which all FBU records are scanned and made available electronically. This document scanning program process is on-going. The objectives for this grant may be obtained through 1) providing salary support for two Forensic Scientists, 2) the replacement of the BioMek2000 extraction robotic instrumentation with the validation and implementation of the QIASymphony, a more sensitive automated large scale DNA extraction liquid handler, 3) addition of a simple liquid handler for repetitive preparation pipetting to replace the procedures the BioMek2000 could conduct, 4) replacement of older MasterCycler PCR instruments with AB PCR instruments which a contracted

vendor will provide validation, analyst training and protocol implementation, 5) continued support for the scanning of all FBU documents and records for the purpose of becoming paperless in the future, 6) validation of the Promega PowerPlex-Y STR kit for use on casework evidence and 7) install GeneMapperID-X on the common CODIS server for ease of researching profiles. In order to provide continued services to the customer, validation studies will be outsourced to private vendors. Past NIJ grant funding was successfully used to contract validation studies for robotic methods including DNA extraction, quantification, amplification and allele detection. One of the most important FBU objectives has been progress towards a completely automated DNA process and this has largely been successful. There are, however, more scientifically sophisticated protocols for DNA processes which make replacement of FBU robots timely and will provide additional liquid handling capabilities and improve PCR protocols using new thermal cyclers. In light of the significant increase in the number of crime scene samples that are considered “touch evidence”, nearly 63% of all DNA samples, these new technologies and protocols are imperative to help reduce the backlog and provide quality profiles for CODIS. The mini-robots and the high throughput robots provide a more seamless DNA process that avoids human intervention which can be inefficient. The addition of newer robotics will increase the capacity of the FBU laboratory by allowing the unit to increase the number and quality of DNA samples analyzed as well as to handle, screen, and analyze backlogged forensic DNA casework samples by the two grant-funded Forensic Scientists currently on staff. The entire FBU staff will benefit from the validation of the Promega PowerPlex-Y technology thereby offering alternative analysis for DNA extracts. All of these grant requests will provide increased capacity and quality to the FBU DNA program.

FY11 Recipient Name: Pinellas County (FL)
Award Number: 2011-DN-BX-K487
Award Amount: $414,921
Abstract: The Pinellas County Forensic Lab (PCFL) is a public county crime laboratory that analyzes evidence in criminal investigations for the Pinellas County, Florida criminal justice community as well as the district medical examiner.

The laboratory recently expanded to add the DNA discipline. The DNA has been fully operational, to include CODIS uploads since the fall of 2010. Due to an extra emphasis placed on the submission of non-violent crime and touch DNA, the laboratory submissions have outpaced initial projections. Budget constraints, as well space limitations have limited the laboratories ability increase efficiencies and productivity.

The federal funding from this award will be used to increase the analytical capacity of the laboratory to achieve the following goals:

1. Increase the throughput of samples analyzed per month by purchasing supplies and laboratory equipment (centrifuges, pipetters, lab tables, chairs, hoods, microscopes, etc) for use in expanded space. Note: this is currently non-utilized laboratory space, no construction will be involved.
2. Increase the number of samples analyzed per month by increasing the analytical staff and purchasing of supplies (kits) necessary to train the new staff and conduct the additional casework.
3. Increase the capacity of the laboratory by purchasing equipment (thermocyclers, automated extraction robotics) and purchasing kits associated with the use of the automated extractions system.
4. Increase the efficiency of the lab by validating new technology with new technology that may eliminate or minimize the need for multiple chemistries (currently Identifiler and Mini-filer) with a single, more stable technology (Identifiler Plus or equivalent).
5. Increase the efficiency of the laboratory by purchasing office equipment (copier, server, copier and laptop computer) for the specific use of the DNA section for managing casework, casefiles, and providing/receiving training.

PCFL can expect to increase the number of DNA cases analyzed per year by at least 300 and the number of samples processed by at least 1000 by the end of the award period. The turnaround time is expected to be maintained at 30 days or less and the analyst throughput is expected to increase by at least 10%.

FY11 Recipient Name: St. Lucie County Sheriff's Office (FL)
Award Number: 2011-DN-BX-K476
Award Amount: $94,500
Abstract: The Indian River Crime Laboratory provides scientific and technical services to all state, county, federal and municipal law enforcement agencies within the 19th Judicial Circuit of Florida, and occasionally assists agencies outside the Circuit. The Laboratory is located in the city of Fort Pierce and covers a four county service area of 2,420 square miles which includes St. Lucie, Indian River, Okeechobee and Martin counties. The Laboratory's budget is comprised of funds input by 12 law enforcement agencies located within the circuit. As with all public sector agencies, the nation's economic problems have caused significant cuts to be made over the past few years. This has resulted in an approximate 11% decrease in agencies funding levels for the laboratory since the 2007-2008 fiscal year. While funding is being decreased, manufacturers of the equipment, software and reagents are raising their costs. Therefore, during the same time frame, the IRCL has experienced a greater than 36% increase in the operating budget. Projections for the near future suggest additional budget cuts will continue over the next few years. With this in mind, IRCL is continually looking for ways to make the best use of our existing funding as well as further

streamline our processes to increase throughput, reduce the time of delivery to our service area and continue our efforts to reduce/eliminate our backlog.
In an effort to thwart DNA processing slowdowns due to increasing operational costs, as well as seek new ways to further streamline current processes, the IRCL is requesting funds to accomplish the following two goals:

Goal 1: Reduce the current backlog by maintaining adequate stocks of DNA analysis supplies alleviating the need to schedule with other analysts based on case load needs.
Goal 2: Provide required annual continuing education for existing DNA analysts to meet the FBI DNA Quality Assurance Standards and investigate new ways to streamline workflow processes.

With the use of these funds, IRCL expects to maintain a steady flow of DNA processing. Based on past experience, this will result in an estimated 150 analyzed cases and 45 uploadable samples into CODIS.

FY11 Recipient Name: Georgia Bureau of Investigation
Award Number: 2011-DN-BX-K414
Award Amount: $2,756,031
Abstract: The Georgia Bureau of Investigation- Division of Forensic Sciences (GBI-DOFS) currently has a relatively small backlog of forensic biology cases. The major problems faced by the laboratory is insufficient state funding to maintain an adequate staffing level to address new casework analysis requests and procure adequate levels of supplies necessary to maintain uninterrupted testing. In the 2011 legislative session, the Georgia General Assembly passed legislation requiring sample collection from all felony convictions, including individuals on probation/parole. This amended legislation will take effect by July 1, 2011 and is projected to increase the number of database samples by 7000-10,000 annually.

The goals of this project are to achieve adequate staffing in forensic biology, provide training opportunities, update and increase instrumental capacities, and provide supplies for database sample analysis. The project will be implemented through maintaining employment of current DNA award funded employees, hiring of additional staff, attendance at national meetings/conferences or in-house training, development of a customized data module in the Lab Information Management System (LIMS), and procurement of instruments (genetic analyzers, robotics), and supplies. The additional staff will be hired in the first half of 2012 and trained to begin participation in sample analysis by late 2012.

The expected outcome of this project is that at least 1156 cases and 20,000 database samples will be analyzed in-house as a result of award funding. Report timeliness will be improved so that by the end of the project, the average number of days to issue a DNA report will be 60 days or less as measured from the date of evidence submission. Database samples will continue to be analyzed and DNA profiles uploaded to CODIS within 30 days of sample submission to the laboratory.

FY11 Recipient Name: City and County of Honolulu (HI)
Award Number: 2011-DN-BX-K416
Award Amount: $263,212
Abstract: The Scientific Investigation Section (SIS) of the Honolulu Police Department (HPD) maintains the only forensic DNA testing laboratory in the State of Hawaii. The section serves an island population of more than 900,000 and is staffed with six criminalists and two contract criminalists. In addition to providing casework services, the unit is also responsible for the State's convicted offender DNA database. Although we are a county agency, we are often asked to assist other jurisdictions, including federal agencies (the Bureau of Alcohol, Tobacco and Firearms; the Department of Immigration and Customs Enforcement; various branches of the U.S Military, and the Office of the United States Attorney) and law enforcement agencies located in the Pacific Basin (neighboring islands, Guam, Saipan, and Micronesia.

The HPD-SIS will be facing increased budgetary constraints in the next fiscal year. Budget cuts in the last fiscal year adversely affected the section's ability to provide timely results due to employee furloughs as well as purchasing restricting on supplies. The Federal funding from this award will be used toward the following goals:

1) Reducing the forensic DNA case backlog through analyst overtime and purchasing supplies.
2) Reducing the DNA database sample backlog through purchasing supplies.
3) Increasing the capacity of the laboratory through equipment purchase and hiring personnel
4) Providing the required continuing education for each analyst

The HPD-SIS can expect to reduce the DNA case backlog by at least 73 cases, processed in-house, by the end of the award period. The section also expects to work at least 967 DNA database samples using Federal funding. The casework turnaround time is expected to be reduced to 90 days or less and the databasing turnaround time is expected to be reduced to 30 days or less.

FY11 Recipient Name: Iowa Department of Public Safety
Award Number: 2011-DN-BX-K490
Award Amount: $461,560
Abstract: The Iowa Division of Criminal Investigation (DCI) Criminalistics Laboratory is soliciting an award of $461,560.00 from the National Institute of Justice (NIJ), "*FY 2011 Forensic DNA Backlog Reduction Program*" for the purpose of Backlog Reduction and Capacity Enhancement.

Due to a tight State budget and the loss of staff, the laboratory has not been able to keep up with the demand for DNA services. With the grant this laboratory would reduce the casework backlog through overtime salaries. The DNA unit would also purchase equipment and software for the purpose of replacement of old/outdated items in the unit. These equipment purchases will help increase the capacity of the casework unit in processing more samples and therefore more cases. The success of the proposed work will be measured through tracking of case turn-a-round time and the number of cases completed each month by the DNA Casework Unit.

The DCI Laboratory is projecting that an expanded DNA database law will be passed in future legislative sessions and therefore is planning for increased capacity enhancement in the DNA Database unit of the Lab. The Database unit plans to add a DNA CODIS LIMS module to more fully automate accessioning and tracking of DNA Database samples into the Convicted Offender Unit of the DCI Crime Lab. This LIMS system will also be used to track all samples through the actual DNA processing. Money will also be used to purchase new DNA Offender Database kits which will help streamline DNA Database sample processing, facilitate the implementation of high throughput processes and maximize sample storage space.
The success of the DNA CODIS LIMS module in the database unit should decrease the average number of days to complete a batch of convicted offender samples for upload.

FY11 Recipient Name: Idaho State Police
Award Number: 2011-DN-BX-K509
Award Amount: $261,474
Abstract: The Idaho State Police Forensic Services (ISPFS) provides service to 88 police agencies, 44 sheriff agencies and all federal and state law enforcement agencies in the state of Idaho. In the 2009 Crime in Idaho (Uniform Crime Report) publication these agencies reported a total of 19,307 violent crimes against persons, 48,832 crimes against property, and 13,697 crimes against society which brings the violent crimes to a total of 81,836. This is a decrease of 2% from the 2008 report. Based upon an adjusted population base of 1,543,741 this breaks down to 5301.1 violent crimes committed per every 100,000 persons. The ISPFS has three regional labs located

throughout the state. Region 1 - Coeur d'Alene, Idaho; Region 3 - Meridian, Idaho; and Region 5 - Pocatello, Idaho. THE ISPFS Biology/DNA section is located in Region 3 and is the only human forensic DNA lab in the state of Idaho. The Idaho Code Title 19 Chapter 55 designates the ISPFS as the agency responsible for conducting analysis on DNA samples collected from all convicted felons in the state of Idaho. The ISPFS is responsible for storing and maintaining the resultant profiles in CODIS. The Biology/DNA section is maintained in Region 3.

The ISPFS is facing budgetary constraints and in April 2011 the Idaho legislature passed new DNA database legislation authorizing DNA collection on an additional approximately 112 felony and attempted felony convictions in the State of Idaho. The laboratory anticipates that there will be an average of at least an additional 1436 samples per year. Over the last three years the laboratory has received an average of 1558 samples per year. Because Idaho had not been processing samples until January 2011, a backlog of unprocessed samples was developed. Idaho has 5542 DNA database samples that have not been processed as of May 2011. The ISP CODIS database contains approximately 4,900 convicted offender profiles. With the current statute for collection of these samples, it is estimated that ISP receives approximately 130-150 samples per month.

The scope of this project is to increase the capacity of the DNA database lab, eliminate the current DNA Database sample backlog, reduce the cycle time of each sample, and to implement the new Idaho “all felony conviction” legislation a year earlier than anticipated. The objectives are:

1. Purchase an Applied Biosystems 3130xl instrument to increase the processing capacity of the Idaho State Police Forensic Services (ISPFS) Meridian DNA Database Laboratory.
2. Utilize training funds to train newly hired DNA Database Analysts and provide continuing education to trained DNA examiners.
3. Supply overtime funds to reduce the DNA database backlog by increasing the number of eligible technical reviewers and using currently proficiency tested staff for extra work.
4. Provide the necessary DNA kits, consumables, and components to process the backlogged DNA Database samples.

Project Design and Methodology:
Idaho State Police Forensic Services has chosen a proactive and strategic approach to DNA database backlog reduction in Idaho. Currently Idaho has approximately 5500 DNA samples that have not been processed or entered into the DNA database, as well as approximately 3400 previously outsourced but unreviewed samples. The

unreviewed samples are a result of the vendor going out of business. Last year the laboratory finished training the first dedicated DNA Database analyst. The laboratory obtained funding to hire two additional analysts in the DNA database program and that training has been initiated. In addition, the laboratory built a new DNA database laboratory, finished validation on all required instruments, and began to process backlogged samples. The backlog reduction plan is coupled with a capacity enhancement plan due to the Idaho legislature passing “all felony conviction” DNA sample collection in April 2011. The objectives will be accomplished in the following manner.

To meet objective #1, the laboratory will work with the Applied Biosystems (Life Technologies) sales staff to obtain one of the last 3130xl instruments in production for the Meridian DNA database laboratory. The laboratory will trade in a 310 instrument to offset the cost of the new instrument. The instrument is necessary to increase the capacity of the database unit and purchasing this instrument before its planned obsolescence will alleviate unnecessary instrument platform validation, software migration, and analyst training. Purchasing this instrument instead of an AB 3500 will save the laboratory over $140,000.00 in instrumentation and software alone. ISPFS already has one 3130xl instrument so the timely purchase of a second instrument gives the laboratory the capacity needed to process the additional samples anticipated from new legislation and more trained analysts.
Objective #2 is to provide training funds for DNA examiners. State funding has been cut for DNA analysts. The grant funding allows analysts to attend critical DNA conferences and training out of state. The DNA Technical Leader orchestrates the staff strategically attending all of the important DNA conferences and regional meetings. The staff will attend meetings such as AAFS, Green Mountain, ISHI, CAC, NWAFS, MAFS, CODIS, and others. The attending staff member will report back to the other staff members on the training using a “train the trainer” format. New analysts in the DNA database unit will be sent to introductory DNA courses that accelerate their introductory training. The DNA section will also continue to send staff members to process mapping training to identify efficiencies in the DNA database program.

For objective #3 the laboratory will allocate funds for analyst overtime. Some of the funds will be allocated for processing of the samples, but the majority of the overtime will be used for technical review. Because most of the senior level analysts at ISPFS are in management or DNA casework positions, overtime funds are needed to allow them to technically review samples after their normal work hours. The DNA database laboratory is implementing an expert system for review, but until that system can be validated, the laboratory has a need for qualified technical reviewers to perform manual data review.

Objective #4 is a critical part of the plan because without reagents, kits, and consumables, the ISPFS backlog reduction plan would be ineffectual. ISPFS has never been funded by the Idaho legislature to perform DNA database work. The supplies needed to run the analysis have been taken from other programs. Now that the ISP general budget has been cut by approximately 51%, there is no budget to take from other programs. ISPFS does not have the money allocated to be able to process the backlog of samples in the accelerated time frame without reliance on Federal grant funding. With the environmental protection documents in place, ISPFS will dedicate the entire 2011 CODIS formulary grant to reagents, kits, and consumables to process the DNA database backlog in Idaho.

The scope of this project will be realized by eliminating the instrumental and personnel bottlenecks in the DNA database section. The objectives outlined will allow ISPFS to accomplish the goals of quicker and more efficient DNA sample processing time. ISPFS is firmly committed to backlog elimination and capacity enhancement and this grant will provide the required funds for that to happen in Idaho.

FY11 Recipient Name: DuPage County Sheriff's Office (IL)
Award Number: 2011-DN-BX-K517
Award Amount: $349,561
Abstract: The DuPage County Forensic Science Center (DCFSC) analyzes DNA using STRs, Y-STRs and Minifiler amplification systems. All validations and much of the equipment needed for the validations of this technology has been supported through NIJ grants. DCFSC is under increasing regulatory scrutiny while demand for various DNA services also expands. The grant will reduce some of the pressure for case analysis by adding additional staff. The DCFSC is poised to implement the most advanced technologies and processes in order to reduce the need for further outlays for years to come, while simultaneously continuing to provide exceptional service.

Funding from this grant will be used for the following goals:

1. Reducing the forensic DNA case backlog through a grant funded hire, analyst overtime, and purchasing supplies.
2. Increasing the capacity of the laboratory by purchasing equipment and software (robotic devices, thermal cyclers, an advanced mixture de-convolution tool, computers and a LIMS for the improvement of a paperless LIMS system, and a workspace for the analyst supported through the project).
3. Improve the laboratory's processes by validating new amplification, robotic, and quality systems.

4. Providing the required continuing education for each analyst, purchasing text books for each analyst, and supporting the development of an analyst pursuing a Master's Degree, which will allow them to one day possible serve as DNA Technical Leader.

At least 180 cases will be analyzed with funds from this grant over 18 months that otherwise cannot be analyzed. The 180 cases represent both backlog reduction and capacity enhancement. The turnaround time is expected to decrease to 14 days as an average and have no more than 5% of all cases tested having a backlog greater than 45 days.

FY11 Recipient Name: Illinois State Police
Award Number: 2011-DN-BX-K498
Award Amount: $3,600,275
Abstract: The ISP, DFS, FSC is responsible for analyzing evidential material associated with criminal investigations for approximately 1,200 criminal justice agencies located throughout the state of Illinois. The ISP forensic science laboratory system is comprised of seven caseworking laboratories, a Research and Development Laboratory, and a statewide training program. Each one has a DNA unit and they all function under the ISP, DFS, FSC. The state's DNA indexing laboratory is a part of the Springfield Forensic Science Laboratory.

The ISP is facing budgetary constraints. The federal funding from this award will be used for the following goals:

1. Reducing the FB and DNA case backlog through analyst overtime and purchasing supplies.
2. Reducing the turnaround time of FB and DNA case backlog through analyst overtime and purchasing supplies.
3. Increase the capacity of the laboratory system by purchasing equipment (genetic analyzers) for all of the casework laboratories.

The ISP expects to work at least 2,655 cases more than what could be worked without this funding.

FY11 Recipient Name: Northeastern Illinois Regional Crime Laboratory
Award Number: 2011-DN-BX-K495
Award Amount: $349,561
Abstract: The Northeastern Illinois Regional Crime Laboratory (NIRCL) has the CODIS capacity, analyzes DNA using STR, y-STR and mini-filer amplification systems. All

validations and much of the equipment needed for the validations of this technology has been supported through NIJ grants. For the last three years NIRCL has had funding and support reduced by local funding. At the same time, DNA, the most expensive operation in the lab has seen increased demand, both in cases submitted and the amount of DNA items requested for analysis. The grant will mitigate some of the pressure seen for case analysis. The lab has changed protocols to improve quality that addresses quality issues, but also consumes time and supply resources. On the other hand, NIRCL is utilizing Identifier Plus, which should save resources. Maintaining the DNA grant supported hire, overtime, supply and instrument support will assist NIRCL in providing timely DNA analysis with the quality accepted by the community at large.

Funding from this grant will be used for the following goals:

1) Reducing the backlog through maintaining a DNA grant funded hire and overtime
2) Purchasing the supplies necessary for the analysis conducted by the staff supported with the grant
3) Purchasing equipment that will replace aging DNA analyzers as well as other support equipment including computers and servers
4) Providing training through conferences that have instructional presentations at the meeting

At least 470 cases will be analyzed with funds from this grant over 18 months that otherwise cannot be analyzed. The 470 cases represent both backlog reduction and capacity enhancement. The turnaround time is expected to decrease to 30-35 days as an average and have no more than 8% of all cases tested having a backlog greater than 60 days.

FY11 Recipient Name: Indiana State Police
Award Number: 2011-DN-BX-K500
Award Amount: $959,314
Abstract: The Indiana State Police (ISP) is the agency that is responsible for analyzing evidentiary material associated with criminal investigations for all state and local law enforcement agencies within the state of Indiana with the exception of Indianapolis/Marion County. The ISP maintains four regional laboratories - the Evansville, Fort Wayne, Indianapolis and Lowell laboratories. Indiana Code designates the ISP as the agency responsible for conducting DNA analysis on DNA samples collected from all convicted felon offenders in the state of Indiana; the ISP is responsible for storing and maintaining the resultant profiles in the Indiana DNA Database. The Indianapolis Regional Laboratory maintains the DNA Database Unit.

The ISP is facing budgetary constraints. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime, and outsourcing.
2. Validation of in-house analysis of DNA database samples through analysts overtime.
3. Increasing the capacity of the laboratory by purchasing equipment (thermal cyclers and a DNA extraction robot) and by purchasing and upgrading software for the Biology Section.
4. Providing the required continuing education for each analyst, and purchasing a subscription to a forensic journal package.

The ISP can expect to reduce the DNA case backlog by at least 310 cases (300 in-house and 10 outsourced) by the end of the award period. The turnaround time is expected to be reduced to 45 days or less, and the analyst throughput in the casework sections is expected to increase 30%.

FY11 Recipient Name: Indianapolis-Marion County Forensic Services Agency (IN)
Award Number: 2011-DN-BX-K516
Award Amount: $512,906
Abstract: The Indianapolis-Marion County Forensic Services Agency, (I-MCFSA) is a local government agency that provides the criminal justice system with forensic laboratory services. We provide prompt, accurate and quality forensic analysis to all requests. The I-MCFSA performs scientific examinations of physical evidence pertaining to crimes occurring in Indianapolis and Marion County.

This laboratory is the first full service forensic laboratory in Indiana accredited in the ASCLD/LAB–International program, and the 35th laboratory accredited in the ASCLD/LAB-International program, worldwide. This accreditation consisted of a very comprehensive assessment in which every aspect of the laboratory's operation, to include the Crime Scene Unit process, and was carefully reviewed to include its management practices, evidence handling procedures, and laboratory security procedures.

As part of a joint effort within the various criminal justice and public safety agencies of Marion County and the City of Indianapolis, the Indianapolis-Marion County Forensic Services Agency is an integral participant in eliminating increases in crime. Crime reduction continues to be an issue that several Marion County and City of Indianapolis government entities have attempted to address over the past few years. The Criminal Justice Planning Council, created by the Indianapolis-Marion County Council, is

aggressively seeking solutions to solve crime problems or and eliminate the jail overcrowding issue exacerbating. The Indianapolis-Marion County Forensic Services Agency plays a vital role in the Council's plan. As part of a solution, the laboratory continues to pursue the goal of reducing the amount of time between submissions for requests of analysis to the point of case completion to a maximum of six weeks in all forensic disciplines.

The submissions for analysis in the Forensic Biology Unit of the Indianapolis-Marion County Forensic Services Agency (IMCFSA) continue to increase even though the turnaround time has decreased. Several reasons exist for the increase to include: the greater demand for DNA analysis from prosecutors; more items per case submitted; a broader application of DNA analysis to multiple sample types; and, the overall success of the Biology Unit in aiding investigations. This, coupled with the drastic budget cuts in local government, has resulted in an ongoing increase in the number of cases in the Biology Unit's backlog.

In 2010, the number of items of evidence analyzed stood at 5,889. As of 4/30/11, the items of evidence analyzed total 2,035. Based on this total, by the end of 2011, the Biology Unit will have analyzed over 6,100 items of evidence, with a staff of nine (9) forensic scientists. The average monthly submissions have increased from 75 in 2008, to 120, as of April, 2011, which represents an increase of approximately 60% from 2008 to 2011. In 2010, the nine (9) member staff of the Biology Unit completed 1178 cases which results in 130 cases completed per analyst. For year 2009, the Uniform Crime Report, Part One, Violent Crime reported over 9,831 violent crimes committed in the City of Indianapolis and Marion County, which represents approximately 46% of the 21,404 violent crimes committed in the entire State of Indiana. Of this total, the City of Indianapolis and smaller communities within Marion County listed 101 murders and 464 forcible rapes for the City of Indianapolis and smaller communities within Marion County. This represents approximately 31% of the murders and 27% of the forcible rapes that occurred in the State of Indiana, in 2009.

The homicides for the City of Indianapolis, for the first four months of 2011, stood at 41. The monthly average of approximately 8 murders reported in 2010 and the year-to-date monthly average is currently at 10. Based on this information and, if the trend continues, there would be an increase, in 2011, of over 26%. These totals are significant when determining the factors concerning DNA backlog cases. With approximately 46% of all UCR Part 1 crimes listed for the State of Indiana occurring in Marion County and the City of Indianapolis, the local Public Safety Agencies, to include the I-MCFSA, are experiencing that increase first hand.

While recent grant programs have resulted in an impact, backlogs continue to be an ongoing problem. Cases completed during this time increased but, cases submitted nearly outstripped our increased output. As of April 30, 2011, the Biology Unit backlog is 496 when combining both the Serology and DNA backlog. Current case turnaround times are at an average of 98 days which exceeds our goal of six weeks. The average number of DNA samples worked per analyst was approximately 237 (evidentiary samples plus control samples), for the period of January 1, through April, 2011. Delays in case analysis cause backups and problems for the criminal justice system. Based on trend analysis, the number of backlogged forensic cases, listed as UCR, Part One Violent Crime DNA cases, is anticipated to reach approximately 500, as of September 30, 2011.

Currently, the number of UCR, Part One Violent Crime cases awaiting DNA analysis is 496. The laboratory's Biology Unit has experienced an approximate 74% increase in case submissions from 2008 (905 submissions) to 2010 (1577 submissions) which results in a drastic increase in the case backlog, even though more cases were completed in 2010 (1178 completed) than in 2008 (898 completed).

With the acquisition of grant funding, the following goals will be met:

1. Reducing the forensic DNA case backlog through analyst overtime, purchasing supplies, and outsourcing.
2. Increasing the capacity through the continued maintenance of existing equipment, such as, the 3130 Genetic Analyzers, Maxwell 16, and ABI7500; the renewal of licensing fees, such as JusticeTrax and Qualtrax; completing an annual internal audit, and renovating the Biology Unit work area.
3. Providing required training for the Biology Unit analysts and costs associated with continuing education.

If approved, the Indianapolis-Marion County Forensic Services Agency expects to reduce the DNA case backlog by a minimum of 231 cases during the grant period. Of those, 131 will be completed in-house and 100 will be outsourced. The continued goal of the laboratory is to reduce the turnaround time to six weeks.

FY11 Recipient Name: Johnson County Kansas
Award Number: 2011-DN-BX-K493
Award Amount: $156,000
Abstract: The Johnson County Sheriff's Office Criminalistics Laboratory (JCCL) is the agency responsible for analyzing evidential material associated with criminal investigations for all local law enforcement agencies and medical examiners within the county of Johnson in Kansas. The Biology section of the laboratory performs STR and

Y-STR DNA analysis methods on forensic casework samples. All CODIS eligible DNA profiles generated by JCCL are uploaded into NDIS.

Johnson County became the most populous county in the state in 2003 with a population of 486,500. Johnson County Strategic Facilities Master Plan (2004) projected population growth at 30% in the next fifteen years. This equates to the addition of approximately 12,000 individuals per year to Johnson County. In 2010, the population of Johnson County rose to 544,179 according to the 2010 census. Past KBI Crime Index Reports support that an increase in population can be followed by an increase in criminal activities. Even though the Biology section has increased and maintained its DNA analysis productivity over the past six years, it has not kept pace with the demand for timely biological and DNA analyses. Backlogs and turnaround times have continued to increase despite increases in productivity. In the first quarter of 2011, backlogs, turnaround times, and exam requests have shifted downward primarily due to Process Mapping and new DNA submission guidelines with the current staffing levels (7 Forensic Scientists).

The Federal funding from this award will be used for the following goal and objectives:
Goal:

1. Retain two fully trained Forensic Scientists in the Biology section with this grant funding. This funding will be used to pay the salary and benefits only for these two positions.

Objectives:

1. Maintain or increase current productivity levels in biology screening and DNA analysis.
2. Maintain or reduce the biology screening and DNA item backlogs and turnaround times.
3. Focus on reducing part I UCR violent crime DNA backlogs.

The JCCL can expect to reduce the DNA backlog by at least 178 cases and the biology processing backlog by 148 cases for 48 weeks of funding for two positions. Performance measurement data will be collected and reported primarily with data obtained from the JCCL LIMS.

FY11 Recipient Name: Kansas Bureau of Investigation
Award Number: 2011-DN-BX-K508
Award Amount: $604,552
Abstract: The Kansas Bureau of Investigation (KBI) Forensic Laboratory is the agency that is responsible for the analysis of evidentiary samples from possible crimes for all

state and local law enforcement agencies and medical examiners offices within the state of Kansas. The KBI has four laboratories within the system, three of which conduct DNA testing. The three laboratories conducting DNA testing are Great Bend (West Region Laboratory); Topeka (headquarters) and Kansas City. The KBI laboratory in Topeka also houses the Databank Laboratory, which is responsible for the DNA analysis, storage and maintenance of arrestee and convicted offender samples.

The KBI Forensic Laboratory along with all state agencies in Kansas are facing significant budgetary constraints. The current backlog of samples awaiting testing at both the screening and DNA level are significant. The Federal funding from this award will be used for the following goals:

1. Reduce the forensic DNA case backlog and turnaround times through the hiring of additional analysts, equipment and supplies.
2. Increase the capacity of the laboratories through the purchase of small extraction robots.
3. Provide the required continuing education for some of the analysts.

The KBI Forensic Laboratory can expect to reduce the DNA case backlog by approximately 600 cases if three trained analysts can be hired. If there are no trained analysts to be hired then the case backlog can be expected to decrease by approximately 120 cases, most cases will be done in screening during the award period. It will be closer to the end of the award period before the positive impact will be seen from the hiring of personnel at the entry level. Turnaround times are expected to continue to drop with the addition of more personnel and equipment. The goal will be to have a turnaround time between 60 and 90 days.

At the current time, there is no backlog in the DNA Databank Laboratory. The pending samples are ones submitted within the month they are tested. Therefore, there are no un-met needs in the databank laboratory and the additional funding will be used for casework and capacity enhancement.

FY11 Recipient Name: Commonwealth of Kentucky
Award Number: 2011-DN-BX-K480
Award Amount: $718,511
Abstract: The Kentucky State Police Forensic Laboratories (KSPFL) has continued to provide DNA analysis to the Commonwealth of Kentucky since 1989. During this period of 20 years many technological advances have occurred in DNA analysis. Along with these technological advances, procedural changes have been implemented within the KSPFL to accommodate the ever advancing science of DNA analysis. Current

evaluations have identified multiple procedural areas in the laboratory that are leading to inefficiencies in regard to DNA analysis. First, is a lack of implementation of high throughput technologies for the DNA casework section. These technologies include robotics, data management and informatics. Second, is a lack of additional analytical time dedicated to processing cases in both the casework and database sections. Submissions that request DNA analysis are increasing and are being requested in a wider variety of case types. This trend leads to larger backlogs and longer turn around times (TAT). Third is a continued need to purchase reagents utilized in DNA analysis in both the casework and database sections. Fourth is analysts need to attend workshops and training to stay abreast of new advances and techniques in the forensic biology field as the topics relate to both casework and database.
By providing high throughput procedures, overtime (OT) hours, reagents, and training opportunities the Kentucky State Police Forensic Laboratory Casework and Database section anticipates that the TAT will decrease along with the number of backlogged cases.

The KSPFL can expect to reduce the DNA case backlog by at least 300 cases (all in-house) by the end of the award period. The agency also expects to work at least 18,000 DNA database samples using Federal funding. The turnaround time is expected to be reduced to 130 days or less for casework samples.

FY11 Recipient Name: Louisiana State Police
Award Number: 2011-DN-BX-K428
Award Amount: $1,793,272
Abstract: Louisiana has six active ASCLD/LAB accredited crime laboratories at this submission that are currently performing DNA analysis: the Acadiana Criminalistics Laboratory, Jefferson Parish Sheriff's Office Regional DNA Laboratory, the Louisiana State Police Crime Laboratory, the North Louisiana Criminalistics Laboratory System, St. Tammany Parish Coroner's Office, and Southwest Louisiana Criminalistics Laboratory. All six labs are fully accredited and maintain their individual accreditation. Each lab undergoes a stringent external audit every two years to maintain their accreditation. All six labs are equipped and perform forensic DNA case work; however, the LSPCL is the only lab that uploads all eligible DNA profiles into NDIS. All DNA analyses performed under this program are maintained in each respective lab as mandated by the federal privacy regulations. All other labs participating in this grant solicitation send their eligible profiles to LSPCL CODIS-State Administrator for upload into the NDIS system.

The entire state of Louisiana and all of the Crime labs within it, are facing stricter budgets. This could potentially reduce appropriations for staff, supplies, equipment,

needed support contracts and/or valuable training dollars. Although crime rates have begun to decrease compared to prior years, there are still backlogs of cases that were submitted when crime rates were increasing. In addition, Louisiana 2009 UCR Violent Crime Rates were higher than the national rates in every pertinent category, with the exception of robbery. To provide the maximum assistance to the crime fighting agencies, Louisiana crime laboratories must maintain and exceed their current level of funding support. The goals of the projects funded by this grant are:

1. Reduce forensic DNA case/sample turnaround time,
2. Increase the throughput of current public DNA laboratories, and
3. Reduce forensic DNA backlogged cases.

By outsourcing cases to external laboratories, the analysis time is decreased, allowing laboratories time to review the cases produced more quickly than they could analyze the cases and then still review the cases. WAE technicians allow for the less technical duties to be completed by staff who can be readily trained to screen evidence and complete quality control duties. This frees DNA analysts to focus on the steps of DNA analysis and interpretation, which requires a more experienced analyst. Outsourcing of training allows the current staff analysts to continue casework, while certain aspects of training are conducted by an external trainer. By applying the analysts' time to casework, a higher productivity is obtained and hence the forensic case turn-around-time is reduced, as well as the backlog is attacked. A DNA module is a tool that will be used to increase the efficiency of analysis through the electronic leverage of the current LIMS systems. Continuing education is critical to maintaining a high level of quality of DNA analysis. Training is essential in fully equipping the DNA analyst to perform at the highest level possible.

By allowing these agencies to increase the capacity of their perspective labs we give them the tools to conquer the backlog and become poised to complete the number of requests that are submitted. As a State we expect there to be a decrease in the laboratory backlogs throughout the state, a decrease in sample turnaround times, and a higher laboratory throughput, which provides more timely investigative support of the law enforcement agencies that fight crime.

In the 2011 solicitation allocation table, the state of Louisiana is estimated to receive an aggregate amount of $1,792,372.00. It is our intent to share these funds corporately among the six accredited public laboratories performing DNA analysis. Our anticipated breakdown is as follows:

- Louisiana State Police Crime Laboratory - $858,984.00
- Jefferson Parish Sherriff’s Office Regional DNA Lab - $316,991.00
- North Louisiana Crime Laboratory - $220,225.00

- Acadiana Criminalistics Laboratory - $161,832.00
- Southwest Louisiana Criminalistics Laboratory - $135,138.00
- St. Tammany Parish Coroner's Office - $100,102.00

FY11 Recipient Name: City of Boston (MA)
Award Number: 2011-DN-BX-K424
Award Amount: $371,006
Abstract: The Forensic DNA Backlog Reduction Grant Program serves to advance the over quality, efficiency and productivity that the Boston Police Department (BPD) Crime Lab delivers to the BPD and the Suffolk County District Attorney's Office, particularly during a period of staffing and fiscal challenges. Over the years, NIJ grant funds have been instrumental in the BPD Crime Laboratory's ability to enhance its performance.

Through prior NIJ DNA Backlog funds, the BPD has secured funding for one DNA Analyst, one Forensic Technologist, and one LIMS Coordinator for at least one additional calendar year. As such, the BPD has looked beyond personnel for this year's award in order to pursue other portions of Crime Lab improvements that are in need of fiscal assistance. As part of the BPD Crime Laboratory's overall plan to meet its goals and objectives, the Boston Police Department is requesting funds to acquire a 3500xl Genetic Analyzer, overtime, training, and supplies. With these additions to the lab, the BPD will be able to better meet demands in 2011 to further reduce backlogs while maintaining its ability to analyze casework in a timely manner.

The BPD plans to purchase a 3500xl Genetic Analyzer, a newer version than what is currently in the lab; a model that is being retired and will no longer be serviced by the company. With that, the BPD will also enter into a service contract to ensure long-term results for the Crime Lab. In addition to having a current analyzer that will be able to be serviced, the analyzer will have a 50% greater capillary capacity, as well as take up less laboratory space and require fewer resources to operate. Finally, with the improvements in the 3500xl model, time will also be saved in chemical and reagents preparation, through the easier use and installation of reagents, and through improvement in the data signal reproducibility and data quality.

Beyond the analyzer and the essential costs associated with its service and installation, the BPD will also request funds for overtime. This will allow analysts and technicians in the lab to validate equipment; screen, analyze, record, and process cases beyond the normal hours of their workdays. With this additional time, the BPD expects a reduction in its backlog of DNA cases, as well as the time period for results to be returned to detectives.

As is the case in many other localities, the City of Boston has seen large fiscal cutbacks which have trickled down to the operational budget of the BPD Crime Lab. To offset cuts to the Crime Lab operational budget, the BPD will also be requesting funds for needed supplies for DNA analysis and validation as well as supplies for the LIMS system currently being implemented.

Finally, funds will be requested for travel and training, so that the BPD DNA Section may send its 5 analysts to required continuing education courses. The analysts will attend the Promega International Symposium on Human Identification, and the Bode Annual Advanced DNA Technical Workshop.

FY11 Recipient Name: Massachusetts State Police
Award Number: 2011-DN-BX-K434
Award Amount: $1,534,319
Abstract: The Massachusetts State Police Forensic Services Group (FSG) is the state laboratory system responsible for analyzing submitted evidence on all criminal cases in Massachusetts excluding the city of Boston. The Boston Police Department has their own crime laboratory. The FSG system is comprised of the main laboratory in Maynard and eight additional satellite laboratories regionally based. All DNA forensic and database testing is done at the Maynard facility. The state designated DNA database laboratory also resides in Maynard.

As the state budget continues to contract, the DNA Unit is continuing to fight the forensic DNA backlog. The federal funding from this award will be used for the following goals during the proposed project dates of October 1, 2011 through March 31, 2013:

1. Reduce the forensic DNA backlog through hiring and training 3 new DNA analysts, purchasing supplies, outsourcing and through the Lean Six Sigma initiative.
2. Increasing the capacity of the laboratory by hiring and training one laboratory technician for CODIS related duties, hire and train 4 temporary contract technicians to assist with reagent preparation, quality control function, sample intake and preparation and case management duties as they pertain to outsourcing for a total of 5 temporary technician hires. In addition, the backlog will be further reduced by the purchasing of equipment and consumables.
3. Provide the required continuing education for each analyst.

The FSG can expect to reduce the DNA case working backlog by 691 cases (66 in house and 625 outsourced) by the end of the grant period. The turnaround time is expected to be reduced by 20%.

FY11 Recipient Name: Anne Arundel County, Maryland
Award Number: 2011-DN-BX-K435
Award Amount: $184,709
Abstract: A grant award under the FY11 DNA Backlog Reduction Program would support ongoing capacity increases in the Forensic Biology/DNA Unit of the Anne Arundel County Police Department Crime Laboratory. Enhanced productivity (case output) and efficiency is expected to reduce the existing case backlog thereby decreasing the overall turnaround times for newly submitted Forensic Biology cases through the following objectives:

i) One year retention of the existing fulltime W-2 temporary grant-funded Biology/DNA analyst via salary funding to continue performing independent DNA casework analyses;
ii) Purchase of an upgraded genetic analyzer for increasing DNA specimen analysis capacity; and,
iii) Purchase of evidence screening and handling supplies (scissors, marking pens, etc) for analyst listed above.

First, this award would continue funding for the existing (W-2 FTE Chemist II under temporary County contract) forensic analyst to conduct in-house Biology/DNA casework. The individual, previously funded under the FY09 and FY10 DNA Backlog Reduction awards, is directly involved in the handling and analysis of forensic cases submitted to the Biology/DNA Unit. As an NDIS-participating laboratory, the individual is also responsible for the data entry and/or reviewing of eligible DNA profile data from that casework into CODIS as applicable. The scope of this position also involves peer reviewing Unit casefiles, participation in quality assurance and control duties both in the Unit and Labwide as needed, and providing expert witness testimony. Other duties as assigned may also be performed.

Secondly, an ABI 3500xl Genetic Analyzer is the next generation of capillary electrophoresis instruments for DNA profile detection and analysis using PCR technology. This purchase will replace the significantly out-of-date aging model 310 genetic analyzer currently in use which is the sole instrument shared among all analysts at this time. The increased sample analysis capacity of this new instrument will help alleviate the critical bottleneck situation now resulting from insufficient sample throughput on the existing 310 to accommodate the volume of sample input generated by all analysts working simultaneously and independently. The instrument will be purchased with installation, training, and all analytical software necessary to complete analysis and will be purchased as a sole source procurement based upon existing training and validation using the Applied Biosystems instrument platforms and the fact that Applied Biosystems is the only manufacturer of these instruments.

Lastly, some minimal benchwork supplies are needed by this analyst during the evidence screening and handling phase of DNA analysis. These items may include small tools needed for specimen sampling such as scissors or blades and marking pens, etc. for labeling evidence items and packaging which occasionally require replacement from typical wear and tear.

These requests are critical to addressing the current case submissions levels for the Unit to meet or exceed adequate turnaround times for trial date deadlines and to manage the backlog. In the absence of this analyst position coupled with significant changes to caseflow to improve sample handling capabilities, the backlog will spike severely resulting in missed court dates within a very short period of time (<6mos). The position is expected to result in more than 50% of the Unit's case output in one year (>360 cases) with additional case output anticipated later when the new genetic analyzer is validated for casework purposes. This instrument will handle quadruple the number of samples at once thereby alleviating the current bottleneck of prepared DNA samples from four analysts consistently awaiting analysis on a single sample basis. As such, turnaround times can be expected to vastly improve over the next two years as the results of this efficiency improvement are realized.

FY11 Recipient Name: City of Baltimore (MD)
Award Number: 2011-DN-BX-K463
Award Amount: $669,143
Abstract: The Baltimore Police Department, Crime Laboratory (BPD-CL) is the agency Section that is responsible for analyzing evidentiary material associated with criminal investigations for all local law enforcement agencies within the City of Baltimore. The BPD-CL operates a forensic science laboratory in Baltimore city that performs autosomal and Y STR DNA casework analysis. The City of Baltimore is facing budgetary constraints and is facing new State licensing requirements through the Department of Health and Mental Hygiene that will be going into effect on January 1, 2012. This will increase the documentation and regulation required for all samples analyzed. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime, additional Criminalists, and outsourcing Serology and DNA casework.
2. Increasing the capacity of the laboratory by purchasing equipment (Sperm Hyliter, freezer, Franek and Computers (with peripherals)) and by hiring three evidence technicians.
3. Providing the FBI QAS required continuing education for each analyst.

The BPD-CL can expect to reduce the DNA case backlog by at least 255 cases (187 in-house and 68 outsourced) by the end of the award period. The turnaround time for new cases is expected to be reduced, and the analyst throughput in the DNA casework sections is expected to increase 10%.

FY11 Recipient Name: Maryland State Police
Award Number: 2011-DN-BX-K452
Award Amount: $758,796
Abstract: The Maryland State Police Forensic Sciences Division (MSP-FSD) requests funds under the 2011DNA Backlog Reduction Program with the goal of analyzing DNA casework and DNA database samples while also increasing the capacity of the MSP-FSD DNA casework and DNA database laboratories all in an effort to eliminate existing backlogs and prevent future backlogs, improve turnaround time, and increase throughput.

MSP-FSD has established a long term plan to eliminate the DNA casework backlog through a multi-pronged approach which focuses on outsourcing of casework while simultaneously streamlining in-house operations. Great progress has been made in the past three years on the casework backlog as it has decreased 77% from a high of 568 in February 2008 to a low of 133 in April 2011. MSP-FSD proposes to continue with this established approach and requests funds that support the continued outsourcing of casework. Funds are also requested for capacity building items that are needed to support the in-house operations.

While an existing backlog of 23,000 DNA Database samples was eliminated in 2007, constant attention is required to ensure that a significant new backlog does not emerge. To that end MSP-FSD has transitioned from outsourcing of DNA Database samples to in-house analysis of these samples. Funds are requested to support the in-house analysis of DNA Database samples.

The reduction of backlogs, improvement of turnaround time, and the increase of throughput are all inter-related. An improvement in one area will cause improvements in the others. Therefore, it is proposed that the goal of this program can be accomplished by meeting three objectives.

- Objective #1 is to analyze casework and DNA Database samples by outsourcing 230 DNA cases, performing in-house analysis of 400 DNA cases, and performing in-house analysis of 5,074 DNA Database samples.
- Objective #2 is to develop staff abilities by providing 32 continuing education opportunities to the lab staff as well as by obtaining a forensic journal package subscription.

- Objective #3 is to develop lab capabilities by validating YSTRs as well as by purchasing various new lab equipment and software.

FY11 Recipient Name: Montgomery County (MD)
Award Number: 2011-DN-BX-K478
Award Amount: $140,798
Abstract: The Montgomery County Police Crime Laboratory, Forensic Biology Unit (MCPCL FBU) is responsible for analyzing evidential material associated with criminal investigations handled by the Montgomery County Police Department. As a courtesy, the MCPCL FBU performs the same analyses on evidential material for the following other agencies in Montgomery County: Takoma Park Police Department, Gaithersburg City Police Department, Rockville City Police Department, and Montgomery County Park Police Department.

The MCPCL FBU has been outsourcing a portion of our backlog in attempt to keep up with increasing demands for DNA analysis. The backlog is below 100 cases and this number has only been maintained by outsourcing batches of cases every three months to a private laboratory. The FBU consists of three full-time, fully trained analysts, one recently hired analyst that needs to complete a few months of training prior to starting casework analysis, a technician and Technical Leader. The FBU is also in the process of hiring another analyst who will also need serological training prior to starting casework analysis. Currently, the FBU is extremely limited in processing samples for DNA analysis due to only having the organic microcon procedure validated for casework. In addition to this bottleneck, the FBU will no longer be outsourcing current casework by the fall of this year and this will certainly increase the cases sitting in our backlog awaiting analysis. Funding is being requested to tackle the limited processing capabilities of the FBU by improving our extraction procedure.

The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog by increasing the capacity of the laboratory to process larger batches of samples for DNA analysis by purchasing the QIAsymphony robot. The robot can extract 24 samples in approximately one hour and up to 96 samples in a total run compared to the current procedure taking four hours for an analyst to extract 24 samples.
2. Providing the required continuing education for three analysts.

FY11 Recipient Name: Prince George's County (MD)
Award Number: 2011-DN-BX-K456
Award Amount: $369,620
Abstract: The Prince George's County Serology/DNA Laboratory is an ASCLD/LAB accredited laboratory (cert # 353) that serves the 900,000 county population. The laboratory is responsible for receiving, analyzing, reporting and storing evidence received from any submitted forensic casework in the county. Although the laboratory has seen an increase of the DNA staff over the last two and a half years, the laboratory has also been hindered by its inability to use grant funds to hire one employee to screen the backlog of cases. There has also been an increase in the number of requests for the laboratory to analyze these cases. Since the laboratory resumed operations in 2008 there has been an increase in the number of casework analysis as well as an increase need to store the extracted DNA. The laboratory is now running out of storage for DNA extracts.

The county now has a new administration at both the county and Police Department levels that appreciates and understands the importance and need for additional staff to complete the laboratory unit's goal and the goals of the county as a whole. The federal funding from this award will be used for the following goals:

1-Reduce the backlog of cases
2-Reduce the in-house analysis turnaround time
3-Increase capacity in the forensic casework laboratory
4-Provide required continuing education training for our DNA staff

Once implemented, the Prince George's County can expect to see a reduction of its backlog to just below 150 cases by the end of the award period. The turnaround time is likely to be reduced to under 125 days and analysts output is likely to be doubled.

FY11 Recipient Name: Maine State Police
Award Number: 2011-DN-BX-K433
Award Amount: $200,000
Abstract: The Maine State Police Crime Laboratory is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies within the state of Maine. We are the only full-service laboratory in Maine. Maine State law requires our state laboratory to be responsible for conducting DNA analysis on DNA samples collected from all convicted felony and some misdemeanor offenders in the state of Maine; the Mane State Police Crime Laboratory is responsible for storing and maintaining the resultant profiles in the Maine DNA Data Bank.

The Maine State Police Crime is facing budgetary constraints and is facing new DNA database expansion legislation that proposes to collect DNA from all felony arrests. That will increase the number of DNA database samples it will have to analyze if the bill passes. We recognize the need to stabilize our current DNA casework and database backlogs before taking on more responsibilities. The Federal funding from this award will be used for the following goals:

1. Increasing the capacity of the laboratory by employing one full-time DNA analyst and one part-time DNA analyst at 28 hours per week.
2. Reducing the DNA database sample backlog through outsourcing.

The Maine State Police Crime Laboratory can expect to reduce the DNA case backlog by at least 255 cases by the end of the award period. The agency also expects to outsource at least 2000 DNA database samples using Federal funding while we conduct at least 5% QC and100% technical reviews with state-funded staff and supplies.

FY11 Recipient Name: State of Michigan
Award Number: 2011-DN-BX-K518
Award Amount: $3,308,790
Abstract: The Michigan State Police requests FY 2011 Forensic DNA Backlog Reduction Program funding to assist the Forensic Science Division (FSD) in reducing the statewide backlog of DNA casework awaiting analysis and to increase the capacity of its DNA and Database laboratories. The requested funding will be used to: (1) make overtime available for the purpose of backlog reduction; (2) continue payroll support for laboratory personnel; (3) provide continuing education to laboratory personnel; (4) purchase DNA database collection kits; and (5) outsourcing of case work.

DNA analysis conducted under this program will be maintained pursuant to all applicable federal privacy requirements. All eligible profiles obtained with funding from this program will be entered into the Combined DNA Index System (CODIS) and uploaded to the National DNA Index System (NDIS), when applicable. Participating laboratories will follow the NDIS DNA Data Acceptance Standards for all profiles uploaded to NDIS.

FY11 Recipient Name: Hennepin County, Minnesota
Award Number: 2011-DN-BX-K494
Award Amount: $130,787
Abstract: The Hennepin County Sheriff's Office Crime Lab Unit (HCSO-CLU) provides 24/7 crime scene processing and forensic science services to over 35 local, state, and

federal law enforcement agencies in Hennepin County, Minnesota (population ~1.1 million). According to FBI crime statistics from 2008 the HCSO-CLU service area constituted approximately 17% of all UCR, part 1 violent crimes in Minnesota.

In 2009 the HCSO lab was awarded an ARRA Byrne grant establishing the Hennepin Sheriff's DNA Property Crime Initiative. This award allowed the DNA lab to hire three DNA scientists, two biology screeners and two support staff. The funding for these individuals will be exhausted in March of 2012. The lab intends to use funding from the FY 2011 DNA Backlog Program to continue this program.

Differential DNA extractions continue to be a cumbersome and time consuming process. An automated liquid handling instrument with an integrated centrifuge can perform many of the routine washing steps required during this process. The lab intends to incorporate this instrument into our procedures which will give us the opportunity to evaluate and determine if additional instruments would be beneficial.

The lab is proposing to purchase three lap top computers that will provide access to the LIMS at the lab workstations and also have the ability to record the analysts' handwritten notes which can then be stored electronically. The laptops will be mounted on arms that will be able to span multiple workstations and reduce the number of computers required.

The lab expects case turnaround time reduction form ~132 days to ~90 days, a backlog reduction of and a productivity improvement of ~50 samples/analyst/month to ~55 samples/analyst/month.

FY11 Recipient Name: Minnesota Department of Public Safety
Award Number: 2011-DN-BX-K506
Award Amount: $758,263
Abstract: As in most states, the State of Minnesota has experienced several years of projected budget deficits during recent legislative sessions. This situation resulted in several years in which the lab received no increase in its operational budget and in fiscal year 2011, the lab received a cut to its base budget. Further cuts are possible pending the end of the 2011 legislative session. In the mean time, the costs of supplies continues to increase and the lab continues to see an increase in the number of cases submitted for DNA analysis. All this comes at time when law enforcement agencies and the courts are demanding faster turn-around-times for these cases.

In recent years, the BCA has used the DNA Backlog Reduction Grant program to increase the labs capacity by purchasing new instrumentation. While introducing the

new technologies will have an overall positive impact on the DNA backlog, often times, the reagents needed to utilize these instruments are more expensive that reagents used previously. Implementation of new instruments also results in a short term negative impact on staffing levels, as staff must be dedicated to validation studies and all staff must receive training on the new technology.

The BCA FSS proposes to utilize the 2011 DNA Backlog Reduction Grant to supplement its overtime budget to allow DNA scientists to work on backlogged cases and provide a support position for the DNA section to allow them more time to spend on casework. The Grant would also be used to supplement the labs' supply budget in both the DNA casework and databasing sections. The BCA FSS also plans to upgrade it's existing license for the STaCS DNA software, a DNA sample management system, in order to allow us to use the software for a greater number of samples. Finally, the grant will provide funding for service contracts that ensure that all instruments used for both casework and databasing are properly maintained and needed repairs will be made in a timely manner, minimizing the downtime.

FY11 Recipient Name: Missouri Board of Police Commissioners
Award Number: 2011-DN-BX-K491
Award Amount: $487,635
Abstract: The Kansas City Police Crime Laboratory (KCPCL) has experienced tremendous success with prior NIJ DNA backlog reduction grants, and is committed to continuing that success with the FY2011 *Forensic DNA Backlog Reduction Program* grant. Prior grants have focused on the identification and analysis of unsolved “cold” cases. The KCPCL has been able to maintain its work in this area as new “cold” cases are reviewed and submitted to the laboratory. However, significant backlogs still exist in the biological screening and DNA analysis of more current cases. Requests for DNA analysis of property crimes and weapons/narcotics cases continue to dramatically increase as field officers have gained training in the collection of biological samples from these case types and how DNA can aid in these investigations. The main objective of this grant program will be to expedite the DNA analysis of all pending casework such that the overall turnaround time (request to report) as well as the number of cases pending analysis decreases. These objectives will primarily be met through the use of staffing. Five grant funded criminalists will be maintained in the Trace and DNA Sections with varying degrees of responsibility (depending on level of training) in both sections, from screening cases to performing various analytical steps in the DNA process. DNA and Trace Criminalists will also work overtime to reduce backlogs in biological screening and DNA analysis. Two additional technicians will be maintained as independent contractors who will also perform several analytical steps in the DNA process concerning known DNA standards as well as the screening of

biological evidence. Capacity enhancements will be addressed to help streamline the DNA extraction efficiency of the DNA Section as well as the analysis and review of generated DNA data. Additional computer and software enhancements should serve to improve the overall efficiency and workflow of the DNA Section. Laboratory protection systems will also be procured for recently acquired instrumentation.

FY11 Recipient Name: Missouri State Highway Patrol
Award Number: 2011-DN-BX-K505
Award Amount: $790,074
Abstract: The Missouri State Highway Patrol (MSHP) Crime laboratory provides PCR-STR DNA analysis on samples from crime scene evidence without cost to all law enforcement agencies within Missouri. The need for DNA analysis continues to increase at a rate greater than present funding and resources support. Our continuing goal is to increase the capacity of our DNA testing services to improve turnaround time, decrease backlogs and increase throughput.

The MSHP Laboratory's portion of Missouri available funds for 2011for Part A. has been calculated to be $546,788. This amount is based on the Highway Patrol's portion (9,107 = 32.3%) of the State's 28,226 UCR, Part 1 violent crimes reported to the FBI in 2009. The funding is adjusted by roughly 4% to allow St. Charles County Sheriff's Department to apply for the minimum $100,000 as suggested by the solicitation and has been agreed upon by the Missouri Association of Crime Laboratory Directors. The Laboratory will use the awarded funds to purchase two 3500 Genetic Analyzers, cover our annual maintenance agreements for 14 instruments, purchase DNA reagents, supplies and amplification kits. It is expected that once implemented, these improvements will increase throughput (samples per analyst per month) by 30%, decrease backlogs by 20% and reduce average turnaround time to below 200 days.

The MSHP will also be applying for the supplemental amount of $243,286 as outlined in Part B of the solicitation as we operate a State Designated DNA database laboratory. These monies will be used to purchase DNA reagents, supplies and amplification kits for our DNA Databasing lab

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FY11 Recipient Name: Saint Charles County (MO)
Award Number: 2011-DN-BX-K504
Award Amount: $100,000
Abstract: The St. Charles County Sheriff's Department Criminalistics Laboratory (SCCSDCL) provides forensic DNA analysis services to the law enforcement community of St. Charles County Missouri. The SCCSDCL has seen an explosion of

DNA cases submitted as DNA evidence continues to be more prevalent and valuable to criminal investigators. As a result, the SCCSDCL is committed to using the most efficient and accurate equipment and technologies available to analyze numerous and varied forensic DNA samples it receives. Funding analyst overtime is a proven way for the SCCSDCL to reduce its DNA backlog and improve the forensic DNA testing it provides.

The SCCSDCL will use its portion ($100,000) of the FY11 Forensic DNA Backlog Reduction Program to enhance its DNA testing capacity and reduce its DNA backlog by providing overtime for analysts and purchasing DNA testing supplies and equipment. The SCCSDCL anticipates working over 300 additional DNA cases during the program period as a result of program funding. The three major goals of this program are:

1) Reduce the DNA backlog by 20% through analyst overtime and the purchase of supplies.
2) Reduce the turnaround time to less than 100 days by funding analyst overtime.
3) Increase the capacity of the laboratory by purchasing equipment to increase the average number of DNA samples analyzed per analyst to over 50 per month.

Achievement of these goals will increase the overall productivity and efficiency of the SCCSDCL - positively impacting the investigations and prosecutions of all laboratory cases, especially those with DNA evidence. This program will also strengthen the SCCSDCL's commitment to the law enforcement agencies it serves.

FY11 Recipient Name: St. Louis County (MO)
Award Number: 2011-DN-BX-K489
Award Amount: $187,969
Abstract: An important objective of the St. Louis County Police Department Crime Laboratory is to provide more efficient processing of DNA samples and to increase the number of forensic DNA samples processed. The Laboratory serves more than one million citizens and provides services to the St. Louis County Police Department, as well as 90 municipalities, 56 of which have their own police departments.

The Biology/DNA Unit within the Crime Laboratory has seen a significant increase in the number of cases submitted for biological screening and DNA analysis each year due to the success of obtaining profiles from samples which would previously have not been submitted to the laboratory. The DNA/Biology Unit currently employs five qualified DNA analysts, two analysts that perform biological screening analysis full-time, one part-time biological screening analyst, and one part-time DNA technician.

The two full-time and one part-time biological screening positions and the DNA technician position are all currently funded by the 2010 Forensic Casework DNA Backlog Reduction Grant. One of the full-time biological screening analysts completed her training on December 7, 2010 and the DNA technician completed her training on February 17th, 2011. By maintaining four fully trained and qualified analysts with grant funding with the 2011 Forensic DNA Backlog Reduction Grant the St. Louis County Police Crime Laboratory will be able to increase the number of samples tested significantly. The increased number of samples processed also increases the number of samples which can be entered into the CODIS database. Even with maintaining the four grant funded employees, the backlog and turn-around-time seem to increase. Despite increased efficiencies from year to year the rate of new cases continues to outpace the rate of case completion. This increase would be much greater if the Laboratory was unable to maintain these analysts through NIJ funding.
The St. Louis County Police Crime Laboratory would like to purchase some additional pipettes. These additional pipettes will be used for an additional DNA extraction area so more than one individual will be able to extract at a time.

FY11 Recipient Name: St. Louis Metropolitan Police Department (MO)
Award Number: 2011-DN-BX-K512
Award Amount: $441,533
Abstract: The St. Louis Metropolitan Police Department Crime Laboratory has a backlog of cases at the DNA analysis level that could be partially alleviated by the hiring of part and full time DNA analysts and overtime funds for department and grant funded DNA analysts. The overall goals and objectives of this program will be to reduce the number of untested forensic casework samples, to enter eligible profiles into CODIS and obtain hits, and to prosecute the suspects. This will be accomplished by hiring 1 part-time and 4 full-time grant funded employees and overtime for the department and grant funded DNA employees. By increasing throughput and creating a more efficient laboratory it is expected that 442 cases will undergo biological screening, DNA analysis where appropriate, upload of eligible profiles into CODIS when obtained, and prosecution of suspects.

FY11 Recipient Name: Mississippi Department of Public Safety
Award Number: 2011-DN-BX-K430
Award Amount: $559,464
Abstract: The Mississippi Crime Laboratory System (MCL) operates the State of Mississippi's forensic DNA laboratory and is the designated by State Statute (Mississippi Code Annotated § 45-33-37) to operate the State-Designated DNA Database Laboratory. Mississippi Crime Laboratory System (MCL), consisting of a

central full-service laboratory in Jackson and three regional laboratories, is an ASCLD accredited system that undergoes external audits once every two years. MCL is a participant in NDIS and maintains all DNA analyses under the applicable federal privacy regulations.

The Mississippi Crime Laboratory (MCL) faces the challenge of providing essential forensic services to the criminal justice system of the state in a time of reduced budgets and increasing crime. At the present time, all DNA analysis, are performed in the Jackson Laboratory. The regional laboratories receive evidence from agencies in their region and provide weekly courier service to the main lab for evidence requiring examinations not available at the branch lab. Conventional Serological Examinations have been added to the services provided by two of the three regional laboratories, the Meridian and the Batesville Laboratories. The Gulf Coast Laboratory which was completely destroyed in Hurricane Katrina could not take on these additional services because the laboratory was housed in a temporary facility and lacked the space required for a Bioscience Unit. However, a new Gulf Coast Laboratory was completed in April 2011 with sufficient space for basic Serology examination and DNA analysis. The Gulf Coast Bioscience laboratory unit will receive Bioscience cases from the agencies served by the Gulf Coast laboratory; provide proper evidence documentation, perform serological examinations, and provide DNA analysis as appropriate. When Bioscience examinations (Serology and DNA) can be carried out in the Gulf Laboratory, it will no longer be necessary to forward evidence to Jackson for these examinations. This will eliminate a bottleneck in the system and increase the efficiency and timeliness of the MCL response to requests for Bioscience examinations. Providing these services locally means that communication will be enhanced and more effective case management and coordination can be achieved.

OBJECTIVES:
The objectives of this project are to improve the MCL system's DNA laboratory infrastructure and analytical capacity and to reduce the number of DNA database samples awaiting analysis.

ACHIEVING THE OBJECTIVES:
The Mississippi Crime Laboratory intends to achieve the objectives by accomplishing the following goals:

1. Maintaining the effectiveness of the DNA Unit by funding continued employment of four individuals whose jobs would be lost at the close of existing grants,
2. Providing the required continuing education for existing DNA staff,
3. Maintaining the improved turnaround-time for DNA cases that has been achieved,
4. Increasing DNA analysis throughput,

5. Insuring continued development of the CODIS data base by supplying Buccal swab kits to the Mississippi Department of Correction (MDOC) for the collection of samples,
6. Supplying the new Gulf Coast Laboratory DNA unit with additional equipment required for the operation of the unit,
7. Reducing the number of DNA database samples awaiting analysis by outsourcing offender samples to an accredited fee-for-service laboratory and paying overtime for existing qualified laboratory employees to review the DNA database profiles produced by the vendor laboratory.

FY11 Recipient Name: Montana Department of Justice
Award Number: 2011-DN-BX-K501
Award Amount: $200,000
Abstract: The Montana Department of Justice Forensic Services Division (MT DOJ FSD) is the agency responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the state of Montana. Montana Code Annotated 44-6-102 designates the MT DOJ FSD Laboratory to conduct analysis of DNA database samples collected from all convicted felons.

Federal funding from this award will be used for the following goals:

1. Increase the capacity of the laboratory by purchasing equipment and supplies (ABI 3500 genetic analyzer, Rainin 12 channel pipetters and FTA card-based convicted offender collection kits).
2. Reduce the forensic DNA case and convicted offender sample backlogs and turn-around-times and to increase sample throughput by improving the efficiency of convicted offender sample processing to the point where one analyst with scant assistance can perform the vast majority of the work. This will allow two CODIS DNA technicians (primarily serologists who also perform CODIS DNA technical work) to focus exclusively on casework production.
3. To provide continuing education for each analyst.

FY11 Recipient Name: City of Charlotte (NC)
Award Number: 2011-DN-BX-K507
Award Amount: $365,831
Abstract: The Charlotte-Mecklenburg Police Department Crime Laboratory (CMPD) seeks $365,831 in federal funding to maintain current federally funded positions and to add an additional DNA analyst.

The CMPD has a limited budget in the laboratory for personnel and without this funding would be unable to maintain and add these positions. With the success of DNA in helping to solve all cases, both violent and property crimes, the number of cases submitted to the laboratory for DNA testing has increased to a size that cannot be managed with the current number of city allotted positions. The additional staffing and requests have put a burden on the Property Control which the Evidence Technician funded by past grants and this grant has achieved to relieve.

Funding from this grant will allow the laboratory to process an additional 400 DNA cases and an additional 100 serology cases by the end of the award period; thereby increasing the production of the section by 20% and reducing the turnaround time of all cases to 90 days. This will result in more rapid identification of individuals responsible for crime and a quicker exoneration of the innocent, which will further aid the criminal justice system. In addition, the CMPD requests funds to outsource approximately 100 DNA cases.
Funding will also provide for travel, and registration to three DNA meetings for training, and office supplies for grant funded personnel.

The CMPD Crime Laboratory is a unit of the City of Charlotte, and part of the Charlotte-Mecklenburg Police Department. It is an ASCLD-LAB accredited laboratory, undergoes external audits every two years, and uses CODIS on a daily basis to upload profiles to SDIS which are then uploaded to NDIS. All DNA analysis performed under this program will be maintained under the applicable federal privacy regulations.

FY11 Recipient Name: North Carolina Department of Justice
Award Number: 2011-DN-BX-K497
Award Amount: $2,129,891
Abstract: History: The State Crime Laboratory is part of the North Carolina State Bureau of Investigation, a division of the North Carolina Department of Justice. The laboratory is an ASCLD-LAB accredited laboratory that provides DNA testing for a population of 9,535,483. The SBI has been performing forensic DNA analyses for law enforcement agencies across the state since 1990.

As the reliability and the reputation of the use of DNA analysis for forensic means increased, so did the demand for its use. In order to reduce the in-laboratory backlog and focus the laboratory's resources on those cases most needing attention, the SBI implemented a case acceptance policy on three different occasions. The policy limited the cases worked by the crime laboratory to only those cases which contained known blood standards from all individuals associated with the crime.

In 2004, the Forensic Biology Section began accepting no-suspect rape kits and as additional staff was hired, expanded its no-suspect policy to include all cases except for misdemeanor property crimes. In 2005, the section switched from a gel based platform to a capillary platform. This new platform was determined to be much more sensitive. As a result of this new sensitivity, the section began to work "touch evidence."

As a result of the broader acceptance policy and ability to perform analysis on touch cases, the number of case submissions increased as well as the number of DNA profiles uploaded to the Combined DNA Indexing System (CODIS).

In addition to performing DNA analysis on casework, the section created a DNA database as a result of the DNA Identification Act of 1994. State legislation required that blood samples from individuals who were convicted of serious crimes, i.e., homicide, rape, sexual assault were to be submitted to the laboratory for analysis. These DNA profiles were then uploaded into a database for comparison. The North Carolina State Crime Laboratory is the designated crime laboratory that conducts analysis of DNA database samples for the state.

With the advent and maturation of CODIS, forensic DNA analysis is increasingly being used as an investigative tool. The number of requests for analysis on all types of cases consistently outpaces the laboratory's ability to work these cases. To meet this demand, the SBI has devoted, and continues to devote, additional personnel. Until December 2002, there were ten analysts in the section who were certified to perform either Body Fluid Identification or DNA analysis and five analysts certified as database analysts. In December of that year, the North Carolina Attorney General began to push for additional analysts whose primary goal was to identify and work the thousands of untested rape kits that sat on the shelves of law enforcement agencies across North Carolina. His plan was to ask the North Carolina General Assembly for six additional DNA analysts each year for the next four years. The section was immediately authorized six new positions that year. In 2003, the section was allotted two sets of increases, 1) six additional DNA analysts to work on forensic casework and 2) two additional DNA analysts and two database analysts whose job responsibility would be to assist with the increase in workload as a result of North Carolina becoming an all-felons state with regards to CODIS.

Although the section was given these increases in staff, the legislature did not provide funding for additional space. In 2004, the General Assembly approved a physical expansion of the Crime Laboratory, but due to overcrowding in the section, no additional personnel were allocated. In 2005, the section broke ground for a $5.1 million, five-story laboratory expansion and was allocated an additional six DNA analysts. In 2007,

using funds from the 2005 DNA Capacity Enhancement Grant, this existing facility was renovated and equipped with hoods, telephones, casework, etc. In 2010, the North Carolina legislature approved DNA samples to be collected upon arrest for certain violent felonies. As a result of this legislation, the section was given four DNA analyst positions and three processing assistants. In total, the Forensic Biology Section has twenty-eight analysts involved in forensic casework and sixteen individuals assigned as database analysts or support personnel.

As part of National Institute of Justice (NIJ) DNA Backlog Program grants, the Section worked numerous backlogged cases and obtained CODIS hits thereby solving cases which would not have been solved had it not been for the funds provided by these grants. In 2010, with the assistance of grant funding from NIJ, the Section completed 2,431 jobs to reduce the on-hand backlog, entered 746 suspect DNA profiles into CODIS, entered 533 forensic unknown samples into CODIS and obtained 420 CODIS hits.

A negative consequence, however, is that the DNA program has become a victim of its own success. As more cases are solved solely as a result of DNA analysis, word spreads from officer to officer and agency to agency and case submissions increase dramatically. This is particularly true with unsolved property crimes and those cases involving “touch DNA evidence”. Therefore, in spite of grant funding provided by NIJ, case backlogs have increased rather than decreased over time. For calendar year 2008, there were 2,557 jobs submitted to the Forensic Biology Section. Submissions increased to 3,289 in 2009; in 2010, there were 3,191 submissions. Section job completions rose from 1,703 in 2008 to 2,530 in 2009; in 2010, the section completed 2,431 jobs.

Project goals and objectives:

1) To work an additional 1,123 cases in-house and enter those DNA profiles into CODIS which meet NDIS DNA Data Acceptance Standards.
2) To purchase six additional extraction robots, bringing the section total to 13. As these extraction robots are purchased, validated and assigned to specific pairs of analysts, it is expected these instruments will relieve these analysts of a substantial amount of hands-on work when compared to performing manual extractions. One benefit of this transition is analysts will experience sufficient time savings to enable them to conduct technical and administrative reviews of casework, currently the largest bottleneck in the section.
3) To renovate existing space into an extraction room for suspect standards.

4) To provide funding for the mandated training for analysts, maintenance contracts, supplies, overtime pay, and support of the laboratory information management system.
5) To provide funding for the purchase of arrestee/convicted offender kits.
6) To provide funding for the outsourced analysis of convicted offender and/or arrestee samples which will be reviewed by this laboratory and uploaded into CODIS. Analysis costs range from $19.49 for convicted offender samples to $26.99 for arrestee samples with a 10 day turnaround time. As a result, this funding will cover the cost of between 16,383 and 22,687 samples depending on the ratio of convicted offender samples to arrestee samples analyzed.

FY11 Recipient Name: North Dakota
Award Number: 2011-DN-BX-K511
Award Amount: $200,000
Abstract: The Office of Attorney General, Crime Laboratory Division is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiner and coroners within the state of North Dakota. The North Dakota Century Code 31-13 designates the Office of Attorney General, Crime Laboratory Division as the agency responsible for conducting DNA analysis on DNA samples collected from all convicted felony and registered offenders, as well as all felony arrestees in the state of North Dakota; the Office of Attorney General, Crime Laboratory Division is responsible for storing and maintaining the resultant profiles in the North Dakota State Index System (SDIS) and uploading the qualified profiles into the National DNA Index System (NDIS).

The Federal funding from this award will be used for the following goals:

1. Reducing the DNA database sample backlog through purchasing supplies and profiling kits.
2. Increasing the capacity of the laboratory by purchasing a 3500 Genetic Analyzer.
3. Providing the required continuing education for each analyst, purchasing text books for each analyst, and purchasing a subscription to the Journal of Forensic Sciences.

The Office of Attorney General, Crime Laboratory Division is striving to attain an average 30 day DNA and database case turn-around time. The agency also expects to work at least 1,250 DNA database samples (which includes 62 QC samples) using Federal funding. The projected number will be greater than 1,250 because the laboratory has validated 1/2 reaction volumes for database samples.

FY11 Recipient Name: Nebraska State Patrol
Award Number: 2011-DN-BX-K496
Award Amount: $353,073
Abstract: The Nebraska State Patrol is a unit of state government with an existing ASCLD/LAB accredited crime laboratory. The Nebraska State Patrol Crime Laboratory undergoes annual DNA audits, including an external DNA audit every two years.

The purpose of the Nebraska State Patrol Crime Laboratory DNA Backlog Reduction program is to reduce the time required to process forensic DNA casework and database samples, to increase throughput and to reduce the number of forensic DNA casework and DNA database samples awaiting analysis. $353,073 in funding provided by the National Institute of Justice is requested to achieve this goal.

To accomplish program goals, objectives and performance measures have been established. When completed, improvements over current operations in forensic DNA casework, DNA database backlog reduction and crime laboratory capacity enhancement for DNA analysis will have occurred. The following information details the Nebraska State Patrol Crime Laboratory DNA Backlog Reduction program.

Objective 1: Improve the Crime Laboratory's DNA analysis capacity for casework.
- Performance Measure: Each analyst will increase the number of samples analyzed each month from 34 to 40.
- Performance Measure: Reduce the average number of days between the receipt of a forensic DNA sample and the delivery of results to the appropriate agency from 60 to 50 days.

Objective 2: Reduce the number of backlogged DNA cases.
- Performance Measure: Reduce number of backlogged DNA cases from 81 to 65 cases.
- Performance Measure: Increase the number of CODIS hits attributable to the forensic casework DNA analyses funded under this announcement.

Objective 3: Improve the Crime Laboratory's DNA analysis capacity for DNA analysis on DNA Database samples.
- Performance Measure: The DNA database analysts will increase the number of database samples analyzed each month from 295 to 480.
- Performance Measure: Reduce the average number of days between the receipt of DNA database samples and the upload of DNA profiles to CODIS from 270 to 90 days.

Objective 4: Reduce the number of backlogged convicted offender DNA database samples.
- Performance Measure: Reduce the number of backlogged DNA database samples from 2,000 to 500 samples.

Performance Measure: Increase the number of CODIS hits attributable to the DNA database samples analyses funded under this announcement.

Seven tasks will be undertaken to enable the successful completion of this project. Those tasks are: 1) continue the DNA Backlog grant funding for one forensic scientist, 2) provide funding for one DNA database laboratory technician who was previously funded in the FY2010 Convicted Offender grant, 3) provide overtime to all forensic scientists, 4) purchase and validate an additional Qiagen EZ1 Advanced XL extraction robot, 5) provide staff training, 6) purchase and validate an additional AB 7500 Real Time PCR instrument for DNA quantitation, and 7) purchase copies of user licenses of the GeneMapper IDX DNA analysis software for each analyst. In addition to these tasks, a dust cover will be purchased for the Tecan robot previously purchased with the 2007 DNA Backlog Reduction grant funding. This dust cover is being purchased to reduce the effects of the air handling system on the gravimetric measurements of the Tecan robot.

When complete, the outcome of this program will be a significant improvement in the number of days between the submission of a sample to the delivery of test results, an increase in the overall DNA analyses completed, and a reduction in the Nebraska State Patrol Crime Laboratory's backlog of forensic DNA casework and DNA database samples.

FY11 Recipient Name: New Hampshire Department of Safety
Award Number: 2011-DN-BX-K413
Award Amount: $200,000
Abstract: The New Hampshire State Police Forensic Laboratory (NHSPFL) is the sole provider of forensic services in the State of New Hampshire. As such, the laboratory performs all serology and DNA analyses in association with criminal investigations in the state, and also is responsible for the analysis and entry of offender and casework samples into the CODIS database.

Like all other states, the NHSPFL is facing increased budgetary constraints coupled with a recent DNA database expansion which went into effect late last year. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog and maintain or improve the current turnaround times through analyst overtime and purchasing supplies.
2. Reducing the DNA database sample backlog through purchasing supplies.

3. Increasing the capacity of both the casework and CODIS laboratories by purchasing equipment (automated puncher, microscope, alternate light source, coolers).
4. Providing the required continuing education and proficiency tests for analysts, as well as maintaining licenses necessary for the laboratory's LIMS system.

It is expected that the NHSPFL will analyze a minimum of 300 DNA cases and 1,000 database samples utilizing grant funds, and maintain its compliance with the FBI's DNA Quality Assurance Standards.

FY11 Recipient Name: County of Union (NJ)
Award Number: 2011-DN-BX-K470
Award Amount: $90,000
Abstract: The Biology Section of the Union County Prosecutor's Office Forensic Laboratory offers both serological and DNA analysis to law enforcement within the county as well as other counties at the request of the Union County Prosecutor's Office. The laboratory consists of two (2) DNA analysts and the DNA Technical Leader who also conducts analysis. The DNA analysts also serve as the Quality Assurance Manager/Interim Laboratory Director and Chemical Hygiene Officer respectively and the DNA Technical Leader also serves as the CODIS Administrator. Due to budgetary constraints, the laboratory cannot hire any additional DNA analysts at this time. For over a year, the Biology Section has been working overtime to meet the needs of the current caseload as well as fulfill the responsibilities of each of the analysts' additional duties. In short, with our current staff, the laboratory is unable to allocate time to the required internal validation necessary to increase our offerings and therefore, provide the highest quality analysis to our clients and increase the number of DNA profiles searchable through CODIS.

The laboratory was accredited by ASCLD-LAB in 2008. Since that time, the laboratory has offered nuclear DNA analysis utilizing the Quantifiler™ Human DNA Quantification Kit and the AmpFlSTR® Identifiler® PCR Amplification Kit both from Life Technologies (formerly Applied Biosystems). The laboratory utilizes the following instruments for DNA analysis also from Life Technologies: 7500 Real Time PCR System, 9700 Thermal Cyclers and 3130 Capillary Electrophoresis Genetic Analyzer.

It is the goal of the Biology Section to add the following kits from Life Technologies to its offerings: Quantifiler™ Duo DNA Quantification Kit and the AmpFlSTR® Minifiler™ PCR Amplification Kit. Before these kits can be implemented validation must be completed. Presently this laboratory does not have the man power to validate new kits and maintain current casework. Therefore it is the goal of the laboratory to utilize this

funding to form a contract with Life Technologies to validate both Quantifiler and Minifiler kits.

The Quantifiler™ Duo DNA Quantification Kit would be invaluable in the sexual assault cases in which no semen is detected or semen has been detected but no spermatozoa or very low numbers of spermatozoa have been observed. These types of cases may rely on the laboratory's ability to determine if male DNA is present on intimate items or the clothing from the victim which may also contain the victim's own female DNA. An example is a pair of underwear from the victim where amylase has been detected in the interior crotch. Amylase may indicate a salivary component although many other body fluids also contain this enzyme. An item such as this may provide the only probative scientific evidence and therefore, DNA analysis would be conducted. However, determining at the quantitation step whether male DNA is present or not would save time and effort to the laboratory and our clients.

The AmpFlSTR® MiniFiler™ Amplification Kit would be invaluable in cases where partial DNA profiles have been obtained with our current amplification kit. These partial profiles are more commonly encountered in our analysis of "contact" or "touch" DNA items such as steering wheels or weapon handles. Many of DNA profiles that the laboratory currently generates from this type of evidence are insufficient to be searched through CODIS.

FY11 Recipient Name: New Jersey Department of Law and Public Safety
Award Number: 2011-DN-BX-K462
Award Amount: $1,741,523
Abstract: The New Jersey State Police, Office of Forensic Sciences (OFS) maintains five forensic laboratories, which service over eight million people living in New Jersey. The system is comprised of the Hamilton Technology Complex as well as the North , East, South regional labs and the Equine laboratory. The Hamilton Technology Complex is a full service state laboratory and is responsible for analyzing evidential material associated with criminal investigations, DNA analysis of the 13 core loci, and analysis of convicted offender samples for entry into the State and National Combined DNA Index System. The Hamilton Complex also houses the FBI Regional Mitochondrial DNA Laboratory. The three regional laboratories provide drug, toxicology and fire debris analysis services. The OFS DNA Laboratory proposes to screen and perform DNA analysis on evidence from 434 cases from its case backlog and upload the resultant DNA profiles generated into CODIS. The accomplishment of this task will provide for the analysis of potential DNA evidence and data basing of DNA profiles from a substantial number of the OFS biology/DNA backlogged cases.

The New Jersey State Police OFS CODIS database contains over 11,000 forensic unknown profiles. The funding through this DNA Backlog Reduction Program will provide the opportunity to expand that number with profiles from our most heinous cases. The lab cannot presently attain the reduction in the backlog without the use of an overtime program. Consequently, in order to analyze the estimated 434 cases it will be required that an overtime program be instituted in order to accomplish the complete analysis from preliminary screening to mailing of a final DNA report to the appropriate agencies.

The overtime program will help to reduce the current bottleneck in the screening of cases for biological evidence, which can then be further analyzed for DNA and the results uploaded into CODIS. In addition, overtime funded through the NIJ grant would allow the lab to significantly decrease its turn-around time on other cases coming in the door. All results that yield eligible profiles will be uploaded to the CODIS database. Purchase of instrumentation and equipment will be used to replace out dated inventory and help furnish a new high sensitivity lab that is part of a renovation project being partly funded by previous NIJ awards.

FY11 Recipient Name: New Mexico Department of Public Safety
Award Number: 2011-DN-BX-K464
Award Amount: $808,675
Abstract:
Abstract - DPS
The main goal of this project is to utilize grant funds to improve overall timeliness of analytical results to submitting agencies. This project can be accomplished by the following five parts: 1) Overtime for existing staff and funding for a technician position, 2) funding for two forensic scientist college interns to validate new technologies and/or methodologies, 3) Upgraded instrumentation and equipment and laboratory supplies for analysis, 4) Augmentation of continuing education and training of DNA analysts, travel expenses, and 5) associated administrative costs. The overall goal for the NM DPS Northern Forensic Laboratory DNA section is to provide DNA analysis from the time of submission to completion in six weeks or less for at least 85% of all DNA cases once the current backlog has been addressed. The current backlog of the DNA section is approximately 230 cases.
Abstract - APD
The intent of this grant program is to provide the City Of Albuquerque Police Department Criminalistics Laboratory (APDCL) DNA Unit with the resources to reduce the amount of backlogged cases that exist within the City of Albuquerque and the County of Bernalillo. The main objective of this lab is to use this grant to outsource DNA samples to an outsourcing vendor.

The APDCL has purchased the contracts of two working outsourcing vendors. These vendors accept DNA cases and now offer services that render full reports after DNA analysis at a cost that varies between $500 and $1,000 per case. So property and violent crimes that require both serology and DNA analysis can be outsourced for complete "analysis to written report" work. Property and violent crimes that require more complex work can be sent for analysis only and reports generated in the lab, or at the labs discretion, worked "in-house". It is this labs hope to complete 300 plus backlogged cases using funding from this proposed grant.
As a secondary objective, the APDCL would like to secure two trips for continued training events for an anticipated five scientists. And finally, we would like to replace an old vacuum centrifuge with an updated model as a capacity enhancement endeavor.

Abstract – NMDIS
The New Mexico DNA Identification System - Administrative Center (NMDIS), is applying for supplemental, award funding. The goal of this project is to utilize grant funds to purchase; one BSD600 Duet sample punch, and one case of Abgene 96 well, 1.2 ml deep round well block trays. Additionally, funds would be utilized to pay for contracted analysis services to our current, contracted DNA vendor, as is required, to complete the necessary validation of the BSD punch and deep well plates, on an estimated 12x plates.
The objective of the NMDIS is that through the successful validation of the BSD punch, in conjunction with DNA analysis processes utilizing the Abgene plates, that the NMDIS will be able to increase the level of quality assurance in sample preparation, decrease the potential for sample contamination and/or misidentification, decrease turn-around times for future analysis as well as allow for reductions in analysis costs. The total NMDIS backlog is less than 300 samples.

FY11 Recipient Name: Las Vegas Metropolitan Police Department (NV)
Award Number: 2011-DN-BX-K439
Award Amount: $839,498
Abstract: The City of Las Vegas and the surrounding area of Clark County, Nevada have a current population in excess of 1.9 million persons and, in 2010, hosted over 3.1 million visitors per month. The Las Vegas Metropolitan Police Department (LVMPD) Forensic Lab operates as a unit of local government providing full service forensic analysis capabilities to the southern Nevada community. In addition, it is the sole provider of forensic DNA analysis services to entire region of southern Nevada. This service area includes the adjacent Nye, Lincoln and Esmeralda Counties with an additional population of approximately 50,000 individuals. The LVMPD Forensic Laboratory also operates and administers the Southern Nevada Combined DNA Index System (CODIS). The database is a CODIS Local installation with both casework and

convicted offender responsibilities. As required by Nevada Revised Statute, ordinances were passed by Clark, Nye, Lincoln and Esmeralda county governments establishing the LVMPD Forensic Laboratory as the official DNA testing laboratory and repository for all DNA specimens collected under statute from the four southern Nevada counties.

The Biology/DNA Detail of the LVMPD has traditionally processed violent offenses and biological evidence associated with homicides, sexual assaults, robberies, attempted homicides, and kidnapping cases. However, in recent years, the LVMPD Forensic Lab recognized the impact it can make by performing DNA analysis, not only on the violent offenses occurring in our community, but also on the full range of property crimes, including burglaries and vehicle thefts in southern Nevada. It has been four years since the Biology/DNA Detail of the LVMPD started performing DNA analysis on property crimes, and case requests for DNA analysis continue to flood the laboratory creating a DNA backlog that has grown to a staggering rate in a short period of time. In just one year, the forensic DNA case backlog increased by 23% from 895 cases on December 31, 2009 to 1,103 cases on December 31, 2010.

The Nevada State CODIS database contains all DNA collections mandated and collected according to Nevada Revised Statute (NRS). Effective October 1, 2007, Nevada state law enacted “all felon” legislation requiring felons to submit a biological specimen to the database. At the onset, the legislation increased collections of DNA database samples substantially. However, in the past few years buccal swab intake has decreased as Nevada’s population has slightly declined and the number of felons already collected, upon conviction, continues to increase.

The 76th Legislative Session in Nevada is currently in session and is scheduled to adjourn in June 2011 unless a special session is needed. Nevada Legislatures are expected to deliberate on genetic testing bills geared toward the collection of felony arrestees. If the law passes, the LVMPD is expected to have an intake of approximately 30,000 database samples per year, which is a marked increase from the 6,499 offender samples collected in 2010. As such, the LVMPD is making provisions to streamline database sample processing in preparation for the new law.

The LVMPD Forensic Lab is requesting funds in the amount of $839,498 to increase the capacity and efficiency of the laboratory. In 2010, the LVMPD was awarded DNA backlog funds to begin the first phase of purchasing a Laboratory Information Management System (LIMS). In addition, 2010 funds were awarded to the LVMPD for both hardware and software purchases of this system. In 2011, the Forensic Laboratory is seeking additional funds to enable the continuum of the LIMS system project through the purchase of additional hardware, software, and professional integration services to

finalize the LIMS project. A LIMS system will improve overall casework management, efficiency, and work flow throughout the laboratory, impacting the existing backlogs in forensic DNA casework, DNA database analysis, toxicology, firearms and toolmark comparisons, controlled substance analysis, latent print comparisons, document and shoeprint examinations, and trace evidence examinations. Incorporating a LIMS has many long-term benefits to include eliminating redundant data entry previously entered by other LVMPD employees during the collection and storage of evidence, capturing and transferring instrument data, minimizing administrative costs, accelerating report delivery, minimizing mistakes made by humans, and facilitating the interface between intra-lab and intra-agency requests. Furthermore, a LIMS will directly affect the DNA analysis process by reducing DNA case and database sample turn-around-time, increasing the number of forensic DNA and database samples processed each month, and reducing the LVMPD's existing DNA backlogs. A LIMS system will also be vital for tracking and managing database samples should the state of Nevada adopt any form of arrestee legislation. This DNA database system would alleviate a huge bottleneck currently being experienced through manual tracking and maintaining CODIS-entry metrics required for the National DNA Index System (NDIS).

Funds for the purchase of printers for the Biology/DNA Detail and the file room that handles case files for the Biology/DNA Detail are being requested. The purchase of a cache array, a hard drive array, forty-eight terabytes of storage server space, a multilayer director for class switches and a tape library are also being requested which will be used to assemble a storage server to house high resolution photos required for forensic documentation, electronic data, and documents such as reports and laboratory notes for the entire forensic laboratory in connection with the LIMS. A LIMS consultant company will be hired to integrate the LIMS into the current workflow processes of the Forensic Lab, enabling staff to remain focused on casework analyses.

To further the goal of DNA backlog reduction, a portion of grant funds ($116,977) will be used in the form of overtime for in-house handling, screening and analysis of at least 117 forensic DNA cases. Completing a minimum of 117 forensic DNA cases and entering eligible DNA profiles into CODIS extends above and beyond the current capabilities of the Biology/DNA Detail. Members of the Biology/Detail will travel to national meetings to maintain compliance with the Quality Assurance Standards related to continuing education requirements as follows: two members of the Biology/DNA Detail will travel to the American Academy of Forensic Sciences meeting to be held in Atlanta, GA in 2012; two members of the Biology/DNA Detail will travel to the 23rd International Symposium on Human Identification Meeting (Promega) to be held in Nashville, TN in 2012; and two members of the Biology/DNA Detail will travel to the

American Academy of Forensic Sciences meeting to be held in Washington DC in 2013. State and federal guidelines will be followed for hotel and per diem rates.

Funds will also be used to purchase DNA equipment to alleviate bottlenecks such as vortexers, pipettes, centrifuges and a camera. If awarded, grant funds will be used to purchase a new CODIS server, workstations, and associated software to facilitate the FBI's upgrade to CODIS Version 7.0. The LVMPD will also procure a semi-automated punching system for buccal cell cards which will streamline DNA database sample processing in anticipation of new arrestee legislation. Supplies such as offender collection kits and scalpels will enable the laboratory to collect and process DNA database samples. The LVMPD will also use funds to outsource the validation of Y-STR chemistry which will enhance the service capabilities of the Biology/DNA Detail.

Due to the wear and tear on pipettes, the Biology/DNA Detail is also requesting federal grant funds to enable DNA pipettes to be calibrated more frequently than once a year. The LVMPD currently only has the budget to pay for annual preventive maintenance and calibration of DNA pipettes, however it has been deemed critical to have DNA's pipettes calibrated more frequently. Pipette calibration funds from this grant will enable all of DNA's pipettes to be calibrated six months after the LVMPD pays for their annual calibration. Finally, the LVMPD is requesting funds to augment electrical and data configurations for LIMS equipment, as needed.

FY11 Recipient Name: Washoe County Sheriff's Office (NV)
Award Number: 2011-DN-BX-K460
Award Amount: $342,000
Abstract: The Washoe County Sheriff's Office (WCSO) Forensic Science Division provides full service forensic analysis, including Crime Scene Investigation, to the entire northern portion of the state of Nevada. This area encompasses borders of four states, specifically California, Oregon, Idaho, and Utah, and comprises 13 of the state's 17 counties, and includes well over 80 separate agencies. Washoe County has a current population in excess of 400,000 persons of which half reside in the city of Reno. The remaining 12 northern counties attribute an additional population base of approximately 230,000. The WCSO Forensic Science Division operates and administers the Nevada State Combined DNA Index System (CODIS); this database entails casework and convicted offender samples. As the State site for CODIS, the WCSO Forensic Science Division also has oversight responsibilities for CODIS use by the Las Vegas Metropolitan Police Department (LVMPD) Forensic Laboratory.

The Biology Unit of the WCSO Forensic Science Division is comprised of the Primary Examination, DNA, and CODIS Sections. The Biology Unit has continuously processed

biological evidence from not only violent crimes, including homicide, sexual assault, assault and battery, and robbery, but from property crimes as well. With recent year's budget cuts the Biology Unit resisted discontinuing DNA analysis on property crimes, recognizing the importance of these types of cases in assisting with criminal apprehension and crime prevention.

The Nevada State CODIS database contains all DNA collections mandated and collected according to Nevada Revised Statutes (NRS). Effective October 1, 2007, Nevada legislatures enacted "all felon" legislation requiring convicted felons to submit a biological specimen to the database. The 76th Legislative Session is currently in session and is scheduled to adjourn in June 2011. Nevada Legislatures are expected to deliberate on a genetic testing bill geared toward the collection of felony arrestees.

The WCSO Forensic Science Division is requesting funds in the amount of $342,000 to increase the capacity and efficiency of the Biology Unit. To continue the goal of DNA backlog reduction, a portion of the funds will be used in the form of overtime and supplies for in-house handling, screening and analysis of at least 35 forensic DNA cases. Completing a minimum of 35 forensic DNA cases and entering eligible DNA profiles into CODIS extends above and beyond the current capabilities of the Biology Unit. A Forensic Technician and Public Service Intern will be hired to perform administrative and technical assistance duties for the entire Biology Unit. Currently these types of duties are shared by all Biology Unit analysts, thus limiting their casework/database duties. To maintain compliance with continuing education requirements set forth in *The Quality Assurance Standards for Forensic DNA Testing Laboratories* and *The Quality Assurance Standards for DNA Databasing Laboratories,* funds are also being requested to allow Biology Unit analysts to travel to forensic national meetings. Funds are also requested to facilitate a state DNA meeting for the purpose of information sharing and uniformity regarding DNA casework and database analysis within the state of Nevada. Approximately one-third of the grant money requested will provide funding for outsourcing 3,600 database samples, including a site visit by the State CODIS Administrator, kits for the collection, storage cabinets and boxes, overtime for DNA profile review and CODIS upload, software to upgrade to CODIS Version 7.0, and a copier/scanner for the CODIS Section to facilitate ease of clerical duties associated with the database samples. Funds will also be used to purchase a freezer for the long term storage of DNA casework samples. The Forensic Science Division's two Evidence Technicians are sometimes unavailable for dispersing items in need of testing as they must leave their section to use a copier/scanner in the performance of their duties. Funds will be allocated for the purchase of a desktop copier/scanner that will be located within the Evidence Section. Space is quite limited in the Evidence Section for the process of evidence intake, particularly for items submitted

for DNA analysis. Mobile carts and additional shelving will enlarge this working space creating efficiency in this section. The remaining funds that are being requested will be utilized for rolling shelving units that will primarily be used to store Biology Unit supplies and laboratory reports. Due to a lack of space in the storeroom bulk items cannot be purchased at a savings. Retrieval of reports for court purposes and for database hits is difficult as these reports are in several locations. Installation of rolling shelves in the storeroom will nearly double the storage space and increase the efficiency of supply and report retrieval.

FY11 Recipient Name: City of New York, Office of Chief Medical Examiner
Award Number: 2011-DN-BX-K469
Award Amount: $1,500,000
Abstract: The Department of Forensic Biology, of the Office of Chief Medical Examiner, serves as the public forensic laboratory for the City of New York and provides serology and DNA testing on thousands of case submissions every year. In 2010 a total of 28,214 DNA samples were extracted, with STR profiles generated, analyzed, and reviewed. As a result, the Department of Forensic Biology uploaded 2,516 profiles into CODIS. During the same year, 1,056 offender matches and 255 case-to-case matches were made.

Ongoing budget reductions have lowered the existing DNA criminalist head count, threatening Forensic Biology productivity and the timeliness of DNA testing results. 2011/2012 goals are to maintain the current capacity and reduce turn-around time and case backlog. The FY11 backlog reduction proposal aims to achieve this by focusing on three types of actions to be taken:

1) Increase available staff hours through weekend overtime and new hires.
2) Purchase supplies, scientific and IT equipment to avoid processing bottlenecks.
3) Provide continuing education through conference travel.

It is expected that weekend overtime will result in 960 additional assignments that can be worked. The additional employees will screen and process cases up to STR typing. Here the goal is to reduce turn around time as much as possible but due to the pending LIMS implementation, it is not possible to quantitate these expectations.

FY11 Recipient Name: County of Erie (NY)
Award Number: 2011-DN-BX-K479
Award Amount: $597,722
Abstract: and Federal law enforcement agencies of Erie County, New York (population 900,000). Additionally, we provide forensic DNA analysis for all of Niagara County and Orleans County (total population 270,000) and occasional forensic DNA analysis for law enforcement agencies from 3 neighboring counties and State and Federal agencies responsible for investigating cases in Erie County. We currently have 10 full-time DNA analysts (includes 2 section supervisors who also perform casework analyses) and one part-time DNA analyst with 1 open full time DNA analyst position. With the success of CODIS, casework requests have been steadily increasing, especially in the area of forcible sexual assault, burglary, weapons possession, robbery and assault. The weapons possession cases require a short turn around time in order to meet court mandated time constraints. Additionally, we are experiencing an increase in the number of items submitted for each case and more requests for DNA analysis on evidence associated with homicides, including cold cases. This has resulted in a significant backlog and a need to decrease the turn-around time. In order to further increase the analytical capabilities of this lab, it is necessary to perform a portion of the lab work on backlogged cases using overtime and to continue the funding for the 2 DNA analyst positions that were funded under previous NIJ grant programs. It is anticipated that the additional overtime spent on casework will result in a decrease in the turn-around time and a decrease in the number of backlogged cases, since the analysts will be able to process more cases in a shorter period of time. The long term goal is to analyze the current backlog of cases and to then provide a 30 day turn-around time for new cases. The funding from this grant ($597,722) will result in the completion of 336 additional cases using overtime.

Additionally, a portion of the funding will be used to purchase the supplies necessary to analyze the additional cases and to train the new DNA Analysts. Funding is also allocated to renew the annual maintenance contracts for the 3 Genetic Analyzers and the RT-PCR instrument.

FY11 Recipient Name: County of Suffolk (NY)
Award Number: 2011-DN-BX-K458
Award Amount: $264,319
Abstract: The 2011 Forensic DNA Backlog Reduction program is intended for increasing the throughput and timeliness of forensic analysis of evidence submitted to the Suffolk County Crime Laboratory Biological Sciences Section. This task is to be completed in four separate ways. First, increase capacity and efficiency will be increased through the purchase of an Applied Biosystems 3500 Genetic Analyzer. This is an 8 capillary instrument which will replace our current 4 capillary 3130 instrument.

Second, funds will be used for the purchase of supplies, such as capillary arrays and kits, used in DNA analysis. This replaces supplies that we will not be able to purchase due to budget cuts, allowing us to maintain our current level of service. Third, funds will also be used to outsource backlogged DNA samples to an accredited fee-for-service vendor laboratory for DNA Analysis. This will allow us to add DNA profiles to CODIS from no-suspect property crime cases that we are not able to analyze in-house due to a lack of staff. Finally, a contract employee will be hired to assist in the screening of backlogged biological evidence. This will ultimately lead to DNA analysis and CODIS entry of samples from backlogged cases that we are not able to analyze due to our manpower constraints.

FY11 Recipient Name: County of Westchester (NY)
Award Number: 2011-DN-BX-K473
Award Amount: $267,323
Abstract: Funding from this grant will go toward satisfying two ends: increasing the capacity to perform DNA analysis, and reducing the backlog created by uncompleted cases in the Forensic Science Laboratory of the Westchester County New York Division of Forensic Sciences. The accomplishment of these goals is tantamount to continuing our pledge to furnish DNA results to investigating agencies within thirty days.

Our laboratory has been online with STR DNA typing since 1999. In twelve years the demands on, and expectations of, all forensic case-working laboratories has intensified such that analytical turn-around time must be greatly reduced and the typing techniques employed must be increasingly more sophisticated. Currently our laboratory employs nuclear STR typing and Y-STR typing techniques. In addition, the FBI Quality Assurance Standards, which took effect in July 2009, impose new requirements for casework analysis and mixture interpretation.

To maintain pace with evolving trends and national accreditation requirements for DNA analysis and to reduce our current backlog of cases to be analyzed for DNA, our laboratory will require upgrades in instrumentation and software applications, new laboratory supplies, hardware support via instrument service contracts, access to training opportunities and travel monies, and the capability to hire temporary support staff. This augmented capacity will enable us to process, record, screen, and analyze forensic DNA samples in order to further reduce the amount of time required to complete casework that has initially met our thirty day turn-around criteria. We anticipate the momentum created by this optimized workflow will preemptively reduce future bottlenecks at the examination and analytical DNA stages of casework by substantially minimizing our current backlog.

The Federal funding from this award will be used for the following goals:

1. Maintaining the trend of providing the most probative case results to requesting agencies within thirty days by hiring DNA technicians to perform necessary routine quality assurance duties to free up analysts' time
2. Increase our capacity to complete ancillary casework procedures through purchasing laboratory supplies and instrumentation
3. Reduce our backlog of “UCR Part 1 Violent Crimes” forensic casework including property crimes by expanding our capacity to handle DNA samples by purchasing new instrumentation and hiring DNA technicians to aid in handling, screening, and analyzing backlogged DNA samples
4. Providing the required continuing education for analysts through specialized training at regional and national meetings, and purchasing reference books to enhance our procedures and protocols

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FY11 Recipient Name: Monroe County (NY)
Award Number: 2011-DN-BX-K485
Award Amount: $315,381
Abstract: The Monroe County Public Safety Laboratory (MCPSL) is a regional crime lab that regularly provides forensic services for over 40 police agencies within an eight county region of New York State including Monroe, Genesee, Livingston, Ontario, Seneca, Wayne, Wyoming, and Yates Counties. In addition to these Counties, the laboratory often provides services to the New York State Police, ATF, US Attorney's Office and the New York Park Police (approximately 52 agencies). The City of Rochester is the largest city within the eight county region and accounts for approximately 75% of the cases completed by the MCPSL. The total service area represents a population of approximately 1,155,000 (U.S. Census 2000). The MCPSL is the agency responsible for conducting DNA analysis on the DNA samples collected in the region and uploading samples into to CODIS database.

The MCPSL is facing monetary constraints severely impacting the supply, instrument purchase maintenance and travel budget allotted to the Forensic Biology section. The federal funding from this award will be used to achieve the following goals:

1. Reducing the forensic DNA case backlog by increasing the number of fully trained analysts and through purchasing necessary analytical supplies.
2. Increasing capacity of the laboratory by purchasing equipment (genetic analyzers) and upgrading DNA analysis workstations to accommodate software changes to support the new instrumentation.
3. Providing the required continuing education for each analyst.
4. Maintaining optimal instrument performance by continuing maintenance contracts on analysis instrumentation and supporting system equipment.

The MCPSL can expect to reduce the DNA case backlog by at least 120 cases by the end of the award period. The turnaround time is expected to reduce by 10% and the analyst throughput is casework is expected to increase by 10%.

FY11 Recipient Name: Nassau County (NY)
Award Number: 2011-DN-BX-K471
Award Amount: $258,312
Abstract: The objective of the proposed National Institute of Justice Forensic DNA Backlog Reduction Program for FY2011 is to reduce the overall turnaround time for the handling, screening, and analysis of forensic DNA samples, and to improve laboratory throughput in an effort to prevent future DNA forensic casework backlogs within the County of Nassau. Reduction in analysis turn-around will be achieved by reducing the time required to validate the Applied Biosystem's 3500 Genetic Analyzer, Identifiler Plus amplification system and Gene Mapper ID-X through the utilization of a vender contracted validation and training package who will be selected through a competitive bidding process. This will prevent the reallocation of several laboratory scientists to this validation project which has historically resulted in significant bottlenecks in DNA analysis, report generation, technical review and administrative review of DNA casework. This proposed method will also bring the aforementioned systems on-line sooner than the laboratory could utilize current staffing levels. Validation completion will result in more rapid development of DNA profile data due to the increased capillary number of the 3500 system. This coupled with the use of requested overtime funds to support the technical review and administrative review of backlogged DNA cases will result in the reduction of the current 117 case turn-around time to an estimated 90 days for the delivery of test results to the laboratory's user agencies.

In order to maintain the current capacity and improve the throughput of property crime related DNA analysis the laboratory is requesting the funds for the purchase of the QIAGEN QIAsymphony which will supplement the current liquid handler utilized for the extraction of DNA samples. This along with the purchase of reagents and consumables will prevent the rejection of ~300 property crime cases. This is a vital initiative to the laboratory and its users since property crimes accounted for 69% of submissions, 57% of CODIS profiles entered and 60% of CODIS hits returned in 2010.

The methods proposed for this project will be measured by the expected decrease in case turnaround time and increase in the number of CODIS eligible profiles entered into the database. Metrics will be generated by the Laboratory Information Management System report function.

FY11 Recipient Name: New York State Police
Award Number: 2011-DN-BX-K453
Award Amount: $1,542,876
Abstract: The New York State Police Crime Laboratory System provides state-of-the-art forensic Short Tandem Repeat (STR) DNA analytical capabilities for all NY State Police criminal case investigations. It also provides forensic DNA services for those state criminal justice agencies that do not have access to county/municipal crime laboratories or to medical examiners offices within the state. All forensic DNA casework for the NYSP is performed at the Forensic Investigation Center (FIC) in Albany. The NYSP FIC also maintains the state convicted offender DNA Database Unit.

The federal funding from the National Institute of Justice FY2011 DNA Backlog Reduction Grant will be used for the following goals:

1. Reduction of the current forensic DNA casework backlog by providing analyst overtime and by outsourcing of casework to a commercial genetic identity testing laboratory.
2. Increase in the analytical capacity of the forensic DNA casework laboratory by purchase of equipment (genetic analyzer), upgrading components of our information technology system (computers, network infrastructure, software development tool), acquisition of equipment for enhanced automation (96-well microplate sealer, robotic workstation), improved evidence storage (stationary evidence processing system) and removal of processing bottlenecks (centrifuges). Funds will also be applied for a consultant to serve as a Laboratory Information Management System Coordinator (LIMS Coordinator) and for consultants to perform process mapping of our existing protocols to help streamline the entire analytical process.
3. Provision of mandated continuing education for ten casework forensic scientists and for eleven forensic scientists in the databasing unit.
4. Decrease in the turn-around times for processing, analysis and CODIS entry of convicted offender DNA patterns by purchase of high-throughput equipment (genetic analyzer), upgrading components of the database's Laboratory Information Management System (servers), validation of the Identifiler Direct amplification kit, and acquisition of equipment for enhanced automation efficiency (liquid handling system, robot enclosures).

By the end of the award period, the New York State Police Forensic Investigation Center expects to reduce the current DNA case backlog by at least 480 cases (339 through in-house testing and 148 through out-sourcing). By increasing analytical capacity, the throughput of forensic scientists performing DNA analysis in the casework unit is expected to increase by 20%. Similarly, the turn-around times for DNA casework is expected to decrease by 30 days or more. The NYSPFIC DNA database unit expects

to reduce its turn-around time for development of DNA profiles from offenders convicted of qualifying offenses to below 20 days.

FY11 Recipient Name: Onondaga, County of (NY)
Award Number: 2011-DN-BX-K467
Award Amount: $180,218
Abstract: The Forensic Laboratories will utilize funds from the 2011 DNA Backlog Reduction Grant to obtain a DNA analyst and fund analyst overtime to reduce the current backlog and decrease the turn-around time for DNA cases. The laboratory will also use grant funds to provide discipline specific continuing education, ensuring that the staff remains up-to-date on new technologies. Additionally, supplies will be purchased that are necessary for casework done on overtime hours, a maintenance agreement will be acquired for service on DNA instrumentation will minimize any downtime for the section, and outdated pipettors will be replaced. Supplemental funding is requested for expenses directly related to accreditation including proficiency tests and pipette calibrations. Overall, the award will enable the laboratory to successfully implement the proposed plan increasing capacity, reducing turn-around time and the number of backlogged cases, further enhancing the services offered to the criminal justice community of New York State.

FY11 Recipient Name: City of Columbus (OH)
Award Number: 2011-DN-BX-K468
Award Amount: $272,315
Abstract: Columbus Police Crime Laboratory DNA Backlog Reduction Project 2011 seeks to enact improvements that will enable the crime laboratory to process DNA samples efficiently and effectively thereby reducing the backlog of DNA cases awaiting analysis. These improvements are critical to help the criminal justice system realize the full potential of DNA technology.

The Columbus Police Crime Laboratory is facing budgetary constraints. DNA database expansion legislation will be going into effect on July 1, 2011 and is expected to increase the number of database hits and confirmations performed by this lab. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime and purchasing supplies.
2. Increasing the capacity of the laboratory by purchasing equipment and software (DNA extraction robots and computer equipment).
3. Providing the required continuing education for each analyst.

The Columbus Police Crime Laboratory can expect to reduce the DNA case backlog by at least 118 cases by the end of the award period. The turnaround time is expected to be reduced to 65 days or less, and the analyst throughput in the casework sections is expected to increase 5%.

FY11 Recipient Name: City of Mansfield (OH)
Award Number: 2011-DN-BX-K446
Award Amount: $237,476
Abstract: The Mansfield Division of Police Forensic Science Section DNA Laboratory is an agency that is responsible for analyzing evidential material associated with criminal investigations for local law enforcement agencies in Mansfield, Ohio and adjoining communities. The DNA Laboratory is composed of 2 DNA Analysts and a part-time DNA Technician and has been in operation since 2001. This laboratory is also one of eight Ohio NDIS laboratory participants. CODIS operations are performed on the local level with samples being uploaded to the State of Ohio for submission to NDIS.

The Mansfield Division of Police Forensic Science Section DNA Laboratory continues to face budgetary constraints with respect to personnel. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime.
2. Maintain a limited backlog and low turn-around times through analyst overtime.
3. Maintain CODIS participation by hiring a DNA analyst.
4. Increasing the capacity of the laboratory by hiring one DNA Analyst and a part-time DNA technician.
5. Providing the required continuing education for each analyst and purchasing DNA related literature.

The Mansfield Division of Police Forensic Science Section DNA Laboratory can expect to reduce the DNA case backlog by at least 337 cases (300 in-house and 37 utilizing overtime by the end of the award period. The turnaround time is expected to be maintained at current levels and analyst throughput in the casework sections is expected to increase as new instrumentation was purchase with previous award funding.

Lake County Crime Laboratory

1. Increasing the capacity of the laboratory by purchasing a new CODIS computer/server, backup hard drives, software, four computer workstations, a walk-in freezer and DNA instrument service agreements.

FY11 Recipient Name: Cuyahoga County Office of Medical Examiner (OH)
Award Number: 2011-DN-BX-K445
Award Amount: $123,718
Abstract: The Cuyahoga County Office of the Medical Examiner (CCOME), formerly known as the Cuyahoga County Coroner's Office, builds upon the DNA Backlog grant initiatives implemented in previous years. In prior years, funding was spent on enhancing technological capabilities and hiring contracted DNA Technicians. The focus of the DNA Backlog funding coupled with procurement of key instrumentation has enabled the Regional Forensic Science Laboratory to reduce the average length of time to process and analyze a forensic DNA case while increasing the amount of DNA samples analyzed monthly.

The focus of funding for the 2011 DNA Backlog grant will be to further enhance and build upon initiatives of past grant cycles. In order to achieve these goals, the CCOME is in the process of hiring two contracted DNA Technicians. This grant will sustain the original investment in the technicians from the previous grant year. Although there have been delays in hiring the technicians this has recently been resolved and the anticipated results once they are on board remains the same. It is anticipated that with the addition of the technicians, and after proper training, in the first six months the laboratory will reduce turnaround time for DNA Backlog cases and increase analyst turnaround time for cases by 20%.

The Technicians will be contracted employees hired to do preparatory work for the analysts. It is anticipated that the additional staff will continue to foster the reduction of the backlog assuming there is not a dramatic increase of DNA cases. All casework will continue to be tracked by the laboratory information management system.

Staff development and training is a crucial component to the expanding field of DNA analysis. As a result, it is imperative that analysts and scientists attend national conferences and training in an effort to stay abreast of current trends and practices.

5% of the grant funds will be utilized toward professional development and training. One scientist will attend the Promega Meeting in Baltimore Maryland and two scientists will attend the AAFS in Atlanta Georgia.

FY11 Recipient Name: Hamilton County (OH)
Award Number: 2011-DN-BX-K475
Award Amount: $164,543
Abstract: The primary objectives of this project are:

1. To reduce the backlog by 96 old cases. Because of the continuing impact of the economic recession in this region, public funding continues at drastically reduced levels. Grant funds will insure supplies are available to process backlogged cases. The laboratory will process these cases in-house using existing procedures and recently upgraded equipment.
2. To reduce the turnaround time by at least 5%. The laboratory is taking steps to improve its efficiency and effectiveness. Recent changes to evidence acceptance policies will help eliminate the submission of items with a low probability of producing CODIS eligible DNA profiles.

FY11 Recipient Name: Montgomery County (OH)
Award Number: 2011-DN-BX-K483
Award Amount: $298,563
Abstract: The Miami Valley Regional Crime Laboratory (MVRCL) is a full-service forensic laboratory serving the law enforcement agencies in southwest Ohio. Approximately thirty-three law enforcement agencies in Montgomery County and forty-nine located in seven other counties contract with the laboratory annually for services. Additionally, numerous other agencies will utilize the services as needed throughout the year.

The MVRCL will use funds from this grant to meet the following goals:

1. Reduce the DNA case backlog by purchasing supplies for the casework and providing overtime,
2. Providing the required continuing education for each DNA analyst.
3. Increase the capacity of the DNA laboratory by expanding automated extraction capabilities on the Tecan Freedom EVO® 200 workstation, purchasing maintenance contracts for DNA equipment, laboratory equipment and office equipment.

The turn-around-time on DNA cases is expected to decrease by 30%. This would allow us to provide DNA results on most cases within 38 days. The analyst should increase the number of samples processed by 30%. We anticipate the number of samples that an analyst can process each month to be 39.

FY11 Recipient Name: Stark, County of (OH)
Award Number: 2011-DN-BX-K438
Award Amount: $130,000
Abstract: The Canton-Stark County Crime Laboratory is a full-service forensic laboratory which serves the Stark County area in northeastern Ohio. The laboratory's mission is to provide quality forensic support to the criminal justice system in Stark County, through science and technology. In order to further this mission and to address current staffing challenges and budgetary constraints, the laboratory plans to use federal grant funds to accomplish the following goals:

1.) Increase the capacity for examinations in the DNA analysis workflow by purchasing robotic DNA extraction instrumentation and adding a grant-funded DNA position.
2.) Increase task efficiency by purchasing additional software to streamline DNA data analysis and implement equipment which will improve and replace manual procedures.

The laboratory expects that by completing the goals and objectives of this project that the number of cases awaiting biological screening and/or DNA typing as well as the overall turnaround time for such cases will decrease by as much as 10% by the end of the award period. Moreover, the laboratory expects to be able to maintain the increased productivity in future years by the investment of grant funds in instrumentation, equipment and software tools aimed at increasing the capacity and efficiency of individual staff members.

FY11 Recipient Name: State of Ohio Office of the Attorney General
Award Number: 2011-DN-BX-K481
Award Amount: $1,511,159
Abstract: The Ohio Bureau of Criminal Identification and Investigation (BCI) is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies within the state of Ohio. BCI operates three regional forensic science laboratories throughout the state. The three regional laboratories - London, Richfield, and Bowling Green - have full forensic DNA casework laboratories.

Ohio Revised Code 109.573 designates BCI as the agency responsible for conducting analysis on DNA samples collected from all convicted felony and certain misdemeanor offenders as well as all adult felony arrestees in the state of Ohio. BCI is responsible for storing and maintaining the resultant profiles in the Combined DNA Index System (CODIS). The bureau's London laboratory maintains CODIS.

BCI has undertaken an aggressive and comprehensive initiative to decrease DNA testing turnaround time, reduce sample backlogs, and increase laboratory capacity. Additionally, new state legislation requiring testing of more samples has increased the burden on the laboratory's CODIS section prompting the need for increased capacity. Therefore, the federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog and decreasing the turnaround time through purchasing supplies.
2. Increasing the capacity of the DNA casework laboratory by purchasing two ABI 3500xl genetic analyzer systems.
3. Increasing the DNA database capacity through the purchase of one ABI 3730 48 Capillary Genetic Analyzer, 2 ABI 96-Well GeneAmp PCR System 9700 instruments, and 2 ABI BSD Duet Filter Paper Punches.
4. Reduce the DNA database turnaround time by implementing and validating the Genemapper ID-X for use as an expert system.

BCI expects to reduce the DNA case backlog by at least 672 cases by the end of the award period. The agency also expects to purchase two ABI 3500xl genetic analyzer systems using federal funding. Chemicals and reagents will be purchased from Applied Biosystems to validate and run backlogged casework samples on the ABI 3500xl genetic analyzer systems. The BCI turnaround time is expected to be reduced to 45 days or less, and the analyst throughput in the casework sections is expected to increase by 23%.
BCI's CODIS DNA database section expects to reduce the turnaround time of the DNA database samples by 20% by implementing the Genemapper ID-X software as an expert system once it is validated and approved by NDIS.The expected increase in analyst throughput by the end of the award period is 25% with the addition of the new CODIS DNA database equipment.

FY11 Recipient Name: City of Oklahoma City (OK)
Award Number: 2011-DN-BX-K405
Award Amount: $306,000
Abstract: The OCPD DNA Laboratory has seen explosive growth in case submissions since January 1, 2009. This growth is due to the now wide-spread application of DNA testing to property crimes occurring in the City of Oklahoma City. Previous use of DNA testing had been limited to case analysis of evidence related to violent crimes.

As a result, the DNA Laboratory is currently burdened with a backlog of approximately two hundred-fifty (250) cases composed of both violent and property crime cases. To increase the laboratory's efficiency and productivity, it is proposed federal grant funds

be used to pay for upgrading the laboratory's capabilities to take advantage of recent technical advances in the field of DNA testing including:

1. Validation and use of a new and improved next-generation DNA analysis kit currently available on the market providing better quality data and improving the laboratories ability to resolve mixed samples;
2. Purchase and validation of two (2) DNA extraction robots to automate the DNA extraction process and thus increase productivity;
3. Purchase of new computers and advanced DNA analysis software for use with the laboratory's current instrumentation. Use of this software will help streamline the analysis of DNA data and improve analyst productivity.

In addition to the purchases listed above, grant funds are requested to pay for the required validation of the new equipment in our laboratory. Use of validation services currently available on the market will free OCPD Laboratory personnel to continue forensic casework while the necessary validation studies are performed.

As a result of these improvements to laboratory capacity it is expected the backlog of DNA cases awaiting analysis will be reduced by at least forty (40) cases by the end of the grant award period. This reduction will be achieved through an estimated 10% increase in casework productivity.

FY11 Recipient Name: City of Tulsa (OK)
Award Number: 2011-DN-BX-K403
Award Amount: $254,549
Abstract: The Tulsa Police Department Forensic Laboratory (TPDFL) is responsible for analyzing evidential material associated with criminal investigations for the Tulsa Police Department within the City of Tulsa. The TPDFL has a fully operational existing forensic DNA casework section that undergoes external quality assurance audits in accordance with the FBI's Quality Assurance Standards at least once every two years and is accredited under the ASCLD/LAB program.

The federal funding from this award will be used for the following goals:

1. Increasing the capacity of the laboratory by purchasing equipment (thermal cyclers, DNA extraction and purification robot, additional pipettes, computers and monitors, and tablet computers) and by hiring two forensic scientists.
2. Provide text books for each analyst in the Biology Section for continuing education.

The analyst throughput in the Biology Section is expected to increase 10% and the turnaround time is expected to be reduced to 140 days or less.

FY11 Recipient Name: Oklahoma State Bureau of Investigation
Award Number: 2011-DN-BX-K417
Award Amount: $654,135
Abstract: The OSBI seeks to improve casework productivity while decreasing the overall turnaround time and back log of cases and decrease the backlog of offender DNA samples. The increase in casework productivity and capacity for offender DNA sample processing will be achieved by continuing to include technicians in the processing of certain steps and with the use of overtime for analysts. The increase in casework productivity and decrease in turnaround time will also be achieved using reagents and supplies which otherwise would not be able to be purchased.

The OSBI requests $439,420.50 for the purchase of supplies that will reduce sample-processing time and/or increase the number of samples processed. The Casework funding will be used to purchase amplification and quantification kits which will be used in all DNA casework performed throughout the OSBI laboratory system. The Database funding will be used to purchase supplies used throughout the profiling process which will be used in all DNA database work performed in the CODIS unit.

The OSBI also requests $214,714.50 to extend three technician positions and provide overtime funds for analysis of cases, database samples, and training. This funding request includes both salary and benefits. The technician positions will be used to aid in the handling, screening, and analysis of forensic biology evidence and processing of offender samples.

All of these improvements together will help analysts reduce the forensic biology backlog and work towards decreasing the average turn-around time to 30 days.

FY11 Recipient Name: Oregon State Police
Award Number: 2011-DN-BX-K499
Award Amount: $737,848
Abstract: PROJECT GOALS AND OBJECTIVES
The goals of this proposal are to 1) reduce the DNA casework and database sample backlog, 2) increase the efficiency and capacity of DNA casework and database screening, processing and analysis, 3) provide required training and continuing education for Forensic Biologists, and 4) assist the Forensic Services Division in converting to a paperless system. The objectives are: A) to fund two Forensic Scientists positions (one for casework and one for database analysis), purchase

supplies for processing DNA backlogged cases and database samples, and to provide overtime for the analysis of backlogged DNA cases and the validation of new equipment, B) to eliminate a bottleneck and increase efficiency of DNA casework processing and analysis through equipment purchases, C) to provide training and continuing education opportunities to analysts to assist with obtaining competency or maintaining proficiency and D) to purchase software to assist with converting the Forensic Services Division to a paperless system.

PROJECT DESIGN AND METHODOLOGY

For objective A, we will provide support for 13 months to one full time CODIS analyst and one full time DNA casework analyst. One Forensic Scientist, entry level, step 3 will be retained with OSP for 13 months (Mar. 1, 2012 to Mar. 31, 2013) to process, analyze and report the DNA results from backlog DNA cases. The current funding for the DNA casework position is a FY2010 DNA Cold Case backlog grant awarded to Portland Police Bureau (PPB). Funding for this position will be exhausted in February 2012. Funds from this grant will allow us to retain this position. If retained, this analyst will analyze any backlogged DNA cases. In 2010 we began processing all CODIS samples in-house. We have dedicated space, equipment and 2 full time CODIS analysts. One position is currently funded using the FY2010 CODIS grant which we anticipate will be expended by October 31, 2011. To continue processing all CODIS samples in-house and maintain our current capacity of ~450 samples/analyst/month, we will use FY2011 DNA grant funds to support this position for 13 months. Grant funds will provide overtime for approximately seven DNA analysts to process and analyze backlogged DNA cases and perform the necessary validation studies on new equipment. The majority of the backlogged samples are no suspect(s), property crime cases. Profiles from these cases will be entered into CODIS and subsequent hits will be reported to the police agency to aid in their investigation. The overtime will help to minimize our DNA backlog. Supplies will be purchased for the processing of DNA backlogged and database samples. In addition, we will purchase supplies for the convicted offender collection kits.

Objective B: To eliminate a bottleneck and increase efficiency of DNA casework processing and analysis we will purchase a multicapillary genetic analyzer, a real time thermal cycler and three biological evidence screening systems which include: pantographs, high intensity lights, a digital camera, wall-mounted monitors and a rail system. The screening systems will provide the Springfield, Central Point and Pendleton laboratories with an optimal evidence screening room by providing maximum lighting and enhanced evidence documentation abilities and assist with the recognition and collection of biological evidence.

For objective C, analysts will participate in various in-state and out-of-state training opportunities to fulfill training requirements for competency or to maintain proficiency.

Training for any new hires may include courses in population genetics and general DNA techniques. This will assist new hires to meet their training requirements to obtain competency. Current DNA analysts will attend various professional conferences (e.g., NWAFS, AAFS, or the International Symposium on Human Identification) to maintain their proficiency and keep current with new technologies.

The Oregon State Police Forensic Services Division is moving towards a paperless system and has requested funding under the 2011 Coverdell grant to help achieve this goal. To meet objective D and assist the Forensic Services Division with the conversion to a paperless system, we will purchase ten client workstation licenses for forensic biology processing and DNA analysts.

Support of this proposal will provide support for two DNA forensic scientists, provide overtime, equipment and supplies as well as training and continuing education opportunities all of which will result in increased capacity and efficiency of evidence screening and analysis for both DNA casework and CODIS database samples. Meeting the objectives will result in maintaining a proficient, confident workforce, will provide enhanced infrastructure for more efficient workflow for DNA sample processing and analysis, and provide resources (equipment, personnel time & supplies) to increase the efficiency of the DNA unit. The subsequent expected outcomes will be a decrease in the DNA backlog and more timely quality service to our customers (i.e., decrease in turn-around time).

FY11 Recipient Name: Allegheny County Pennsylvania
Award Number: 2011-DN-BX-K419
Award Amount: $341,929
Abstract: In recent years, the Forensic Biology section of the Allegheny County Office of the Medical Examiner (ACOME) has committed significant time and resources into developing and implementing an advanced DNA processing plan to reduce the number of backlogged cases and increase throughput. Having already acquired several state-of-the-art robotics and information technology systems, ACOME now seeks to adapt their DNA processing design to the changing and growing demands placed upon Forensic DNA analysis. Through the proposed program, the laboratory will reduce its backlog through continued capacity enhancement and improve its turnaround time through the consolidation of its data transfer procedures.

Funding from the proposed program will be used to acquire and validate a state of the art Genetic Analyzer, which will increase capacity and efficiency over the currently used out-dated models. Funding will be used to acquire and configure a new DNA laboratory information management system (LIMS), which will streamline the transfer of data

through each step in the DNA casework process. ACOME FL projects a budget of $341,929 and an estimated timetable of 18 months (October 1, 2011 to March 31, 2013) for successful completion of the proposed program.

FY11 Recipient Name: City of Philadelphia (PA)
Award Number: 2011-DN-BX-K425
Award Amount: $1,146,517
Abstract: The Philadelphia PD Forensic Science Bureau Criminalistics Unit is the agency that is responsible for analyzing evidential material associated with criminal investigations for the City of Philadelphia. The Criminalistics Unit is comprised of the "DNA Laboratory" which only conducts DNA typing and the "Trace Laboratory" which screens evidence for biological material suitable for DNA analysis. The Trace Laboratory has other functions such as Arson and Gunshot Residue analysis, however these duties are separate from the biological screening duties and these areas are not the subject or recipients of any funds requested under this grant proposal.

The Philadelphia PD Forensic Science Bureau Criminalistics Unit is facing budgetary constraints. For the years 2007, 2008 and 2009, the City of Philadelphia accounted for 41%, 41% and 40% of the Violent Part 1 Crimes in the State of Pennsylvania. The demand for services to the Philadelphia Forensic Sciences Bureau DNA Laboratory is expanding while the funds available are decreasing. Increases in the sensitivity of DNA Technology and the success of CODIS entries has resulted in increased application of DNA analysis to any evidence that is known to have been touched by the suspect. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime and purchasing supplies.
2. To increase the efficiency of the Criminalistics Unit by redesigning the analytical and office areas to better utilize the available space and to be able to accommodate 6 additional analysts that will be funded by City of Philadelphia General Funds.
3. To send two forensic scientists to the premier meetings for forensic DNA technology. This will keep the laboratory informed about technological advances, analytical modifications, interpretation issues, and provide continuing education.

The Philadelphia PD Forensic Science Bureau Criminalistics Unit DNA laboratory can expect to reduce the DNA case backlog by at least 605 cases by the end of the award period.

FY11 Recipient Name: Pennsylvania State Police
Award Number: 2011-DN-BX-K410
Award Amount: $1,662,908
Abstract: This proposal will provide funding for overtime to enable the Pennsylvania State Police Bureau of Forensic Services to screen backlog serology cases for potential DNA analysis and to provide overtime for the analysis of the DNA backlog cases. Funds are also requested for equipment and supplies to continue to streamline techniques to maximize throughput in the analysis of casework samples. The overtime is for the serology sections in the six regional crime laboratories to screen evidence for DNA analysis and for the DNA Laboratory to complete the DNA analysis.

This proposal will provide funding for the Pennsylvania State Police DNA Laboratory to utilize overtime to perform technical and administrative reviews of their convicted offender samples analyzed in house in order to input the genetic profiles into CODIS within 30 days of analysis. The proposal also includes a request for the funding to order the supplies and biochemicals necessary to analyze the convicted offender samples.

The Pennsylvania State Police Bureau of Forensic Services is backlogged in each of the six regional laboratory's serology sections and in the DNA laboratory. Overtime will be used to control and potentially eliminate or reduce these backlogs. The Pennsylvania State Police DNA Laboratory is no different than many forensic laboratories throughout the country that experience large backlogs due to increasing casework demands and rapidly expanding laws. The continued level of case submissions coupled with resignations, time spent on validations, training and maternity/sick leaves has made it difficult to reduce turnaround time.

The Pennsylvania State Police DNA laboratory is dedicated to reducing its current average turnaround time in both screening and DNA analysis while increasing the number of cases processed per month per analyst.

FY11 Recipient Name: Instituto de Ciencias Forenses (PR)
Award Number: 2011-DN-BX-K488
Award Amount: $678,552
Abstract: The proposed goal of this effort is to continue reducing turnaround time, increasing throughput, reducing casework backlog and fostering batch work. This goal will be achieved via the execution of a series of measures/objectives which will impact various aspects of the operation. FY2011 Forensic DNA Backlog Reduction Grant Program (FDBRGP) funding will be used for retaining currently employed personnel on a transitory basis: three (3) forensic serologists and three (3) technicians; as well as for overtime pay for in-house and transitory personnel. Furthermore, 2,111 DNA analyses will be performed, 2,091 of which will be for CO/Arrestee sample outsourcing and 20 of

which will be for casework backlog reduction in-house processing based on supplies and overtime funding level requested. Funds will also be used for attendance of personnel to the CODIS Meeting and the PROMEGA Conference. As part of an aggressive effort that is long overdue, funding will also be used for the acquisition of two robotic platforms for PCR Set Up, one (1) AB 3130 Genetic Analyzer, and one (1) Advanced EZ1 platform, all of which will foster batch work. Funding will also be used to provide continuity to CODIS-Consulting Services by a bona-fide CODIS user who is currently employed in a properly ASCLD-LAB/FBI accredited laboratory. Lastly, funds will also be used for acquisition of supplies with which to carry out the proposed backlog-reduction and, possibly, for the in-house validation of the new instrumentation/equipment. The Marshall's University TAP program will also be considered for validation of some of the platforms. All the cases for which genetic profiles are obtained will be carefully evaluated to ensure that prior to uploading into NDIS all case files meet the FBI NDIS Acceptance Standards.

FY11 Recipient Name: Health, Rhode Island Department of
Award Number: 2011-DN-BX-K457
Award Amount: $209,355
Abstract: The Rhode Island Department of Health Forensic Sciences Laboratory (RIDOH-FSL) serves the entire state of Rhode Island, with a population of approximately 1 million. Agencies served include state and municipal police, the Office of the State Medical Examiner, Attorney General, and other law enforcement agencies. The laboratory is divided into four sections: Drug Chemistry, Forensic Toxicology, Breath Analysis/Evidence, and Forensic Biology/CODIS. The Laboratory is the sole Forensic DNA laboratory and CODIS site in the state, and casework is submitted by more than 40 stakeholders. Database collections are carried out by RIDOH-FSL staff at the RI Adult Corrections Institution, and a separate probation collection office. The Laboratory is accredited under ISO 17025 standards by Forensic Quality Services, Inc, and undergoes external audits every two years as required by the FBI's DNA Quality Assurance Standards.

The Federal funding from this award will help achieve the following goals:

a) Reduce the forensic DNA case backlog by continuing to fund a full time analyst dedicated to DNA casework;
b) Increase throughput of both casework and database functions by partially funding (50%) a senior laboratory technician to assist with evidence and some CODIS duties such as collection and processing for shipment;
c) Increase the capacity of the laboratory in both casework and CODIS with a semi-automated sample punching system, a camera for evidence documentation, an alternate light source, a mini centrifuge, and sample storage (freezer).

d) Ensure the integrity of robotic instrumentation through a maintenance contract
e) Provide the required continuing education for each analyst through training and travel, and purchasing a subscription to the Journal of Forensic Sciences.

The RIDOH-FSL expects to reduce the DNA case backlog by at least 100 cases and to be able to process incoming cases within a 90 day time frame, assuming no changes in staff of workload. We believe that making the long term investment in personnel will increase the overall efficiency of our laboratory, thereby reducing the backlog of DNA casework. Database backlogs are expected to be reduced to the turnaround time by the vendor laboratory.

FY11 Recipient Name: Richland County Government (SC)
Award Number: 2011-DN-BX-K404
Award Amount: $195,000
Abstract: The Richland County Sheriff's Department is currently seeking funds to enhance its capacity for DNA analysis through the DNA Backlog Reduction Program Formula Grant FY 2011. With the implementation of this grant, the following goals will be achieved; reduction of backlogged DNA cases and increase laboratory capacity with the objective of an overall reduction in violent and nonviolent crimes in Richland County through a continuation of current analyst throughput (~100 cases/month). Without the grant-funded re-employment of the full time analyst and the full time technician, laboratory case throughput will be reduced by approximately 30 percent. The project plan/method is to utilize the grant-funded full time analyst and full time technician along with the two county-funded full time DNA analysts and existing laboratory infrastructure to coordinate and process DNA backlogged cases during the grant period. Acquired instrumentation will increase the laboratory's capacity and efficiency. Annual training for the DNA Analyst and DNA Technician will allow for continuing education.

FY11 Recipient Name: South Carolina Law Enforcement Division
Award Number: 2011-DN-BX-K432
Award Amount: $1,815,233
Abstract: This application is for Federal assistance for the FY11 DNA Backlog Reduction Program. Funds are being sought to improve the analysis capacity of the SLED Forensic DNA Laboratory to increase the number of DNA samples processed. SLED proposes to maintain increased DNA staff through grant funds and to process Database samples with the supplemental funding provided by the 2011 award.

Funds are also being sought to handle, screen, and/or analyze backlogged forensic DNA casework samples. Overtime salaries for DNA personnel, the on-going support of

grant-funded DNA personnel, and the outsourcing of backlogged cases to a qualifying fee-for-service laboratory will be used in accomplishing this task. The SLED DNA Laboratory is an NDIS participant lab in good standing and is eligible to upload appropriate profiles to NDIS. Therefore, the resulting evidence profiles from analysis of these cases will be entered and searched in the Combined DNA Index System (CODIS) to assist state and local agencies to ultimately solve crimes. The funds may also be used to conduct post conviction DNA testing pursuant to a court order. All DNA analyses performed at SLED using funds from this program will be maintained under the applicable federal privacy regulations.

Funds are being sought to provide external training in DNA analysis for analysts and technicians who will have recently started accepting cases, as well as providing required continuing education and training for DNA analysts. New technologies presented in these training events enhance the lab's capabilities in implementing new DNA methodologies and to increasing throughput through exposure to novel automation and techniques.

The supplemental funding provided by this award will allocate funds for the SLED DNA Database Laboratory to process 10,755 database samples that will be submitted to NDIS. The funds will be used to purchase the reagents needed for the analysis of these samples.

While many variables determine the number of backlogged cases, through the use overtime and grant funded personnel internally, and outsourcing analysis on property crimes externally; SLED expects to reduce the DNA case backlog by the end of the award period. Funding on this award will allow us to analyze 400 cases using overtime; and once trained, the analysts funded by this award will have access to overtime funds requested on this award and will work cases with federally funded supplies. Additionally, we anticipate outsourcing approximately 395 cases using these funds.

This agency also expects to work at least 10,755 DNA database samples using Federal funding for amplification kits.

No backlog of offender samples exists in the SLED DNA Database department; however 2010 statistics show a slightly higher number of offender samples analyzed than were received. This is a reflection of the completion of analysis of samples received in late 2009 during early 2010.

Twenty one analysts will attend continuing education events.

FY11 Recipient Name: South Dakota Office of the Attorney General
Award Number: 2011-DN-BX-K510
Award Amount: $200,000
Abstract: The South Dakota Forensic Laboratory (SDFL) is the only public laboratory in South Dakota capable of forensic DNA testing. With NIJ funding and authorization from the South Dakota Attorney General, the SDFL hired one additional employee to conduct serology screening. The new employee completed his serology training in spring 2011. With previous NIJ funding, the SDFL DNA examiners have been able to: 1) maintain and support the additional personnel that have increased the output of completed cases; and 2) operate at a higher efficiency by not sharing/waiting for equipment. The South Dakota Forensic Laboratory has enjoyed a 30-90 day turnaround time on DNA cases for several years now. This has largely been accomplished through the utilization of NIJ funding. This funding will allow us to continue and hopefully lower that turnaround time.

Additionally, a project objective is to continue offender DNA database sample analysis at an accredited fee-for-service (vendor) laboratory. This arrangement is the most cost effective and efficient process for the SDFL and NIJ. Currently we have 1250 samples awaiting analysis under FY2009 offender backlog funds and have FY2010 Convicted Offender and/or Arrestee DNA Backlog Reduction Program grant funds to pay for approximately 2330 more samples. We anticipate receiving (and shipping shortly thereafter) the samples by October 31, 2011. We anticipate receiving approximately 7000 samples between October 1, 2011 and March 31, 2013. Approximately 350 QC samples would be needed for a total of 7350 offender and QC samples. Based on previous experience with our current vendor lab, we would anticipate a reporting rate of between 500-1000 samples per month.

Goal #1 – With NIJ funding, the SDFL will continue general casework capacity.
- Objective #1 – send 4 DNA examiners to continuing education training.
- Objective #2 – purchase DNA supplies needed to analyze evidence for DNA and enter all eligible DNA profiles into CODIS.

Goal #2 – Continue purchasing DNA database collection kits for qualifying arrested felons and enter those profiles into CODIS.
- Objective #1 – purchase DNA database collection kits so all arrested felony offenders' DNA can be submitted to CODIS per South Dakota state statute.

Goal #3 – Continue out-source analysis of DNA database samples and enter the offender profiles into CODIS.
- Objective #1 – outsource analysis of DNA database samples.
- Objective #2 – conduct required site visit to vendor laboratory.

The laboratory information management system will adequately track progress on our proposed casework goals. The offender database data collection (samples tested and hits received) is ongoing and is made through a combination of a spreadsheet listing the samples that were shipped for testing, which of those have had results reported, and the date the profile data was entered in CODIS as well as the CODIS Match Manager software showing the hits (both in-state and inter-state) for the samples that were tested. Once the funding is received, the plan will be to begin expending those funds after our remaining funds from our previous (FY09 and FY10) awards (casework and offender) are expended.

FY11 Recipient Name: Tennessee Bureau of Investigations
Award Number: 2011-DN-BX-K459
Award Amount: $2,346,924
Abstract: The Tennessee Bureau of Investigation, Forensic Services Division is the agency that is responsible for analyzing evidentiary material associated with criminal investigations for all state and local law enforcement agencies within the state of Tennessee. The TBI Forensic Services Division is composed of three crime laboratories located at headquarters in Nashville and two regional laboratories in Knoxville and Memphis. The TBI is an approved NDIS participating laboratory, which allows for the upload of acceptable state offender DNA profiles into the FBI CODIS database. In addition, the TBI also collects samples from all convicted felons, registered sex offenders and individuals arrested for certain violent felony offenses.

The TBI is facing continuing budgetary constraints, which affect not only the ability to analyze casework, but also to analyze all convicted felon, sex offender registry and arrestee samples collected across the state. Funding from this award will be used for the following goals:

1. Maintain or decrease the current backlog of casework samples through analyst overtime and purchasing supplies.
2. Maintain the employment of contracted employees in each of the state laboratories, used for the screening of evidence and also aid in, or conduct, validations of new techniques or tests to allow analysts to concentrate on casework.
3. Provide the required continuing education for each analyst through travel to conferences, workshops and symposiums.
4. Continue to maintain current instrumentation by way of maintenance contracts. Also maintain the existing document control system and video conference system purchased under the no-suspect grant (2003).

5. Reduce the anticipated CODIS backlog by continuing to outsource both convicted offender and arrestee samples to Orchid Cellmark Dallas, a previously selected vendor laboratory, and provide overtime funds for the in-house review of profiles prior to submission to NDIS.

The TBI can expect to maintain our current turnaround time of approximately 60 days, while seeing an increase in the number of DNA samples worked per analyst per month. The current number of samples worked per analyst per month is 78. The TBI also expects to be able to outsource 16,000 Convicted Offender and 16,000 Arrestee samples for processing, with at least 20,000 reviewed using overtime funds prior to upload to NDIS.

FY11 Recipient Name: City of Austin (TX)
Award Number: 2011-DN-BX-K409
Award Amount: $240,532
Abstract: The City of Austin is a home-rule municipality situated in Travis, Williamson, and Hays Counties of Texas. The City of Austin Police Department Forensic Science Division Crime Laboratory provides forensic and investigative services to over 777,953 persons residing within 296 square miles.

In 2004, the city opened a state-of-the-art forensic facility and in 2005, received ASCLD/LAB Legacy Accreditation in the areas of biology, toxicology, controlled substances, firearms, latent print, and crime scene. In April 2010, the APD Crime Lab underwent successful ASCLD/LAB Legacy and FBI DNA external audits. The laboratory is preparing for ASCLD/LAB ISO accreditation, which is estimated to be complete in 2012.

With this application, the City of Austin requests $240,532 in grant funding from the U.S. Department of Justice, Office of Justice Programs, National Institute of Justice FY 2010 Forensic DNA Backlog Reduction Program for a proposed project period of October 1, 2011 – March 31, 2013. The goals of this program are to reduce DNA casework backlogs, to improve the throughput of the DNA Section, and to provide required continuing education for existing city-funded forensic DNA analysts. If funding is awarded, the program anticipates improvements in the APD Crime Lab DNA Section by purposing funds for overtime, personnel, supplies, and training. The City of Austin requests grant funding in the amount of $112,731 to allow existing laboratory employees to work on an overtime basis; $48,701 to continue the grant-funded salary of an evidence technician; $70,000 to purchase essential supplies; and, $9,100 to send the five DNA Section laboratory analysts to training.

The impact of funding from the National Institute of Justice would be significant and would include: a reduction in DNA casework backlogs by 275 cases; a 10% increase in DNA Section throughput; and, the completion of required training for all DNA Section analysts.

FY11 Recipient Name: City of Houston Police Department (TX)
Award Number: 2011-DN-BX-K427
Award Amount: $1,532,118
Abstract: The Houston Police Department Crime Lab is responsible for analyzing evidential material associated with criminal investigations for the Houston Police Department. The Houston Police Department is the largest police department in the state of Texas. The Houston PD Crime Lab is primarily responsible for analyzing violent offenses and a much smaller number of non-violent cases such as burglaries using DNA technology.

The HPD Crime Lab is facing budgetary constraints including hiring freezes and furloughs and is facing potential new DNA legislation requiring that all Sexual Assault Kits be tested. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through outsourcing.
2. Reducing the number of sexual assault kits stored in the Property Room and Crime Lab untested.

The HPD Crime Lab can expect to reduce the DNA case backlog by at least 441 cases through outsourcing by the end of the award period. The HPD Crime Lab also expects to work at least 3,500 sexual assault kits with federal funding by hiring contract screeners. The turnaround time is expected to be reduced by 25% pending workload increases or decreases.

FY11 Recipient Name: County of Bexar (TX)
Award Number: 2011-DN-BX-K412
Award Amount: $335,751
Abstract: As part of our ongoing effort to advance the workload capacity and reduce the backlog of pending forensic Serology/DNA casework at the Bexar County Criminal Investigation Laboratory (BCCIL), an ASCLD/LAB accredited laboratory since 1998 (ISO 17025 accredited as of January 2009), and to better serve our community, we propose continuing the development and implementation of a DNA backlog reduction program through the purchase, validation, and evaluation of an ABI 3500 eight (8) Genetic Analyzer for Human Identification with associated GeneMapper ID-X software,

foster + freeman ML-2 alternative light sources), through digitizing paper case files for incorporation into the new LIMS (purchased through award 2009-DN-BX-K095), the purchase of the QA/QC module for the new LIMS, and new technologies for handling digital documents. The new equipment and software will enhance the efficiency of total case request turnover and increase the output capacity of Serology/DNA case samples to meet our primary goal of reducing the amount of time a sample requires for genetic analysis. Currently, there are about 13 forensic Serology/DNA cases that require examination for the presence of biological fluids (blood, semen and saliva) and/or DNA analysis. The resulting DNA casework backlog represents approximately a 1 month waiting period for our client law enforcement agencies.

We will accomplish this project goal by purchasing, validating, evaluating, and, if sufficient for our requirements, implementing an ABI 3500 Genetic Analyzer system into our casework workflow. Although this will be a Sole Source purchase, the most cost effective methods, as required by authorized Bexar County policy, will be used to purchase all necessary equipment and software.

As an additional goal for the project, due to local budget cuts, grant funds will assist the BCCIL in meeting accreditation standards as outlined in the DNA Audit Document for the Continuing Education (CE) of DNA analysts. We will accomplish this goal by sending staff to sufficient local and national training in required forensic DNA related areas to satisfy the requirements of the current version of the Quality Assurance Standards for Forensic DNA Testing Laboratories.

The Assistant Crime Laboratory Director (ACLD) will manage and monitor this capacity enhancement program. The ACLD, acting as the Grant Manager and Point of Contact, will compile and send all necessary progress reports to the appropriate agencies.

FY11 Recipient Name: Dallas County (TX)
Award Number: 2011-DN-BX-K415
Award Amount: $849,881
Abstract: The project will address the need for improved DNA testing capabilities in a local forensic DNA laboratory. The goal of the project is to increase testing capacity in both evidence screening and in DNA analysis. As a consequence of increased testing capacity it is expected that the turnaround time for testing will be reduced. As part of the project, two grant-funded analysts will be hired and trained to perform evidence screening and serological analysis. This will both increase the laboratory's testing capacity in evidence screening and allow several regular staff members to complete training in DNA analysis. Additionally, instruments will be purchased and validated for DNA casework: a capillary electrophoresis instrument for the high-throughput analysis

of amplified DNA and a robotic liquid handling platform for the extraction of samples and the setup of quantitation and amplification reactions. These instruments will alleviate process bottlenecks, and will automate certain processes that are currently done manually by DNA analysts. By both increasing the number of analysts performing DNA testing, and by increasing the instrumental capacity of the laboratory, it is expected that the overall testing capacity of the laboratory will be increased appreciably. The expected results of this project are to reduce the backlog of cases awaiting DNA testing by 10% and to reduce the turnaround time for DNA testing by 10%.

FY11 Recipient Name: Harris County (TX)
Award Number: 2011-DN-BX-K422
Award Amount: $690,850
Abstract: The goal of this proposed project is to reduce our current case turnaround time of 60 days and to improve case documentation. The implementation of this program will enhance the efficiency, capability, and capacity of the HCIFS Genetics laboratory and improve the laboratory's ability to assist in criminal and death investigations.

The Harris County Institute of Forensic Sciences (HCIFS) Forensic Genetics Laboratory had approximately 500 cases in process, roughly two months of incoming casework, as of December 31, 2010. The eradication of our case backlog to only two months of current cases was a direct result of previous NIJ funding which increased our capacity to process cases. With funds requested through this grant, we plan to continue to meet casework demands and to decrease turnaround time and improve efficiency. Additionally, we will continue the implementation of processes begun in the current project year that will improve our efficiency and increase the number of samples that can be completed per analyst. We estimate we will be able to analyze 25% more DNA cases within the upcoming grant period than is possible currently, while reducing our 55 – 60 day turnaround time to 45 days.

To maintain and to increase our capacity, we plan to continue to employ contract personnel, add additional contract personnel as needed, and to purchase DNA testing supplies not provided by our in-house budget. Funds from this award will also be used to send DNA Analysts to annual scientific meetings and to purchase equipment.

FY11 Recipient Name: State of Texas
Award Number: 2011-DN-BX-K407
Award Amount: $3,304,246
Abstract: The Texas Department of Public Safety is the state law enforcement agency in Texas, and it operates a system of Crime Laboratories under the Law Enforcement Support Division. Of the thirteen ASCLD/LAB accredited forensic laboratories in the system, eight laboratories perform forensic DNA testing. This work is provided to city, county, state, and federal law enforcement agencies, at no cost to the outside agencies. Texas DPS also operate the state's offender DNA testing laboratory at its Austin location.

The FY 2011 Forensic DNA and DNA Database Backlog Reduction project will have the objective of using federal funds to augment the state's program of DNA analysis on criminal evidence and offender samples, with the objective of both reducing backlogs as well as to shorten the time it takes to complete forensic DNA cases. With the federal funds, twelve persons will be employed, most of whom will screen forensic DNA cases, then existing trained DNA analysts will work overtime to enhance the production of forensic DNA casework. It is expected that 2,000 forensic DNA cases will be analyzed, in-house, along with 40,000 offender samples being examined in-house by CODIS Analysts, seven of whom will work overtime on this project.

In addition, funds will be used to provide continuing education to fifty of the Department's one hundred DNA analysts in both the forensic DNA labs as well as the offender database lab. This training will meet requirements of the FBI quality assurance requirements.

Capacity of the laboratories will be enhanced by the acquisition of new equipment which is listed in the Program Narrative.

FY11 Recipient Name: Tarrant County (TX)
Award Number: 2011-DN-BX-K406
Award Amount: $314,879
Abstract: The Tarrant County Medical Examiner’s (TCME) Office is a regional medical examiner’s facility located in Fort Worth, Texas that provides services to Tarrant, Parker, Denton, and Johnson Counties. These counties represent a core population of approximately 2.5 million citizens. The Medical Examiner’s Office operates a multi-discipline crime laboratory that offers Forensic Biology and DNA analysis. The Forensic Biology/DNA laboratory not only serves the Medical Examiner, District Attorney, and other Tarrant County agencies, but also provides analysis, on a fee for service basis, to law enforcement agencies throughout the four counties served, as well as many other agencies throughout North Central Texas and the rest of the United States. In 2010, a

total of 96 agencies submitted requests to the Forensic Biology/DNA laboratory resulting in a total of 814 submissions for evidence screening and/or DNA analysis. Based on data reported to the Department of Public Safety Uniform Crime Reporting Bureau indicated that the percentage of the Texas UCR Part 1 Violent Crimes represented by the core counties (Tarrant, Johnson, Denton, and Parker) was 4.48% in 2009.

The National Institute of Justice (NIJ) has allocated $7,288,859 for the state of Texas and the TCME Crime Laboratory has been offered $314,879 as its share of the formula grant. The Federal funding from this award will be used for the following goals:

1. Increase capacity, decrease the DNA backlog, and decrease the DNA case turnaround time by purchasing, implementing, and supporting a commercial LIMS system. Also, to purchase software and equipment to allow analysts to analyze DNA data, perform technical reviews, and access LIMS from their personal workstation. Equipment will be purchased to expedite evidence examination by implementing an electronic procedure.
2. Providing the required continuing education for three analysts.

The TCME expects that a new LIMS system will have a major positive effect on the TCME Crime Laboratory's efforts to decrease the DNA case turnaround and the backlog as well as the increase the lab's capacity. It was determined that a new LIMS system will save each analyst approximately 10 hours a month. Also, introducing an automated process for evidence examination and allowing analysts to work and print from anywhere in the laboratory will help to accomplish the laboratory's goals. Just with the new LIMS system, GMIDX licenses, and new equipment for the evidence examination, the TCME DNA laboratory is expecting to reduce the case turnaround time by approximately 10% and increase the number of samples per analyst per month by 10%.

FY11 Recipient Name: University of North Texas Health Science Center at Fort Worth
Award Number: 2011-DN-BX-K408
Award Amount: $654,539
Abstract: The University of North Texas Center for Human Identification (UNTCHI) is a forensic laboratory accredited under the requirements of ISO 17025 and the DNA National Standards for DNA Analysis by Forensic Quality Services - International. UNTCHI provides serological testing, STR (autosomal and Y) and mtDNA testing to law enforcement agencies throughout the State of Texas.

With funding provided through NIJ, UNTCHI has been responsible for screening and analyzing backlogged criminal forensic casework from the City of Fort Worth and other law enforcement agencies throughout the State of Texas. Approximately 58% of the cases submitted to UNTCHI come from counties outside of Fort Worth/Tarrant County. All DNA testing is performed at no cost to Texas law enforcement agencies. UNTCHI also functions as an adjunct laboratory for the Texas Department of Public Safety (TXDPS) Crime Laboratory providing the analysis of casework samples requiring traditional STR testing as well as mtDNA, Y STR analysis, MiniFiler™, and cases requiring familial/kinship analysis.

The federal funding provided through this award will be used to accomplish the following goals:

- Improve the throughput of forensic casework.
- Reduce the turn-around times for forensic casework.
- Reduce the number of backlogged forensic DNA cases.

In collaboration with the TXDPS, UNTCHI is eligible for $654,539.00 of the available funding allotted to the State of Texas. UNTCHI does not receive any State funds for conducting DNA Forensic Casework testing. Funding provided through this program will allow UNTCHI to pay the salaries of four forensic analysts including the Technical Leader, one forensic technologist and 50% of an evidence custodian's salary. Funding will also be utilized to provide continuing education for analysts and the purchase of reagents and supplies required to analyze forensic cases submitted to UNTCHI.

With continued process improvements, we anticipate that these funds will allow UNTCHI to eliminate the current DNA casework backlog as well as screen and complete the DNA analysis on a minimum of 756 cases. By the end of the award period each analyst will complete an average of 12 cases per month. UNTCHI expects to complete approximately 2,500 DNA casework samples with this funding. This translates to 40 samples per analyst per month with an anticipated turn-around time of 51 days or less per case. All eligible forensic DNA profiles are currently entered into CODIS (SDIS) by the TXDPS and uploaded into NDIS where applicable.

FY11 Recipient Name: Utah Department of Public Safety
Award Number: 2011-DN-BX-K455
Award Amount: $417,873
Abstract: The mission of the Utah Department of Public Safety - Bureau of Forensic Services is to provide a safe and secure environment for the citizens of Utah through the application of forensic science. The goal of the forensic biology section is to use DNA technology to help agencies achieve case closure. The laboratory provides

accurate and sound science during forensic serology and DNA analysis, while striving to maintain a rapid response to analysis requests.

The Utah Bureau of Forensic Services (UBFS) maintains three laboratories throughout the state of Utah: Northern, Southern and Central laboratories. The forensic biology section is located in the Central laboratory and is responsible for analyzing and processing all forensic DNA samples as well as storing, processing, and maintaining all forensic DNA database samples. The UBFS continues to see an increase in case submissions for DNA analysis as well as an increase in the number of samples per case and a continual demand for timely results and reports. Additionally, legislation passed in Utah this year requires that all felony arrestees be included in the CODIS database. The Federal funding from this award will be used for the following goals:

1. Reduce the forensic DNA case backlog and decrease case turnaround times by retaining on staff the Forensic Scientist hired with 2010 award funds.
2. Increase the capacity of the Utah Bureau of Forensic Services by purchasing supplies, equipment and service agreements.
3. Provide the required continuing education by funding the training opportunities for DNA analysts.
4. Decrease/maintain CODIS backlog through outsourcing of offender samples.

UBFS anticipates reducing our DNA case backlog by 150 cases by the end of the award period. The laboratory also expects to process at least 5,599 database samples using Federal funding. Turnaround time is expected to decrease to 45 days or less, while sample throughput for serology/DNA will increase by 10%.

FY11 Recipient Name: Virginia Department of Forensic Science
Award Number: 2011-DN-BX-K421
Award Amount: $1,447,358
Abstract: The Virginia Department of Forensic Science (DFS), an Executive Branch agency, is exclusively responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the Commonwealth of Virginia. DFS maintains four regional laboratories - the Central Laboratory in Richmond, the Eastern Laboratory in Norfolk, the Western Laboratory in Roanoke, and the Northern Laboratory in Manassas. As required by statute, DFS is also solely responsible for receiving and analyzing DNA samples collected from Virginia's convicted felons and certain arrestees for inclusion, storage and maintenance in the Virginia DNA data bank. Beginning July 1, 2011, state law will also require DNA sample collection from individuals convicted of certain

misdemeanor sex offenses. Most activities related to the DNA data bank are managed by the DNA Database Unit, which is located at the Department's Central Laboratory.

DFS is requesting funding under this program to reduce the forensic DNA case backlog and for capacity enhancement in its four Forensic Biology Sections. DFS is not requesting funding at this time for the DNA Database Unit, as there is currently no backlog of data bank samples. The goals of this grant project are as follows:

1. To reduce the forensic DNA case backlog through forensic scientist overtime and purchase of supplies,
2. To increase the capacity of the laboratory system by purchasing equipment, such as a DNA extraction robot, and expert systems software and by hiring three fully-qualified forensic scientists and one full-time forensic laboratory specialist, and
3. To provide the required continuing education for each forensic scientist.

DFS expects to reduce the forensic case backlog by at least 432 cases by the end of the grant period. DFS also projects that the increased capacity gained through the grant funded examiners will result in the completion of approximately 432 additional cases. It is also anticipated that a change in robotic platforms will decrease current turnaround times. The expert system software will be used by the casework examiner as a tool in DNA mixture analysis, which is also expected to have a positive effect on the Forensic Biology Section's turnaround time.

FY11 Recipient Name: Vermont Department of Public Safety
Award Number: 2011-DN-BX-K515
Award Amount: $200,000
Abstract: Ensuring an efficient processing, DNA testing and upload of appropriate samples to the DNA database, CODIS, is the goal of the biology/DNA section of the Vermont Forensic Laboratory (VFL). Previous NIJ grant programs have allowed the VFL to enhance casework capacity through funding for an additional employee to assist in serology casework and to aid DNA analysts in determining and documenting DNA cases for CODIS eligibility and in the DNA database program by funding supplies to type convicted offender samples and to overtime for staff to review profiles prior to upload. Our goal is to continue to make progress in reducing our casework backlog by applying the grant funds from the 2011 DNA Backlog Reduction Program into areas which have had success, notably the continued use of additional personnel, overtime for existing staff and funding to allow the purchase of adequate supplies to conduct the necessary casework analyses. The additional individual hired under an NIJ grant will continue to assist in reducing the backlog of casework samples by performing serological analyses and contacting officers or prosecuting attorneys to screen the

active from the non-active cases and to obtain needed information for CODIS eligibility documentation. Overtime money for serologists and DNA personnel will allow more time to process the backlog samples and in DNA to validate a new single amplification kit. We will also use the funding to allow us to purchase adequate supplies to continue to process a wide range of cases including property crime cases and to fund the contracts for maintenance of the capillary electrophoresis instrument, and for calibration of pipettes. Funding requested for the DNA database program will provide supplies for testing and validation of methods for use in the future that will enhance capacity by reducing extraction and sample handling time. This combination of efforts will assist our laboratory meet the needs of the Vermont Criminal Justice System.

Request for funding for the Duet punch is intended to speed the processing of Convicted Offender samples. Currently an analyst manually punches each sample. The Duet will make this a faster part of the process, which is currently one of the more significant time investments of the analyst. This will allow us to prepare plates of samples quickly for processing.
The repeater pipette will be used by the casework analysts to set up plates of samples. We have purchased a Genetic Analyzer 3500 and will be changing our work flow to move to large batching to ensure the most cost effective use of the instrument. The repeater pipette will allow more rapid processing of samples in a plate format.

FY11 Recipient Name: Washington State Patrol
Award Number: 2011-DN-BX-K513
Award Amount: $1,548,332
Abstract: The Washington State Patrol through the Crime Laboratory Division is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the state. Under state law (RCW 43.43.756) the Washington State Patrol Crime Laboratory Division (WSPCLD) is the established public provider of Forensic DNA services in Washington State . There are 5 casework DNA laboratories located throughout the state: Seattle, Tacoma, Marysville, Vancouver and Spokane. The CODIS database lab is also located in the same Seattle facility as the Crime Lab.

Despite an average increase in throughput of 14% in 2010 there is an ever increasing demand for more and faster DNA service with an average 20% increase in submissions at the end of 2010. Due to budgetary constraints there was a loss of 5 DNA analysts who resigned and their positions were not filled for a 12% decrease in DNA staffing. There were 2 DNA analysts on maternity leave which also reduced staffing levels. The backlog of cases has increased 16% in 2010 and is currently at 1,140 requests. The federal funding from this award will be used for the following goals:

1) Reducing the forensic case backlog thorough 1,500 hours of overtime funds.
2) Increasing the capacity of the laboratories for casework by purchasing new equipment (3500 CE instruments, laptops, a 9700 thermal cycler, microcentrifuges, a temperature monitor, vortexes and a UPS power supply) and by the continued hiring of the DNA IT employee to maintain and add new instruments and forensic scientist laptops into the state-wide DNA laboratory instrument network. This person would also work on the conversion of the DNA electronic forms from Excel to a database program to allow for more autofill features.
3) Increasing the capacity of the CODIS laboratory for database sample analysis by purchasing new equipment (3500xl CE instruments, DBS puncher, a workbench set and protective storage cabinets for CODIS submissions) and performing minor renovations on the CODIS submission storage area and the post-amplification room.
4) Providing the required continuing education for each analyst including the purchasing of the newest Forensic DNA text books for each laboratory.

The WSPCLD expects to reduce the backlog of DNA case requests by 200 before the end of the award period. The mean turnaround time is expected to be reduced to 90 days or less, and the analyst throughput in the casework sections is expected to increase 10%. The WSPCLD expects to reduce to 30 days the mean turnaround time from receipt of CODIS submission to upload and CODIS analyst throughput is expected to increase 10%.

FY11 Recipient Name: Wisconsin Department of Justice
Award Number: 2011-DN-BX-K514
Award Amount: $1,036,095
Abstract: Wisconsin State law requires the State Crime Laboratory to provide DNA forensic services to process evidence involving a potential felony charge. Reasonable projections of future case load combined with necessary hiring and training periods indicate that the DNA backlog will continue to grow. The increase in receipts plus the current inability of existing State Crime Laboratory resources to handle current case load indicate the compounding nature of the problem. At the present time almost all of the analyses are performed on cases with suspects and court dates/orders.

The department realizes that the DNA backlog cannot be eliminated in its entirety. No case is turned around immediately, and if every case were on the bench, some analysts would have nothing to do. The better approach is to target a manageable pending case load. The goal is to have every new case assigned to analysts within 60 days of receipt and completed within 30 days of assignment. This approach maximizes resources in that it attempts to match the number of staff with the expected case submissions.

The DOJ-LES is facing budgetary constraints and is facing new DNA database expansion legislation that is pending, if passed that will increase the number of DNA database samples it will have to analyze. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime and purchasing supplies.
2. Reducing the DNA database sample backlog through analyst overtime, outsourcing and purchasing supplies.
3. Increasing the capacity of the laboratory by purchasing/replacing aging equipment (upgrade laptops, hardwire DNA labs, digital cameras, printers, scanners & label printers, an alternative light source, bench top centrifuges and desktop PC's), continue funding of three DNA technicians.
4. Providing the required continuing education/training for DNA analysts.

The DOJ-LES can expect to reduce the DNA case backlog by at least 380 cases by the end of the award period. The agency also expects to outsource at least 6926 DNA database samples (which includes 346 QC samples) using Federal funding. The turnaround time is expected to be reduced to 60 days or less, and the analyst throughput in the casework sections is expected to increase 10%.

FY11 Recipient Name: West Virginia State Police
Award Number: 2011-DN-BX-K449
Award Amount: $373,262
Abstract: The West Virginia State Police Forensic Laboratory (WVSPFL) is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local enforcement agencies within the state of West Virginia. The WVSPFL is a centrally located laboratory in South Charleston, WV. The Code of West Virginia designates the WVSPFL as the agency responsible for maintaining DNA profiles from samples collected from all convicted felony and misdemeanor offenders in the state of West Virginia; The WVSPFL is the State designated CODIS Laboratory. The WVSPFL uses Marshall University Forensic Science Center for the analysis of DNA database samples.

The WVSPFL is facing budgetary constraints for the purchase of new equipment, funding overtime for analysts, hiring more technicians to assist with casework and QC of database samples, and funding continued education for its DNA analysts. The Federal funding from this award will be used for the following goals:

1- Reducing the forensic DNA case backlog through analyst overtime.

2- Reducing the DNA database sample backlog for upload through analyst overtime.
3- Increasing the capacity of the laboratory by purchasing equipment (upgrading a genetic analyzer to higher capacity, a thermal cycler, two DNA extraction robots, a microscope, a refrigerator, desktops, tube writer), by hiring two evidence technicians, and by acquiring a quality assurance/management software.
4- Reducing contamination issues and therefore avoiding repeat analysis by purchasing equipment (stools, sterilizer, autoclave, and UV crosslinker). By reducing repeat analysis , analysts would increase their case output.
5-Providing the required continuing education for four analysts by attendance to a conference and workshops.

The WVSPFL can expect to reduce the DNA case backlog by at least 15 cases by the end of the award period. The agency also expects to review and upload at least 1,000 DNA database samples (which includes 100 QC samples) using Federal funding. The turnaround time is expected to be reduced to 380 days or less, and the analyst throughput in the casework sections is expected to increase by 30%

FY11 Recipient Name: Wyoming Office of the Attorney General
Award Number: 2011-DN-BX-K502
Award Amount: $200,000
Abstract: The Wyoming State Crime laboratory (WSCL) is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the state of Wyoming. Wyoming State Statute designates the WSCL as the agency responsible for conducting DNA analysis on DNA samples collected from all convicted felony offenders and qualifying sex offenders in the State of Wyoming. The WSCL is responsible for storing and maintaining the resultant profiles in the Wyoming State DNA Database.

The WSCL Biology Unit is in the process of validating new methodologies for both DNA casework and Offender sample analysis. Offender samples will be processed using Identifiler plus chemistry directly amplified from sample punches without extraction. The DNA casework laboratory is planning on moving to single amplification Identifler Plus chemistry as well, from our current two kit Profiler / Cofiler chemistry now in use. The Federal funding from this award will be used for projects with the following goals:

1. Reducing or maintaining the current forensic DNA case backlog through analyst overtime and supply purchases while allowing for both the new methodologies to be validated and the staff to be trained on the new methods.
2. Reducing the DNA database sample backlog through analyst overtime and supply purchases while allowing for both the new methodologies to be validated and the staff to be trained on the new methods.

3. Increasing the capacity of the laboratory by purchasing supplies for validation, funding analyst overtime for validation purposes and by hiring on e contract technician to assist analysts in both the casework and database laboratories.
4. Providing education opportunities to develop a depth of staff necessary to ensure continued laboratory operation in the case of personnel losses or turnover.
5. Providing education opportunities to develop a depth of staff necessary to ensure continued laboratory operation in the case of personnel losses or turnover.

The WSCL can expect to reduce or maintain the DNA case backlog by the end of the award period while still allowing completion of the proposed method validation. The agency also expects to work at least 1632 offender samples and 90 cases with monies from this solicitation. The WSCL expects to enhance the efficiency of the DNA laboratory by validating the single amplification methodologies.

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding under the Solving Cold Cases With DNA Program. This program furthers the Department's mission by offering assistance to States and units of local government to identify, review, and investigate Uniform Crime Report (UCR) Part 1 Violent Crime "cold cases" that have the potential to be solved through DNA analysis, and to locate and analyze biological evidence associated with these cases.

Solicitation:
Solving Cold Cases With DNA

Eligibility

States (including territories) and units of local government (including federally-recognized Indian tribal governments as determined by the Secretary of the Interior) are eligible to apply for funding under this solicitation.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 8.)

All applications are due by 11:59 p.m. eastern time on March 8, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact Charles Heurich, Program Manager, at 202–616–9264 or by e-mail to Charles.Heurich@usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2810

SL# 000954

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Solving Cold Cases With DNA
CFDA 16.560

Overview

With this solicitation, NIJ seeks applications from States and units of local government for funding to identify, review, and investigate "violent crime cold cases" that have the potential to be solved using DNA analysis, and to locate and analyze the biological evidence associated with these cases. Experience has shown that cold case programs can solve a substantial number of violent crime cold cases, including homicides and sexual assaults. Advances in DNA technologies have substantially increased the successful DNA analysis of aged, degraded, limited, or otherwise compromised biological evidence. As a result, crime scene samples once thought to be unsuitable for testing may now yield DNA profiles. Additionally, samples that previously generated inconclusive DNA results may now be successfully analyzed.

For the purposes of this announcement: "violent crime cold case" refers to any unsolved UCR Part 1 Violent Crime case for which all significant investigative leads have been exhausted.

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on March 8, 2011. Please see the "How to Apply" section, page 8, for more details.

Eligibility

Please refer to the title page for eligibility under this program.

Specific Information—Solving Cold Cases With DNA

The goal of this solicitation is to make funding available to States and units of local government for the following purposes:

1. To identify, review, and prioritize violent crime cold cases that have the potential to be solved using DNA analysis (by appropriate persons such as prosecutors, public defenders, law enforcement personnel, forensic scientists, and medical examiners) in order to determine whether DNA analysis of any existing biological evidence could help solve the cold case.
2. To identify, collect, retrieve, and evaluate biological evidence from such cases that may reasonably be expected to contain DNA.
3. To perform DNA analyses on such biological evidence, including the handling and screening of this evidence.

Funds may be used for certain investigative purposes provided they fall within the scope of the solicitation. Specifically, all investigative activities must be directly related to the funding purposes (1, 2, and/or 3) above. Activities such as interviewing victims, witnesses, suspects, etc., are permissible in violent crime cold case investigations that have the potential to be solved through DNA analysis until: (a) all samples with potential DNA evidence have been recovered and analyzed (including probative evidentiary samples, cold hit confirmatory samples, reference samples from victims and consensual partners, etc.), or (b) the review of the case demonstrates that no biological material was present for further analysis.

Please note: Costs for general cold case investigations—those that do not involve UCR, Part 1 violent crimes, or do not have the potential to be solved through DNA analysis—are not allowed. Funds also may not be used for the purpose of general laboratory capacity enhancement or general casework backlog reduction.

All DNA analyses conducted using funding from this program must be performed by a laboratory (government-owned or fee-for-service) that is accredited and currently undergoes external audits not less than once every 2 years. These audits must demonstrate that the laboratory maintains compliance with the DNA Quality Assurance Standards established by the Director of the FBI. All eligible DNA profiles obtained with funding under this program must be entered into the Combined DNA Index System (CODIS) and, where applicable, uploaded to the National DNA Index System (NDIS).

Each DNA analysis conducted under this program must be maintained pursuant to all applicable Federal privacy requirements, including those described in 42 U.S.C § 14132(b)(3).

Applicants should be aware that NIJ may choose to conduct an evaluation of one or more projects funded under this solicitation. Any such evaluation may focus on the impact of the project and its implementation, and may result in publication of a report. An example of an NIJ-funded report (on Boston's Operation Ceasefire) may be found at www.ncjrs.gov/pdffiles1/nij/188741.pdf.

Amount and length of awards: Total funding for this solicitation and the number of awards made will depend on the availability of funds, the quality of the applications, and other pertinent factors. **All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.**

Individual awards typically will not exceed $500,000. Applicants representing cities with a population of 250,000 or greater may apply for funding in excess of $500,000 if they rank in the top 25 nationwide for the number of murders and non-negligent manslaughters for the year 2009, based on Federal Bureau of Investigation Uniform Crime Reports statistics available as of September 2010. The data are available on the FBI 2009 statistics site (www.fbi.gov/ucr/cius2009/index.html). Data to support eligibility for the increased funding should be provided within the body of the application.

In general, NIJ will limit any grants under this program to a maximum period of 18 months after the start of the award.

Permissible Uses of Funds

All expenditures under this program must relate directly to violent crime cold cases that have the potential to be solved through DNA analysis and to one or more of the three award purposes listed above. The following types of expenditures may be permitted:

1. **Salary and benefits of additional employees.** Funds may be used for salaries and benefits of additional full-time or part-time employees to the extent that such employees are directly engaged in case review, location of evidence, or DNA analysis of biological evidence. Applicants should provide documentation that additional new full-time/part-time employee(s) will be directly engaged in these activities.
2. **Overtime.** Funds may be used for overtime for people directly engaged in case review, location of evidence, DNA analysis of biological evidence, and post-hit case investigation necessary for retrieval of confirmatory DNA samples. All overtime payments must be made in accordance with the applicable provisions of the OJP Financial Guide, available at www.ojp.usdoj.gov/financialguide/.
3. **Travel.** Funds may be used for travel for investigative purposes within the scope of the program (excluding witness travel).
4. **Laboratory equipment.** Funds may be used to upgrade, replace, lease, or purchase laboratory equipment when the primary use of this equipment can be documented as **directly related** to investigation of violent crime cold cases that have the potential to be solved through DNA analysis.
5. **Computer equipment.** Funds may be used to upgrade, replace, lease, or purchase computer hardware or software that will be used exclusively for case review, location of evidence, or DNA analysis of biological evidence.
6. **Laboratory supplies.** Funds may be used to acquire laboratory supplies for DNA analysis of biological evidence.
7. **Consultant and contractor services.** Funds may be used to hire consultants or temporary contract staff, or both, to conduct case reviews, locate evidence, or conduct DNA analysis of biological evidence. Funds may also be used for contracts with accredited fee-for-service vendors to conduct DNA analysis of biological evidence.
8. **Training.** Funds may be used for training directly related to case review, location of evidence, and DNA analysis of biological evidence.

What will not be funded:

1. Work that will be funded under another specific solicitation.
2. Salaries and benefits for existing staff. Funds may not be used to pay salaries or benefits, or both, for existing staff, other than overtime as discussed above.
3. Travel for witnesses.
4. Portable investigative equipment such as cameras and tape recorders.
5. Cell phones and cell phone plans.
6. Vehicles.
7. Construction.
8. Renovation.
9. Rental costs for space.

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2011 salary table for SES employees is available at www.opm.gov/oca/11tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Assistant Attorney General of the Office of Justice Programs. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match Requirement: See "Cofunding" paragraph under "What an Application Should Include" (below).

Performance Measures

To assist in fulfilling the Department's responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the "Data Grantee Provides" column so that OJP can calculate values for the "Performance Measures" column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
To identify, review, and investigate "violent crime cold cases" that have the potential to be solved through DNA analysis, and to locate and analyze biological evidence associated with these cases.	1. Percent of (UCR Part 1) "violent crime cold cases" reviewed in which biological evidence still existed. 2. Percent of "violent crime cold cases" subjected to DNA analysis that yielded viable DNA profiles. 3. Number of "violent crime cold case" DNA profiles generated that have been entered into CODIS. 4. Number of CODIS hits resulting from "violent crime cold case" analyses.	1. The number of violent crime cold cases reviewed. 2. The number of violent crime cold cases reviewed in which biological evidence still existed. 3. The number of violent crime cold cases subjected to DNA analysis. 4. The number of violent crime cold cases that yielded viable DNA profiles. 5. The number of DNA profiles entered into CODIS. 6. The number of CODIS hits. 7. Quarterly financial reports, semi-annual progress reports, and a final comprehensive progress report.

Submission of performance measures data is not required for the application. Instead, applicants should discuss in their applications their proposed methods for collecting data for performance measures. Please refer to the section "What an Application Should Include" (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute "research" for purposes of applicable DOJ human subjects protections. However, project evaluations that are intended only to generate internal improvements to a program or service, or are conducted only to meet OJP's performance measure data reporting requirements, likely do not constitute "research." Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of human subjects protections for OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP "Other Requirements for OJP Applications" Web page (www.ojp.usdoj.gov/funding/other_requirements.htm). Applicants whose proposals may involve a research or statistical component also should review the "Confidentiality" section on that Web page.

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding. Reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at www.fsrs.gov.

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System) number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point-of-contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity. Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it

is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov. Please use the following identi**fying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ–2011–2810.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web

site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, and resumes/curriculum vitae of key personnel will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
   The program narrative section of your application should not exceed 25 double-spaced pages in 12-point font with 1-inch margins. Abstract, table of contents, charts, figures, appendices, and government forms do not count toward the 25-page limit for the narrative section and should be separate.

   If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

   Program Narrative Guidelines:

   a. **Title Page**

   b. **Project Abstract** (not counted against the 25-page program narrative limit and not to exceed 600 words).

   c. **Table of Contents and Figures** (not counted against the 25-page program narrative limit).

d. **Main body.** The main body of the program narrative should describe the project in depth. Proposals should clearly define the strategy and criteria that will be used to identify, prioritize, and select violent crime cold cases that have the potential to be solved through DNA analysis. These may be demonstrated through the inclusion of checklists, flowcharts, diagrams, or narratives, and should be developed through collaboration with appropriate members of the criminal justice community (such as crime laboratory personnel, prosecutors, defense counsel, medical examiners, law enforcement investigators, etc.). The proposal should include a description of the follow-up activities that will be performed to advance a case toward adjudication should a DNA match be obtained. For proposals where the crime laboratory is not the submitting agency but where DNA analysis will be performed, there should be a demonstration of the crime laboratory's commitment to analyze the biological evidence, interpret the DNA results, and upload the DNA profiles into DNA databases.

The program narrative should address the specific project objectives, expected results, and implementation approach. It should demonstrate, specifically and comprehensively, how requested funds will be used for the review and investigation of violent crime cold cases that have the potential to be solved through DNA analysis and for the location and analysis of biological evidence associated with these cases.

The following sections should be included as part of the program narrative:

- Statement of the Problem.
- Project/Program Design and Implementation.
- Capabilities/Competencies.
- Impact/Outcomes and Evaluation.
- Plan for Collecting the Data Required for This Solicitation's Performance Measures. **Note:** Submission of performance measures data is not required for the application. Performance measures are included as an alert that successful applicants will be required to submit specific data to NIJ as part of their reporting requirements. For the application, the applicant should indicate an understanding of these requirements and discuss how the applicant will gather the required data, should the applicant receive funding.

Note: Within the above five sections, the narrative should address:

- Purpose, goals, and objectives.
- Implications for criminal justice practice in the United States.
- Management plan and organization.

f. **Appendices** (not counted against the 25 page program narrative limit) include:

- Bibliography/references.
- Curriculum vitae, resumes or biographical sketches of key personnel.
- Project timeline and calendar with expected milestones.
- Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).

- Privacy Certificate (for further guidance go to www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
- List of previous and current NIJ awards to applicant organization.
- Letters of cooperation/support or administrative agreements from organizations collaborating in the project (if applicable).
- List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- Other materials specified by the solicitation.

3. **Budget Detail Worksheet and Budget Narrative**

   a. Budget Detail Worksheet

   A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

   For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

   b. Budget Narrative

   The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

   Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)
   Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution** (if applicable)
   If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership should be included with the application. In those instances when an organization or consortium of tribes proposes to apply for a grant on behalf of a tribe or multiple specific tribes, then the application should include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in lieu of tribal resolutions.

6. **Other Standard Forms**
   Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

   a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds).

   b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded).

   c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded).

   d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds).

Selection Criteria

Statement of the Problem (Understanding of the problem and its importance)—5%

Applicants should include appropriate citations and other information to demonstrate an understanding of the problem and the expected impact of the funding in solving violent crime cold cases with DNA.

Project/Program Design and Implementation (Quality and technical merit)—30%

1. Awareness of the state of current DNA technology and its application to solving cold cases.
2. Soundness of methods and analytic and technical approach, including demonstrated team approach to solving cold cases.

3. Feasibility of proposed project and awareness of pitfalls.
4. Innovation and creativity (when appropriate).

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—20%

1. Qualifications and experience of proposed staff.
2. Demonstrated ability of proposed staff and organization to manage the effort.
3. Adequacy of the plan to manage the project, including how various tasks are subdivided and resources are used.
4. Successful past performance on NIJ grants and contracts (when applicable).

Budget—20%

1. Total cost of the project relative to the perceived benefit.
2. Appropriateness of the budget relative to the level of effort.
3. Use of existing resources to conserve costs.
4. Affordability and cost-effectiveness.

Impact/Outcomes and Evaluation (Relevance to policy and practice)—25%

1. Potential for resolving violent crime cold cases.

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ, conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

Absent explicit statutory authorization or written delegation of authority to the contrary, all final grant award decisions will be made by the Assistant Attorney General (AAG), who may also give consideration to factors including, but not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding when making awards.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds
- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006
- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If a proposal is funded, the award recipient will be required to submit several reports and other materials, including quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Future awards and fund drawdowns may be withheld if reports are delinquent. If a cold DNA hit occurs during a reporting period, a brief description of the case should be included in the progress report. The description should detail the type of hit (offender or forensic) and the evidence the hit was obtained from.

Application Checklist

Solving Cold Cases With DNA

This application checklist has been created to assist in developing an application.

What an Application Should Include:

_____ Application for Federal Assistance (SF–424) (see page 10)
_____ Program Narrative (see page 10)
_____ Appendices to the Program Narrative (see page 11)
- _____ Bibliography/references
- _____ Curriculum vitae, resumes or biographical sketches of key personnel
- _____ Project timeline and calendar with expected milestones
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ List of previous and current NIJ awards to applicant organization
- _____ Letters of cooperation/support or administrative agreements from organizations collaborating in the project (if applicable)
- _____ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable)

_____ Budget Detail Worksheet (see page 12)
_____ Budget Narrative (see page 12)
_____ Indirect Cost Rate Agreement (if applicable) (see page 12)
_____ Tribal Authorizing Resolution (if applicable) (see page 13)
_____ Program Narrative/Abstract Format (see page 10)
- _____ Double-spaced
- _____ 12-point standard font
- _____ 1” standard margins
- _____ Narrative is 25 pages or less

_____ Other Standard Forms as applicable (see page 13), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 5: FY 2011 Solving Cold Cases with DNA Program Grant Awards

FY11 Recipient Name	Award Number	Award Amount
Arizona Criminal Justice Commission	2011-DN-BX-K546	$499,975
Baltimore, County of	2011-DN-BX-K519	$176,444
City of Charlotte	2011-DN-BX-K525	$485,777
City of Hollywood	2011-DN-BX-K523	$224,974
City of Jacksonville	2011-DN-BX-K521	$500,000
Kansas City, Missouri Board of Police Commissioners	2011-DN-BX-K526	$452,293
MN Dept. of Public Safety – Bureau of Criminal Apprehension	2011-DN-BX-K522	$465,079
Multnomah County	2011-DN-BX-K520	$34,749
New York City Office of the Criminal Justice Coordinator	2011-DN-BX-K527	$796,829
San Bernardino County	2011-DN-BX-K545	$500,000
St. John's County Sheriff's Office	2011-DN-BX-K524	$219,723
	TOTAL FUNDING	**$4,355,843**

Attachment 6: FY 2011 Solving Cold Cases DNA Program Abstracts

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FY11 Recipient Name: Arizona Criminal Justice Commission
Award Number: 2011-DN-BX-K546
Award Amount: $499,975
Abstract: From 2008 through 2010 the Phoenix Police Department (PPD) more than over 400 reported homicides and more than 1,500 reported forcible rapes based on Uniform Crime Reporting (UCR) criteria. Many of these violent crimes have a high degree of complexity and therefore require a great deal of evidence to be analyzed by the crime laboratory. These investigations require the collaboration of many different entities in the criminal justice community from the first responders to the investigators to the medical examiners to the crime laboratory and finally the prosecutor's office. Unfortunately, in a time when resources in the criminal justice community are stretched thin and budget constraints are worse than ever, many of these investigations become cold cases.

The PPD has a long standing commitment to the investigation of cold cases and established two cold case squads to investigate homicides and sexual assaults more than seven years ago. In 2008, the PPD made an organizational commitment to investigating cold cases and dedicated additional resources to these cold case detective squads by increasing the number of detectives assigned and providing them with dedicated resources. In addition, the Department formalized a department-wide protocol to successfully work with all stakeholders in the criminal justice community to solve these cold cases. With the use of the 2008 Solving Cold Cases With DNA grant, the department was able to conduct DNA analysis on 297 homicides and sexual assaults resulting in 60 CODIS hits. This 20 percent hit ratio is consistent with both cold cases and current cases. It is the intent of the Phoenix Police Department to utilize $499,975 of the *Solving Cold Cases with DNA* grant funds to:

- Follow up / complete investigation on the 60 cold case CODIS hits and submit them for prosecution as appropriate, in addition to, conducting follow-up investigation on any new hits generated through the analysis of samples processed under this award;
- Research 600 cold cases from PPD's pending homicide and sexual assault cold cases. It is currently estimated that the PPD has in excess of 2,000 pending cold case investigations;
- Screen the evidence from 300 of these cases for possible biological evidence;
- Analyze 200 of these cases for DNA and enter suitable profiles into CODIS;
- Collaborate with criminal justice community partners and victims (victim families) to forward all suitable cases for prosecution

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FY11 Recipient Name: Baltimore, County of
Award Number: 2011-DN-BX-K519
Award Amount: $176,444
Abstract: The Baltimore County Police Department (BCoPD) requests funding to continue and expand the success of its Solving Cold Cases With DNA Project established to identify, review and investigate "violent crime cold cases" that have the

potential to be solved using DNA analysis, and to locate and analyze biological evidence associated with these cases.

Building upon work to review cold cases that was initiated in January 2009 with funding from the NIJ, the BCoPD will continue its review and investigation of violent cold cases. Funding of the Solving Cold Cases With DNA Project will provide continued support to two units located in the Department's Criminal Investigations Division – Persons Crimes Section: the Homicide Unit and the Support Services Unit. Overtime and travel funding will enable detectives to pursue leads in open cold cases that involve sexual assaults and homicides. The BCoPD also requests funding for detectives to attend courses and conferences which offer training on a range of topics relevant to cold case investigation. New techniques, information, and skills from these training opportunities will enhance investigative abilities and be utilized to train other detectives in the Persons Crimes Section.

Funding is also requested to outsource the appropriate biological evidence as determined by the Persons Crimes Section detectives in cooperation with the Department's Forensic Services Section Biology Unit.

The Program will be managed by experienced law enforcement personnel. Program activities will be documented progress reported semiannually and a final program evaluation will be completed.

FY11 Recipient Name: City of Charlotte
Award Number: 2011-DN-BX-K525
Award Amount: $485,777
Abstract: The Charlotte-Mecklenburg Police Department (CMPD) seeks funding through the NIJ for its Homicide Cold Case Unit and Sexual Assault Cold Case Unit to continue to actively investigate more unsolved homicide, sexual assault, and rape cases involving possible DNA evidence.

The problem facing the CMPD is that it currently has more than 550 inactive, unsolved homicides and over 1,500 unsolved sexual assault cases. Each year the CMPD adds approximately 100 new cases to the total number of unsolved violent cold cases. Our goals for this 2011 proposal include reviewing 600 violent crime cold cases and identifying 300 violent crime cold cases with the existence of biological evidence. Funding would allow for the performance of DNA analysis on 150 violent cold cases likely resulting in 120 cold cases yielding DNA profiles. We will enter 90 DNA profiles into CODIS and expect 72 (80 %) CODIS hits.

Unique to our 2011 application, is the funding request to hire retired Mecklenburg County Assistant District Attorney Barry Cook and a DNA Analyst dedicated to performing analyses on the biological evidence identified by the retired detectives. With a dedicated Assistant District Attorney, violent cold cases will be assured prosecutorial time and finally provide closure to the victim and the victim's family. We will also be breaking new ground by prosecuting sexual assault cases where the victim is deceased. The District Attorney's Office has been reluctant to try such cases; in part due to the heavy workload prosecutors have trying active cases.

During Mr. Cook's 29 years of service he tried more than 200 felony cases, including capital murder, assault, arson, robbery, rape, and property crime. Working with retired and CMPD full-time detectives, Mr. Cook would prepare and prosecute violent cold cases resulting in CODIS hits.

The State of North Carolina, effective February 1, 2011, adopted the DNA Database Act of 2011. The Act allows law enforcement to obtain DNA samples from arrestees charged with a qualifying offense. The result of this new law will be an increased number of DNA samples cataloged and maintained by North Carolina, further increasing the chances for a CODIS hit.

The CMPD has a long history in the understanding of current DNA technology and its application to solving cold cases. The CMPD has had an internal crime laboratory since 1969 and is accredited by the American Society of Crime Laboratory Directors (ASCLAD). The DNA Unit undergoes external audits every two years to demonstrate compliance with the DNA Quality Assurance Standards established by the Director of the FBI.

In 2003, the CMPD created the Homicide Cold Case Unit. The CMPD was among the first police departments to use expert volunteers to assist paid officers in preparing old, unsolved homicide cases. Since 2003 this Unit has reviewed 130 cases, solved 29 cases, and netted 19 arrests.

In January 2006, the CMPD formed the Sexual Assault Cold Case Unit. Since its inception, this Unit has solved 102 cases, resulting in 38 arrests dating back to 1981. Since 2006, six serial rapists have been charged accounting for 17 cases.

The methodology to be implemented under this proposal will allow researchers to measure the effectiveness of our strategies and tactics to add to the body of knowledge on effectively solving cold cases using DNA strategies and tactics for evaluation and

replication in other jurisdictions to reduce the incident of violent crime, disrupt criminal activity, and reduce victimization.

Through this coordinated and comprehensive plan, the CMPD fully expects to increase the number of rapists and murderers brought to justice. For each violent cold case solved, the CMPD can prevent future violent attacks on innocent victims.

FY11 Recipient Name: City of Hollywood
Award Number: 2011-DN-BX-K523
Award Amount: $224,974
Abstract: The City of Hollywood Police Department is requesting $224,974.00 from NIJ to fund lab analysis of possible DNA evidence from Cold Cases. The Department will dedicate a Detective on a full-time basis to locate and analyze biological evidence associated with violent crime cold cases. The Detective will be under the supervision of the Homicide Unit Sergeant.
Requested funding from the National Institute of Justice will allow the Department to implement the proposed initiative:

- Identify, review, and prioritize ninety (90) cold homicide cases
- Evaluate and identify all evidentiary items found suitable for DNA analysis to be submitted to accredited State and private laboratories for testing.
- Cold Case Detectives will ensure the active follow-up investigation of suspects identified through DNA analysis and when applicable, submit completed investigations to the State Attorney for prosecution.

FY11 Recipient Name: City of Jacksonville
Award Number: 2011-DN-BX-K521
Award Amount: $500,000
Abstract: The consolidated City of Jacksonville (Duval County), Florida, has experienced an unprecedented number of murders over the past several years, murders that are investigated by the Jacksonville Sheriff's Office's Homicide Unit. Current resources of personnel and funding are stretched to the limit on these new cases, leaving little time to investigate cold cases. A five-member Cold Case Team, implemented at the agency in 2002, is tasked with investigating these older cases in addition to investigating all officer-involved shootings and all in-custody deaths involving the use of force.

With approximately 1,300 homicide cold cases dating back to 1960, the workload on this small squad is immense. Determining which cases to fully investigate based on the probability they contain DNA evidence, and performing the investigation, is taken on as

time and funding permit. However, even with the limited resources currently available, the Cold Case team has developed a system to successfully investigate a number of these cases over the past eight years. The investigations have led to several arrests and convictions, including one for a serial killer who had committed six murders between 1999 and 2003.

For a large number of the cases investigated by the Cold Case Team, DNA evidence was the key piece of evidence needed to solve the case. In fact, in some of the solved cold cases, the suspect had been questioned about the incident during the initial investigation but could not be linked to the case. In others, the eventual suspect was totally unknown to investigators. It was only through the existence and processing of the DNA evidence that suspects in these cases were finally charged.

In addition to these on-going efforts, a small pilot project was started in 2010 to review cold cases for possible DNA, focusing on 55 homicides that occurred in 1990 and 1991. Initial review resulted in 16 cases with DNA evidence. To date, three forensic examinations resulted in a DNA profile being developed suitable for entry into the CODIS database, with one suspect identified. That case is currently being reviewed by the State Attorney's Office.

In addition to homicides, there are 1,557 unresolved sexual assault cases in Jacksonville committed between 1989 and 2001. Detectives in the Sex Crimes Unit have labored under the same restrictions as the Homicide Unit for manpower and budget in investigating these older cases. While many sexual assault cases are likely to have physical evidence present, often in these older cases the evidence was never submitted to a laboratory due to the limitations of DNA testing at the time (for example, a small sample size). Others had evidence submitted and tested for DNA, but with negative results. However, recent improvements to the DNA testing capability is expected to improve the possibility of obtaining positive results in many cold cases.

Under this 18-month grant project, we will increase the number of homicide and sexual assault cold case investigations undertaken by providing overtime to Homicide and Sex Crimes unit personnel (36 Detectives and seven Sergeants) to more fully investigate those cases; providing funding for evidence analysis by fully accredited DNA laboratories; providing travel expenses for detectives to interview witnesses or suspects during the investigative phase; and providing training opportunities for investigators to improve and update their skills in DNA evidence, cold case, and violent crimes investigations.

Based on agency experience, we estimate 25 percent of the 160 homicide cases selected for investigation will provide biological evidence suitable for processing and 90 percent of the 100 sexual assault cases selected will yield viable evidence collection kits.

The budget for this project is $649,829.

FY11 Recipient Name: Kansas City, Missouri Board of Police Commissioners
Award Number: 2011-DN-BX-K526
Award Amount: $452,293
Abstract: The Kansas City, Missouri Police Department (KCPD), with the resources provided by the Solving Cold Cases with DNA Grant is addressing two important components in the investigation of "cold case" sexual assaults to include rapes, sodomies and potentially other Part 1 violent crimes. The first is the evaluation and prioritization of cold cases that have potential biological evidence but have not been analyzed by the KCPD Crime Laboratory. Currently the KCPD Sex Crimes Cold Case Squad with the assistance of the KCPD Crime Laboratory identified approximately 5,500 cold sex crimes cases where biological evidence potentially existed from the years 1972-1992 that were in need of review and then analysis by the crime lab. In 2008, the year 1991 was used as a test year to determine the best way to systematically review the sex crimes cases collaboratively, and a process was developed. The KCPD believes potential biological evidence that can be tested for DNA will be found in the above cases but is unable to predict how many that may be. Since the inception of the Solving Cold Cases with DNA Grant, which was first awarded in the 2008 year, KCPD has have been able to decrease that number to approximately 1,448 cases. This feat could not have been accomplished without the Solving Cold Cases with DNA Grant.

The second component is to reduce the steadily growing amount of sex crimes cases that have a CODIS hit identified or have a full or partial profile developed for an unknown suspect but have yet to be investigated fully. Prior to the inception of the Sex Crimes Cold Case Squad (which was started with the Solving Cold Cases with DNA Grant in 2008) there were 126 cold cases that had either a CODIS hit or an unknown DNA profile in CODIS. Currently, there are approximately 177 samples in CODIS for Cold Case Sex Crimes that have never matched to a suspect.

The KCPD is applying for the Solving Cold Cases with DNA Grant in order to build on the remarkable work that has already been accomplished. The objective is to identify, review, and prioritize sex crimes cases that have the potential to be solved using DNA analysis to determine whether biological evidence may exist. Activities such as

interviewing victims, witnesses, suspects, etc., will continue to be conducted in those cold case investigations that have the potential to be solved through DNA analysis until either all samples with possible DNA evidence have been recovered and analyzed (including probative evidentiary samples, cold hit confirmatory samples, reference samples from victims and consensual partners, etc.) or the review of the case demonstrates that no biological material was present for further analysis.

The focus will be on sex crimes cases (but other violent crimes could be looked at) that have either not been evaluated for DNA evidence as of the present date or have not been fully investigated and have a DNA profile. The KCPD Crime Laboratory and the Jackson County Prosecutor's Office are collaborative partners and are fully in support of this endeavor. The KCPD Crime Laboratory and the Jackson County Prosecutor's Office currently have Federal Grants that help with this project. The Sex Crimes Cold Case Squad currently does not have funding for this project, but has been awarded federal grants in the past for it.

FY11 Recipient Name: MN Department of Public Safety – Bureau of Criminal Apprehension
Award Number: 2011-DN-BX-K522
Award Amount: $465,079
Abstract: The Minnesota Bureau of Criminal Apprehension (BCA) Cold Case Unit is responsible for assisting law enforcement agencies in the evaluation and continued investigation of unsolved cold cases that occurred throughout the state's 87 counties. The unit also assists metropolitan agencies, including St. Paul and Minneapolis Police Departments. Since its initial launch in 1991, the unit has diligently worked with prosecutors, victim advocates, and forensic scientists to ensure that the highest level of professionalism and investigation is applied to all cold cases. Additional funding will enhance the Cold Case Unit's resources for potentially solving violent cold cases that contain DNA evidence.

As a result of constant fluctuations in resources, the Cold Case Unit has utilized innovative resources for funding, including partnerships with private corporations. In 2005, partnerships with the Target Corporation helped fund two additional agents, on loan from St. Paul PD and Minneapolis PD, temporarily re-assigning them to the Cold Case Unit. Unfortunately, in April 2007 the funding was exhausted and the unit lost the additional personnel.

While we understand that the needs of the BCA Cold Case Unit are not unique; our capabilities are. The BCA contains an experienced Investigations Division, as well as an advanced Forensic Sciences Laboratory. The Cold Case Unit currently utilizes a state of

the art Crime Laboratory that performs numerous types of DNA analysis; including STR, Y-STR, and mtDNA testing. The BCA Forensic Laboratory has a long and progressive track record when it comes to the use of DNA technology in solving crime.

As a diverse and innovative statewide agency, the BCA and Minnesota Department of Public Safety fully support the application of technological advancements and experienced personnel, as best utilized in the cold case process. With the aid of additional resources, the Cold Case Unit may generate a fusion of criminal justice professionals to actively and diligently investigate, analyze, and prosecute cold cases in Minnesota.

FY11 Recipient Name: Multnomah County
Award Number: 2011-DN-BX-K520
Award Amount: $34,749
Abstract: The Multnomah County Sheriff's Office (MCSO) has completed work which identifies 13 unsolved homicides and five unsolved sexual assault cases which have sufficient DNA evidence where, if processed at a crime lab, progress could be made in solving these "cold" cases. MCSO is still in the process of reviewing 411 unsolved sexual assault cases to determine other cases with viable biological evidence. There is currently a backlog of 50-75 person crime cases waiting for processing at the Oregon State Police Forensic Laboratory (Crime Lab). These cold cases are important to the Crime Lab, but due to limited resources, they are often considered a lower priority to newer cases.

Technological advances in DNA evidence processing have provided law enforcement agencies the opportunity to reopen older cases that were once considered unsolvable.

The cases MCSO need processing on are homicide and rape cases. These victims have not been forgotten and there is now the ability to have additional investigation performed on their cases. In addition to the advances in DNA evidence technology, MCSO has additional resources to work on these cases in the form of the MCSO Cold Case Team. Created in 2008 and made up of seven retired, experienced, volunteer, law enforcement investigators, two volunteer support staff, three MCSO Detectives, and an Investigative Sergeant the Cold Case Team has the ability to work on these cases before and after DNA processing has been completed. The Cold Case Team hopes to close these open homicide and sexual assault cold cases.

Using funds from this National Institute of Justice (NIJ) grant, MCSO would be able to pay for DNA analysis lab kits used to process these cases at the Oregon State Police Forensic Laboratory. As part of the follow up to evidence discovery, this grant would

fund overtime for three detectives to further investigate any hits resulting from the lab analysis. Travel for these investigations, as DNA matches are from a national database, is also requested as part of this grant.

MCSO seeks to close all of our cold homicide and rape cases through an arrest or other discovery. Although it is unlikely that all of the cases will be solved, the attempt needs to be made for the victims and the co-victims (family members and loved ones of cold case homicide and rape victims). Many of these co-victims believe that no one is willing to put effort into their cases, with some even understanding the limited resources available for to law enforcement for these investigations. New technologies in DNA processing, funding from this grant, and the availability and capabilities of the thirteen-member Cold Case Team will allow MCSO to get closer to solving these cases and providing closure to all the victims.

FY11 Recipient Name: New York City Office of the Criminal Justice Coordinator
Award Number: 2011-DN-BX-K527
Award Amount: $796,829
Abstract: New York City has over 9,000 unsolved homicides as well as thousands of other violent crime cold cases. Many of these crimes occurred during the 1980s and 1990s when the violent crime rate in New York City was significantly higher than it is today. Though crime rates in the city have declined considerably in recent years, New York City's 471 murders and non-negligent homicides, as reported in the 2009 Federal Bureau of Investigation Uniform Crime Report statistics, ranks first in the nation, 29% higher than the next city on the list.

The Mayor's Office of the Criminal Justice Coordinator (CJC) in partnership with the Police Department (NYPD), the Office of Chief Medical Examiner (OCME) and the District Attorneys' Offices of Bronx, New York, Richmond and Queens Counties is requesting $796,829 in grant funds. These funds will support selection and analysis of cold cases across six New York City law enforcement agencies. The NYPD Cold Case Squad (CCS) and the District Attorneys' Offices will identify, review, and prioritize cold case files for their potential to yield evidence for DNA analysis. These cases will be forwarded through a centralized administrative protocol to the NYPD Property Clerk or OCME for evidence retrieval. Any evidence found by the Property Clerk will be logged out to the appropriate county DA or the Cold Case Squad. OCME will perform DNA analysis on any potentially probative evidence. Grant funds will pay for OCME overtime and supplies dedicated to DNA analysis, evidence handling and loading DNA profiles into the CODIS database, in addition to NYPD and DA overtime expended on case review and evidence retrieval. OCME will refer successful DNA matches to the agency

that originated the request. NYPD and the county DAs will handle investigation and prosecution of successfully matched cases with non-grant funded personnel.

CJC will be responsible for oversight, reporting requirements, and fiscal monitoring. CJC receives no direct funding under this grant which strengthens its position and credibility in managing the project. CJC has a dedicated grants unit and a proven track record of managing NIJ, BJA and OVW grants.

This important work was started under the 2009 NIJ Cold Case award. We have achieved promising successes, nonetheless we have instituted a number of improvements including standardizing case selection and prioritization, involving the NYPD Property Clerk Division to improve for evidence retrieval, and streamlining interagency coordination. We believe these improvements will allow us to conduct more analyses resulting in more DNA profiles.

While the existing grant has been of considerable assistance in the quest for answers in many unsolved crimes, additional funding is necessary to continue these efforts as both DAs have exhausted all their funds and NYPD and OCME will have exhausted theirs by close of grant. New York City expects a $4.58 billion dollar budget deficit in FY12. The NYPD, OCME and the DAs have managed to use increasingly scarce funds to modernize the evidence management and DNA analysis process. This work has essentially eliminated the rate of growth of the untested DNA backlog, however very little funding remains for working off the current backlog. This grant will provide much needed funding to reduce this backlog and, in combination with the recent innovations, will allow the city to manage what was once viewed as an unwieldy trove of cases.

FY11 Recipient Name: San Bernardino County
Award Number: 2011-DN-BX-K545
Award Amount: $500,000
Abstract: The San Bernardino County Sheriff's Department serves a population of over 2 million residents and an area of 20,186 square miles, the largest county in the contiguous United States. The Department currently has over 562 unsolved homicide cases. The Department's jurisdiction experiences an average of 75 homicides per year; and the Department's Crime Lab currently has 1,355 cases which are assigned for DNA analysis and 189 cases assigned for stain preservation. The Crime Lab serves the counties of San Bernardino and Riverside, which together serve a population of over 4 million residents. The demands for DNA testing far outweigh the current capabilities of the Crime Lab, and the lack of resources has resulted in delays in the processing of evidence.

The purpose of this proposal is to re-examine and re-investigate older unsolved cases dated back 75 years with an emphasis on homicides. With the Department's Crime Lab using the available technology of PCR STR-DNA extraction and profiling, cases that could not be solved in years past will be re-examined to determine if any of the cases are amenable to addition forensic testing. Evidence will be re-inventoried, screened, assessed, processed for DNA profiling, submitted to CODIS, and followed up on subjects identified through DNA testing. Arrest and prosecutions and/or exonerations will be the focus of this collaborative project.

Due to the high volume of cases that have resulted since the inception of the exiting Cold Case Unit, the Department is seeking additional funds under this program to continue with these efforts, which have proven to be successful.

FY11 Recipient Name: St. John's County Sheriff's Office
Award Number: 2011-DN-BX-K524
Award Amount: $219,723
Abstract: The St. Johns County Sheriff's Office (SJSO) currently has 33 victims of unsolved homicide cases, whose murderers are still at large and remain free from paying any price for their heinous crimes. With the increasing use of DNA analysis to examine evidence in violent crime cases, law enforcement agencies have been able to reach into past unsolved homicide investigations and find links that bring closure to cases and justice to the community.

Like other law enforcement agencies faced with numerous unsolved cases, the SJSO must find the time and resources to review and prioritize these cases to determine if viable DNA evidence exists to aid in re-opening an investigation. Unfortunately, the workload demands of new and current cases often deter expending any significant efforts on cold cases.

To address this and to fulfill our responsibility to the 33 victims and their families, the SJSO is requesting funding from the National Institute of Justice and proposes an eighteen month initiative, "SJSO Solving Cold Cases with DNA." This initiative will be in partnership with the St. Johns County Medical Examiner's Office, The Florida Department of Law Enforcement (FDLE), and the St. Johns County State Attorney's Office Homicide Investigative Unit (HIU) of the 7th Judicial Circuit. The initiative will allow the SJSO to develop more effective procedures for reviewing and prioritizing unsolved homicide cold cases to determine the potential for solving cases using DNA technology.

The requested funding from the National Institute of Justice will allow the SJSO to implement the following elements of the proposed initiative.

- The SJSO in conjunction with FDLE will train and equip two SJSO Forensic Review Specialists who will examine, collect, and prepare biological evidence for DNA testing for 33 unsolved homicide cold cases.
- The SJSO will purchase equipment and supplies associated with the examination, collection, and preparation of biological evidence for DNA testing. Evidentiary items found suitable for DNA analysis will be submitted to accredited laboratories for testing.
- The SJSO will ensure specialized training for the Cold Case Investigative Team in cold case investigations management.
- The SJSO Cold Case Investigative Team will review cases referred by the Cold Case Investigative Supervisor and make recommendations concerning follow-up investigations or actions.
- The Cold Case Investigative Team will ensure the active follow-up investigation of suspects identified through DNA analysis and when applicable, will submit completed investigations to the State Attorney's Office for prosecution.
- When applicable, the unknown DNA profiles will be submitted for inclusion in the CODIS database.

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding to support applied research and development projects that will: (1) increase knowledge or understanding necessary to guide forensic science policy and practice, or (2) result in the production of useful materials, devices, systems, or methods that have the potential for forensic application. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and criminal justice, particularly at the State and local levels. The availability of funding for FY 2011 has not yet been determined. In FY 2010, NIJ provided over $30 million in grants to fund research and development projects related to forensic science and the criminal justice system.

Solicitation: Applied Research and Development in Forensic Science for Criminal Justice Purposes

Eligibility

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with, States (including territories), units of local government (including federally-recognized Indian tribal governments as determined by the Secretary of the Interior), nonprofit and for-profit organizations (including tribal nonprofit and for-profit organizations), institutions of higher education (including tribal institutions of higher education), and certain qualified individuals. For-profit organizations must agree to forgo any profit or management fee. NIJ may also enter into interagency agreements with Federal entities in appropriate cases. Foreign governments, foreign organizations, and foreign institutions of higher education are not eligible to apply.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 11.)

All applications are due by 11:59 p.m. eastern time on April 5, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact NIJ by email to forensic.research@ojp.usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2805

SL# 000944

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Applied Research and Development in Forensic Science for Criminal Justice Purposes
CFDA 16.560

Overview

With this solicitation, NIJ seeks proposals for applied research and development projects that will: (1) increase knowledge or understanding necessary to guide forensic science policy and practice, or (2) result in the production of useful materials, devices, systems, or methods that have the potential for forensic application. The intent of the Applied Research and Development in Forensic Science for Criminal Justice Purposes Program is to direct the findings of basic scientific research, research and development in broader scientific fields applicable to forensic science, and ongoing forensic science research toward the development of highly discriminating, accurate, reliable, cost-effective, and rapid methods for the identification, analysis, and interpretation of physical evidence for criminal justice purposes.

Authorizing Legislation: Title I of the Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202); Homeland Security Act (section 232).

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on April 5, 2011. Please see the "How to Apply" section, page 11, for more details.

Eligibility

Please refer to the title page for eligibility under this program.

Program-Specific Information—Applied Research and Development in Forensic Science for Criminal Justice Purposes

This solicitation seeks applications for funding to support applied research and development forensic science projects. For the purposes of this solicitation, the following definitions apply:

- Forensic—Of, relating to, or used in legal proceedings or argumentation.[1]
- Science—The observation, identification, description, experimental investigations, and theoretical explanation of natural phenomena.[2]

[1] The definition of "forensic" is taken from *Webster's II New Riverside University Dictionary*.
[2] The definition of "science" is taken from *Webster's II New Riverside University Dictionary*.

- Basic research—A systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Basic research may include activities with broad applications in mind.[3] (For the purposes of the planned FY 2011 solicitation "Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes," basic research must include activities with broad application to forensic sciences related to the criminal justice system.)
- Applied research—The systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.[4] (For the purposes of this solicitation, the specific need(s) being met must relate to the improvement of forensic science services for criminal justice purposes.)
- Development—The systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.[5] (For the purposes of this solicitation, the development of forensic technologies and methods should assist in answering questions posed in criminal investigations or increase crime laboratory capacity to meet the demand for forensic science services.)

Proposals are expected to identify the forensic science discipline(s) intended to benefit from the project. Some of the forensic science disciplines are listed below (where available, links have also been provided to sites containing additional information). However, projects that propose to address a forensic science need outside of the disciplines listed may be considered for award.

- DNA and forensic biology (www.dna.gov, www.cstl.nist.gov/strbase/).
- Forensic crime scene analysis (www.swgstain.org).
- Forensic anthropology and forensic odontology (www.swganth.org).
- Controlled substances (www.swgdrug.org).
- Fire debris analysis and arson scene investigations (www.ncfs.ucf.edu/twgfex).
- Firearms and toolmark identification (www.swggun.org).
- Latent print and other pattern/impression evidence (www.swgfast.org, www.swgtread.org).
- Questioned documents (www.swgdoc.org).
- Trace evidence (www.swgmat.org).
- Forensic pathology.
- Forensic toxicology (www.swgtox.org).

Solicitations That Will Not Be Reissued in FY 2011

The following FY 2010 solicitations will not be reissued in FY 2011. Applications that would previously have been submitted under these solicitations may, as appropriate, now be submitted to this FY 2011 solicitation, "Applied Research and Development in Forensic Science for Criminal Justice Purposes," or to the planned FY 2011 solicitation, "Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes."

[3]Definition is taken from: OMB Circular A–11, Preparation, Submission, and Execution of the Budget, Section 84—Character Classification (Schedule C).
[4]Ibid.
[5]Ibid.

- Forensic DNA Research and Development
- Research and Development in the Forensic Analysis of Trace Evidence
- Research and Development in Instrumental Analysis for Forensic Science Applications
- Research and Development in Forensic Crime Scene and Medicolegal Death Investigations
- Research and Development on Impression Evidence
- Research and Development in Forensic Toxicology
- Research and Development in the Area of Controlled Substances Detection and Analysis
- Research and Development in Forensic Anthropology and Forensic Odontology
- Research and Development in the Forensic Analysis of Fire and Arson Evidence

Goals, Objectives, and Deliverables

NIJ's Applied Research and Development in Forensic Science for Criminal Justice Purposes Program is intended to meet the following goals and objectives:

- **Goal:** Increase knowledge or understanding necessary to guide criminal justice policy and practice related to the forensic sciences. To achieve this goal, projects should meet at least one of the following objectives:

    - Perform applied research to increase knowledge of physical evidence and/or its behavior. Examples include, but are not limited to, the study of fluid transfer and fluid dynamics of certain biological fluids (e.g., blood) to increase understanding of patterns deposited at crime scenes; the examination of mechanical properties of materials (fracture mechanics) for the purpose of physical match analysis of evidence; the examination of chemical properties of evidence for the purpose of identifying source materials; studies of the behavior of chemical compounds of forensic interest in biological systems; research to better understand aged, degraded, limited, damaged, inhibited, or otherwise compromised physical evidence (e.g., studies on the effect of environmental factors on physical evidence; studies to increase the overall understanding of the processes and mechanisms that result in the inability to obtain analytical results from evidence).

    - Perform evaluation studies of existing technologies that are expected to have application to forensic sciences in criminal justice settings. The purpose of an evaluation must be to test a new, modified, or previously untested technology to determine whether it is effective for forensic science application. Proposals for evaluation studies will only be accepted if they will systematically use scientific methods to measure efficiency, implementation, and utility of the technology being evaluated. The primary intent of a proposed evaluation study must be to generate new knowledge or contribute to the knowledge in the forensic scientific literature. Furthermore, knowledge gained from an evaluation study should be applicable to sites other than the one(s) being evaluated. An evaluation study should result in a report suitable for publication and dissemination to guide criminal justice policy and/or practice related to the forensic sciences.

- Expected work products:
  - A final technical report that includes results of the studies performed.
  - Where applicable, a report suitable for dissemination to forensic science practitioners that includes recommendations for best practices and/or protocols for criminal justice purposes.
  - Scientific data supporting any reported conclusions or recommendations.

- **Goal:** Produce novel and useful materials, devices, systems, or methods that have the potential for forensic application for criminal justice purposes. Priority consideration will be given to projects that demonstrate potential for increased quality of result and/or decreased time/cost for forensic analyses as compared to current standard practices. In order to achieve this goal, projects should meet at least one of the following objectives:

  - Improve the "front end" of the forensic analysis processes. Examples include, but are not limited to, the development of improved methods for detection and identification of evidence at crime scenes, the development of improved screening methods to help assess the probative value of physical evidence (i.e., onsite presumptive and/or confirmatory analysis of evidence); the development of improved means to remotely detect forensic evidence at a crime scene to overcome scene hazards and prevent evidence contamination; the development of non- or minimally destructive methods for evidentiary sample identification and/or collection; and the development of improved tools or methods for evidence preservation and/or storage.

  - Develop instrumental systems to improve analysis throughput and the reliability, reproducibility, selectivity, and/or sensitivity of current methods used in crime laboratories for forensic analysis.

  - Develop tools or methods that can separate the various components of a mixture. The separation method must be successful on typical forensic samples (limited in yield, etc.) and must not reduce the efficiency of downstream forensic methods. Examples of mixtures include, but are not limited to, cells from different sources (e.g., sperm cells from female epithelial cells, epithelial cells from different sources); products of DNA processes (e.g., polymerase chain reaction (PCR) products in mixtures from two or more individuals); and trace materials.

  - Develop improved tools for examining aged, degraded, limited, damaged, inhibited, or otherwise compromised physical evidence. Examples include, but are not limited to, the development of tools to determine the condition of the evidence to assist crime laboratory analysts in selecting the appropriate analytical approach; the development of methods to repair damaged evidence (without compromising sample integrity) to increase the likelihood of obtaining an analytical result; improvements to the methods for detection and/or removal or remediation of substances that inhibit the success of analysis; other methods that will maximize the success rate of the analysis of compromised evidence.

  - Develop novel approaches for forensic science methods for analysis and interpretation. Examples include streamlined, portable, high-throughput, more informative, more sensitive, less susceptible to inhibition, and other novel methods for analysis of physical evidence for criminal justice purposes.

- Develop novel approaches and enhancement of current approaches to interpret forensic data derived from physical evidence, including an assessment of the significance of association. This may include development of databases (comprehensive, searchable, easily accessible, secure databases for use in determining the statistical strength of analytical results obtained from evidence found at crime scenes) and/or analyses that provide quantitative measures and statistical evaluation of forensic evidence.

- Expected work projects include:
  - A final technical report that includes results of the studies performed.
  - Where applicable, a report suitable for dissemination to forensic science practitioners that includes recommendations for best practices and/or protocols for criminal justice purposes and an evaluation of the proposed technology (which should also include the technology's limitations).
  - Scientific data supporting any reported conclusions or recommendations.
  - If applicable, prototype(s) of devices and/or software.
  - Some projects may be chosen for Technology Evaluation or Technology Transition Workshop(s). Examples of previous evaluations and workshops can be found through the link: www.ojp.usdoj.gov/nij/topics/forensics/welcome.htm.

Applicants under this solicitation should demonstrate an appreciation of and general familiarity with the forensic science techniques currently used for analyzing physical evidence. Applicants should also have an appreciation of the costs and the training required to implement and maintain a proposed technology. NIJ strongly encourages researchers to seek guidance from or partner with appropriate State or local crime laboratories. Such associations foster a greater understanding of the issues unique to the field of forensic science and may strengthen the scope of the proposed research plan.

Information on NIJ's forensic science research and development programs (including previously funded projects) can be found at:

- www.dna.gov/research/.
- www.ojp.usdoj.gov/nij/topics/forensics/welcome.htm.

The following resources may provide additional information to prospective applicants about forensic sciences:

- *Forensic DNA Typing, Second Edition: Biology, Technology, and Genetics of STR Markers*, by Butler, J. (Burlington, MA: Elsevier Academic Press, 2005) ISBN 0–12–147952–8.
- *Fundamentals of Forensic DNA Typing*, by Butler, J. (San Diego, CA: Academic Press, 2009) ISBN 0–12–374999–4.
- *Techniques of Crime Scene Investigation, 7th Edition*, by Fisher, B.J. (Boca Raton, FL: CRC Press, 2004) ISBN 0–8493–1691–X.
- *Criminalistics, An Introduction to Forensic Science, 7th Edition*, by Saferstein, R. (Upper Saddle River, NJ: Prentice Hall, 1998) ISBN 0–13–592940–7.
- *Forensic Science Handbook, Volume I, 2nd Edition*, edited by Saferstein, R. (Englewood Cliffs, NJ: Prentice Hall, 2002) ISBN 0–13–091058–9.
- *Forensic Science Handbook, Volume II, 2nd Edition*, edited by Saferstein, R. (Englewood Cliffs, NJ: Prentice Hall, 2005) ISBN 0–13–112434–X.

- *Forensic Science Handbook, Volume III*, edited by Saferstein, R. (Englewood Cliffs, NJ: Prentice Hall, 1993) ISBN 0–13–325390–2.
- *Fundamentals of Forensic Science*, by Houck, M., Siegel, J. (Burlington, MA: Elsevier Academic Press, 2006) ISBN 0–12–356762–9.
- *Forensic Chemistry*, by Bell, S. (Upper Saddle River, NJ: Pearson Prentice Hall, 2006) ISBN 0–13–147835–4.
- *Forensic Pathology, Practical Aspects of Criminal & Forensic Investigations, 2nd Edition*, by Di Maio, D., Di Maio, V. (Boca Raton, FL: CRC Press, 2001) ISBN 0–84–930072–X.
- *Scientific Examination of Questioned Documents, Revised Edition*, by Hilton, O. (Boca Raton, FL: CRC Press, Inc., 1993) ISBN 0–8493–95–10–0.
- *Clarke's Analysis of Drugs and Poisons, 3rd Edition,* edited by Mofatt, A., Osselton, M., Widdop, B. (London, UK: Pharmaceutical Press, 2004) ISBN 0–85369–473–1.
- *Principles of Forensic Toxicology: Revised and Updated, 2nd Edition*, by Levine, B. (Washington, DC: American Association for Clinical Chemistry, Inc., 2006) ISBN 1–59–425053–7.
- *Spitz and Fisher's Medicolegal Investigation of Death: Guidelines for the Application of Pathology to Crime Investigation*, by Spitz, W., Spitz D., Fisher, R. (Springfield, IL: Charles C. Thomas Publisher, 2006) ISBN 0–398–07544–1.
- *Quantitative-Qualitative Friction Ridge Analysis: An Introduction to Basic and Advanced Ridgeology*, by Ashbaugh, D. (Boca Raton, FL: CRC Press, 1999) ISBN 0–8493–7007–8.
- *Handbook of Digital Forensics and Investigation*, by Casey, E. (London, UK: Elsevier Academic Press, 2010) ISBN 0–12–374267–4.
- *Digital Image Processing: An Algorithmic Introduction Using Java*, by Burger, W., Burge, M.J. (New York, NY: Springer Science+Business Media, LLC, 2008) ISBN 1–84628–379–6.
- "Forensic Science" by Brettell, T.A., Butler, J.M., Almirall, J.R. (2009). *Journal of Analytical Chemistry* 81:4695–4711.
- "Confirmation bias: A ubiquitous phenomenon in many guises," by Nickerson, R. S. (1998). *Review of General Psychology* 2:175–220.
- "The vision in 'blind' justice: Expert perception, judgment and visual cognition in forensic pattern recognition," by Dror, I. E. and Cole, S. (2010). *Psychonomic Bulletin and Review* 17(2):161–167.
- National Institute of Justice Firearm Examiner Training: www.ojp.usdoj.gov/nij/training/firearms-training/index.htm.

Amount and length of awards: Total funding for this solicitation and the number of awards made will depend on the availability of funds, the quality of the applications, and other pertinent factors. **All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.** In fiscal year 2010, NIJ provided over $30 million in grants to fund research and development projects related to forensic science, including DNA. NIJ funding for an individual research or development project rarely exceeds $500,000 annually, though total funding for projects requiring multiple years to complete has exceeded $1 million in some cases. If feasible, NIJ recommends that applicants divide the proposed work into discrete phases, with each phase resulting in the delivery of a measurable deliverable. Applicants should try to structure the phases so that the funding required in any fiscal year will not exceed $500,000. Although NIJ cannot guarantee that subsequent phases, stages, or tasks will be funded, this approach will enable NIJ to fund the proposed work incrementally, depending on, among other things, the quality of the deliverable

at the end of each phase, strategic priorities, and the availability of funds. However, applicants should not divide their work if it is not feasible to do so without impairing the technical and programmatic soundness of their approach. Note: Deliverables (e.g., technical reports, prototypes, software, recommendations for best practices and/or protocols, etc.) will be required at the end of each phase to enable NIJ to assess the progress of the work and assist NIJ in making reasoned determinations as to the suitability of funding the next phase of the work.

Applicants should be aware that the total period for an award ordinarily will not exceed 3 years. Award announcements are expected to be made by September 30, 2011. Applicants may wish to consider proposing project period start dates commencing on January 1, 2012.

Please note: All applicants under this solicitation must comply with Department of Justice regulations on confidentiality and human subjects' protection. See "Other Requirements for OJP Applications" at www.ojp.usdoj.gov/funding/other_requirements.htm.

What will not be funded:

1. Provision of training or direct service.
2. Proposals primarily to purchase equipment, materials, or supplies. (The budget may include these items if they are necessary to conduct applied research, development, demonstration, evaluation, or analysis.)
3. Work that will be funded under another specific solicitation.
4. Proposals that do not contain a research component or do not respond to the specific goals of this solicitation.
5. Proposals addressing basic research to support forensic science. Applicants proposing such studies may consider submitting applications to the planned FY 2011 solicitation entitled, "Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes."
6. Proposals addressing both a basic research *and* applied research or development component. Applicants should submit the applied research and/or development component only.

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2011 salary table for SES employees is available at www.opm.gov/oca/11tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Director of the National Institute of Justice. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match Requirement: See "Cofunding" paragraph under "What an Application Should Include" (below).

Performance Measures

To assist in fulfilling the Department's responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the "Data Grantee Provides" column so that OJP can calculate values for the "Performance Measures" column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
The production of novel and useful knowledge, materials, devices, systems, or methods that have the potential for forensic science application in criminal justice settings and/or to guide criminal justice policy and practice related to forensic sciences.	1. Relevance to the needs of the field as measured by whether the grantee's substantive scope did not deviate from the funded proposal or any subsequent agency modifications to the scope. 2. Quality of the research as assessed by peer reviewers. 3. Quality of management as measured by whether significant interim project milestones were achieved, final deadlines were met, and costs remained within approved limits. 4. If applicable, number of NIJ final grant reports, NIJ research documents, and grantee research documents published. 5. If applicable, number of fielded technologies.	1. A final report providing a comprehensive overview of the project and a detailed description of the project design, data, and methods; a full presentation of scientific findings; and a thorough discussion of the implications of the project findings for criminal justice practice and policy in the United States. 2. Quarterly financial reports, semi-annual progress reports, and a final progress report. 3. If applicable, each data set that was collected, acquired, or modified in conjunction with the project. 4. If applicable, citation to report(s)/document(s). 5. If applicable, description of fielded technologies.

Submission of performance measures data is not required for the application. Instead, applicants should discuss in their applications their proposed methods for collecting data for performance measures. Please refer to the section "What an Application Should Include" (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute "research" for purposes of applicable DOJ human subjects protections. However, project evaluations that are intended only to generate internal improvements to a program or service, or are conducted only to meet OJP's performance measure data reporting requirements, likely do not constitute "research." Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of human subjects protection for OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP "Other Requirements for OJP Applications" Web page (www.ojp.usdoj.gov/funding/other_requirements.htm). Applicants whose proposals may involve a research or statistical component also should review the "Confidentiality" section on that Web page.

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding. Reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at www.fsrs.gov.

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours

a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System) number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point-of-contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity. Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov.** Please use the following identifying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ–2011–2805.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the

applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, and resumes/curriculum vitae of key personnel will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
   The program narrative section of the application should not exceed 18 single-spaced pages in 12-point font with 1-inch margins, of which a minimum of 9 pages should be dedicated to the description of the project/program design and implementation. If included in the main body of the program narrative, then tables, charts, figures, and other illustrations do count toward the 18-page limit for the narrative section. Abstract, table of contents, appendices, and government forms do not count toward the 18-page limit for the narrative section.

   If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

   Program Narrative Guidelines:

   a. **Title Page** (should include a list of Key Words/Phrases relevant to the proposed research subject matter)

   b. **Project Abstract** (not counted against the 18-page program narrative limit and not to exceed 600 words).

   c. **Table of Contents** (not counted against the 18-page program narrative limit).

   d. **Main body.** The main body of the program narrative should describe the project in depth. The following sections should be included as part of the program narrative:
      - Statement of the Problem.
      - Project/Program Design and Implementation (should account for a minimum of 9 pages of the main body of the narrative).
      - Capabilities/Competencies.
      - Impact/Outcomes, Evaluation, and Dissemination.
      - Plan for Collecting the Data Required for This Solicitation's Performance Measures. **Note:** Submission of performance measures data is not required for the application. Performance measures are included as an alert that successful applicants will be required to submit specific data to NIJ as part of their reporting requirements. For the application, the applicant should indicate an understanding of these requirements and discuss how the applicant will gather the required data, should the applicant receive funding.

   Note: Within the above five sections, the narrative should address:
      - Purpose, goals, and objectives.
      - Review of relevant literature.

- Implications for criminal justice policy and practice in the United States.
- Management plan and organization.

e. **Appendices** (not counted against the 18-page program narrative limit) include:

- Bibliography/references.
- Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study that are supplemental to such items included in the narrative (tables, charts, graphs, or other relevant illustrations that are essential for comprehension of the project/program design should be included in the main body of the narrative).
- Supporting Data—This should include any preliminary data to support the investigator's ability to perform the work and/or proof of principle for the proposed technology.
- Curriculum vitae, resumes or biographical sketches of key personnel (Curriculum vitae, resumes or biographical sketches should be limited to no more than 2 pages per person).
- Project timeline and research calendar with expected milestones.
- Research independence and integrity (see "Selection Criteria," below).
- Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).
- Privacy Certificate (for further guidance go to www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
- Other funding:
  - List of previous and current NIJ awards to applicant organization and investigator(s).
  - List of current and pending non-NIJ support for each investigator collaborating on this proposal.
  - List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- Letters of cooperation/support, administrative agreements from organizations collaborating in the project, memoranda of understanding (MOUs), or letters of intent to establish MOUs (if applicable).
- Other materials specified by the solicitation.

3. **Budget Detail Worksheet and Budget Narrative**

a. Budget Detail Worksheet

A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

b. Budget Narrative

The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)

Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution** (if applicable)

If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership should be included with the application. In those instances when an organization or consortium of tribes proposes to apply for a grant on behalf of a tribe or multiple specific tribes, then the application should include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in lieu of tribal resolutions.

6. **Additional Attachments**

List of Entities Involved in the Project

An application should include a standalone attachment entitled "List of Entities" that lists the names of all entities that will be involved in the work. This list should include, but is not limited to: the organizations at which the investigators are employed; academic

institutions at which grant-funded researchers are employed or enrolled; organizations that may receive subawards or contracts; and any organization(s) named in letters of cooperation/support, administrative agreements from organizations collaborating in the project, MOUs, or letters of intent to establish MOUs.

7. **Other Standard Forms**
   Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

   a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds).

   b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded).

   c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded).

   d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds).

Selection Criteria

Applications that meet basic minimum requirements will be evaluated by peer reviewers using the following review criteria.

Depending on the number of applications received, applications may be categorized by scientific discipline into discrete groups for purposes of peer review and/or selection for award.

Statement of the Problem (Understanding of the problem and its importance)—5%

1. Clarity of the description of the problem.
2. Demonstrated understanding of the problem that exists in an identified forensic science field/discipline or area of criminal justice.
3. Awareness of the state of the art of tools available for the stated problem (if applicable, this should include tools that are currently in development).
4. Strength of citations and other appropriate information to support the understanding of the problem and the expected contribution of the proposed research/development to the identified field of forensic science or area of criminal justice.

Project/Program Design and Implementation (Quality and technical merit)—50%

1. Awareness of the state of current research or technology. (What are the existing technology gaps? How will the proposed effort resolve the problem stated?)
2. Soundness of methods and analytic and technical approach. (The overall strategy, methodology, and analyses should be well-reasoned and appropriate to accomplish the specific aims of the project.)
3. Feasibility of proposed project and the strength of supporting data. (The proof-of-principle of the proposed technology or methodology should be established and supported by preliminary data presented in or referenced in the proposal. More innovative plans and/or plans with a higher potential for failure should be counterbalanced to manage the inherent risk, for example, by firm theoretical basis, reasonable preliminary data (depending on the mechanism), the track record of the lead investigator(s), and an outstanding scientific and management plan.)
4. Realisticness of the proposed timeline relative to the project design. (Are the timeline and milestones logical and realistic? Are milestones adequately developed and quantitative, to serve as effective guidance for assessment of progress by the investigators and NIJ?)
5. Awareness of pitfalls and feasibility of proposed actions to minimize and/or mitigate these. (Are key technical barriers and dependencies identified?)
6. Innovation and creativity (when appropriate). (Innovative projects include those that challenge and seek to shift current research or practice paradigms by utilizing novel theoretical concepts, instrumentation, approaches, or methodologies. These concepts, instrumentation, approaches, or methodologies may be novel to one field of forensic science or novel in a broad sense. The refinement, improvement, or new application of theoretical concepts, instrumentation, approaches, or methodologies may also be proposed.)

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—15%

1. Qualifications and experience of proposed staff. The principal investigator (PI) should demonstrate an ongoing record of accomplishments that have advanced the field(s). If the project is collaborative or multi-PI, investigators should have complementary and integrated expertise.
2. Demonstrated ability of proposed staff and organization to manage the effort.
3. Adequacy of the plan to manage the project, including how various tasks are subdivided and resources are used.
4. Strength of strategic collaborations. (Does the proposed project connect technical expertise with criminal justice policy and practice? Does the project propose teams of strategic partners (e.g., researchers, technologists, practitioners, and/or policymakers) that have demonstrated experience and success in the relevant science/technology and practical forensic science disciplines? Do proposed partnerships add value to the core competencies of the applicant, and are the benefits of each partnership clearly explained? Proposals that involve strategic collaborations should include letters of cooperation/support from partners and may be further strengthened with the inclusion of memoranda of understanding (MOUs) or letters of intent to establish MOUs.)
5. Strength of the scientific environment (e.g., institutional support, equipment and other physical resources, or collaborative arrangements) in which the work will be done and its contribution to the probability of success.

Impact/Outcomes, Evaluation, and Dissemination (Relevance to policy and practice)—30%

1. Potential for significant advances in scientific or technical understanding of the problem. (How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive the forensic science field as it relates to criminal justice? How will a successful project address the identified criminal justice or forensic science problem and associated critical barriers to progress?)
2. Potential for significant advances in the field. (If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or forensic science practice in the criminal justice system be improved? What is the likelihood for the project to exert a sustained, powerful influence on the forensic science field(s) related to criminal justice?)
3. Relevance for improving the policy and practice of criminal justice and related agencies in the United States and improving public safety, security, and quality of life. (Higher quality applications clearly explain the practical implications of the project.)
4. Affordability and cost-effectiveness of proposed products, when applicable (e.g., purchase price and maintenance costs for a new technology or cost of training to use the technology).
5. Perceived potential for commercialization and/or implementation of a new technology for use by forensic science practitioners in the criminal justice system (when applicable).
6. Well-defined plan for the grant recipient to disseminate results to appropriate audiences, including researchers, and, in line with NIJ's mission, forensic science researchers, practitioners, and policymakers in the criminal justice system. (The dissemination strategy should be consistent with the goals of the solicitation and proposed project. A strong dissemination plan will be detailed and will go beyond a basic confirmation that the findings will be presented at national/regional forensic science meetings or through NIJ work products. Does the proposal include a clear description of how final research data will be shared, or, if applicable, explain why data-sharing is not possible? Does the dissemination strategy include suggestions for print and electronic products that NIJ might develop for criminal justice practitioners and policymakers? If applicable, does the strategy include suggestions for training materials or workshops (e.g., technology transition workshops for forensic science practitioners in the criminal justice system)?)

Budget

Reviewers will consider and may comment on the following additional items in the context of scientific and technical merit.

1. Total cost of the project relative to the perceived benefit.
2. Appropriateness of the budget relative to the level of effort.
3. Use of existing resources to conserve costs. (Does the applicant leverage the existing scientific environment to conserve cost?)
4. Consistency of budget with all proposed activities (e.g. dissemination strategy).

The budget criteria will also be considered by the program office in relation to the anticipated overall benefit of a successfully completed project.

Research Independence and Integrity

Regardless of a proposal's rating under the criteria outlined above, in order to receive funds, the applicant's proposal must demonstrate research independence, including appropriate safeguards to ensure research objectivity and integrity.

For purposes of this solicitation, research independence and integrity pertains only to ensuring that the design, conduct, or reporting of research funded by NIJ grants, cooperative agreements, or contracts will not be biased by any financial interest on the part of the investigators responsible for the research or on the part of the applicant.

In the appendix dealing with research independence and integrity, the applicant must explain the process and procedures that the applicant has put in place to identify and manage potential financial conflicts of interest on the part of its staff, consultants, and/or subrecipients. It must also identify any potential organizational financial conflicts of interest on the part of the applicant with regard to the proposed research. If the applicant believes that there are no potential organizational financial conflicts of interest, the applicant must provide a brief narrative explanation of why it believes that to be the case.

Where potential organizational financial conflicts of interest exist, in the appendix the applicant must identify the safeguards the applicant has put in place to address those conflicts of interest.

Considerations in evaluating research independence and integrity will include, but may not be limited to, the adequacy of the applicant's efforts to identify factors that could affect the objectivity/integrity of the proposed staff and/or the organization in carrying out the research, development, or evaluation activity; and the adequacy of the applicant's existing or proposed remedies to control any such factors.

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ, conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

All final award decisions will be made by the Director of the National Institute of Justice, who also may give consideration to factors including, but not limited to, underserved populations,

geographic diversity, strategic priorities, past performance, and available funding when making awards.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds
- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006

- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If a proposal is funded, the award recipient will be required to submit several reports and other materials, including:

Final technical report: The final report should be a comprehensive overview of the project and should include a detailed description of the project design, data, and methods; a full presentation of scientific findings, placed in the context of existing literature; a thorough discussion of the implications of the project findings for criminal justice practice and policy in the United States; etc. It must contain an abstract of no more than 600 words and an executive summary of 2,500 to 4,000 words.

A draft of the final technical report, abstract, and executive summary must be submitted 90 days before the end date of the grant. The draft final report will be peer reviewed upon submission. The reviews will be forwarded to the principal investigator with suggestions for revisions. The author must then submit the revised final report, abstract, and executive summary by the end date of the grant. The abstract, executive summary, and final report must be submitted in electronic format.

Interim reports: Grantees must submit quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Grantees should anticipate that semi-annual progress reports will be required to follow the non-budgetary components of the Research Performance Progress Report template/format. Future awards and fund drawdowns may be withheld if reports are delinquent.

Application Checklist

Applied Research and Development in Forensic Science for Criminal Justice Purposes

This application checklist has been created to assist in developing an application.

What an Application Should Include:

_____ Application for Federal Assistance (SF–424) (see page 14)
_____ Program Narrative (see page 14)
_____ Appendices to the Program Narrative: (see page 15)
- _____ Bibliography/references
- _____ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study
- _____ Supporting Data—This should include any preliminary data to support the investigator's ability to perform the work and/or proof of principle for the proposed research
- _____ Curriculum vitae, resumes or biographical sketches of key personnel
- _____ Project timeline and research calendar with expected milestones
- _____ Research independence and integrity
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ Other funding:
  - _____ List of previous and current NIJ awards to applicant organization and investigator(s).
  - _____ List of current and pending non-NIJ support for each investigator collaborating on this proposal.
  - _____ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- _____ Letters of cooperation/support, administrative agreements from organizations collaborating in the project, memoranda of understanding (MOUs), or letters of intent to establish MOUs (if applicable).
- _____ Other materials specified by the solicitation.

_____ Budget Detail Worksheet (see page 15)
_____ Budget Narrative (see page 16)
_____ Indirect Cost Rate Agreement (if applicable) (see page 16)
_____ Tribal Authorizing Resolution (if applicable) (see page 16)
_____ Program Narrative/Abstract Format: (see page 14)
- _____ Single-spaced
- _____ 12-point standard font
- _____ 1" standard margins
- _____ Narrative is 18 pages or less
- _____ Project/Program Design and Implementation is at least 9 pages of the main body of the narrative

_____ Additional Attachments (see page 16)
- _____ List of Entities Involved in the Project

_____ Other Standard Forms as applicable (see page 17), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 8: FY 2011 Applied Research in Forensic Science Awards

FY11 Recipient Name	Award Number	Award Amount
Advanced Liquid Logic, Inc.	2011-DN-BX-K556	$699,872 **
Arryx, Inc.	2011-DN-BX-K562	$360,748
EOIR Technologies, Inc.	2011-DN-BX-K536	$208,085
Harris County, Texas	2011-DN-BX-K554	$76,778
Illinois State University	2011-DN-BX-K552	$396,780
McCrone Research Institute	2011-DN-BX-K528	$370,539
McCrone Research Institute	2011-DN-BX-K548	$199,712
Michigan State University	2011-DN-BX-K540	$681,147
Michigan State University	2011-DN-BX-K560	$272,220
Microtrace LLC	2011-DN-BX-K557	$242,727
North Carolina State University	2011-DN-BX-K561	$537,098
Orchid Cellmark	2011-DN-BX-K555	$224,968
The Florida International University	2011-DN-BX-K538	$417,595
The Florida International University Board of Trustees	2011-DN-BX-K559	$143,225
The Research Foundation of SUNY, University at Albany	2011-DN-BX-K551	$615,575
Trustees of Boston University, BUMC	2011-DN-BX-K558	$464,617
University of Central Florida	2011-DN-BX-K539	$241,257
University of Central Florida	2011-DN-BX-K553	$470,545
University of Tennessee	2011-DN-BX-K537	$514,495
Washington State University	2011-DN-BX-K549	$249,867
	TOTAL FUNDING	**$7,387,850**

** Note - The total amount of this award is $996,237, which includes $296,365 of supplemental funding that was carried over from FY 2010 COPS DNA/Forensics funds.

FY11 Recipient Name: Advanced Liquid Logic, Inc.
Award Number: 2011-DN-BX-K556
Award Amount: $699,872
Abstract: Expanding the science of evidence screening beyond pure serology to include source classification has tremendous potential value in that only the most probative samples are submitted for STR profiling while reducing needless duplication or unnecessary analysis. This will have a substantial positive effect on case processing and adjudication through better utilization of existing STR analysis assets. Source classification is achieved through multianalyte, sample-to-answer screening and is enabled by Advanced Liquid Logic's Digital Microfluidic technology. The proposed system will accept a sample similar in volume to that required for a confirmatory strip-based test. However, instead of a strip, the proposed system will use Digital Microfluidics to perform, in parallel, purification and analysis of both proteins and DNA. The protein analysis section of the cartridge will test for the presence of 1) hemoglobin and 2) p30/PSA using standard ELISA methods. At the same time, and on the same cartridge, the DNA will be purified, amplified and SNP profiles will be generated. The expert software component of the system will perform exhaustive comparison and analysis of the multianalyte profiles within a case incorporating, where relevant, single-contributor reference samples. The output will be a report with a preliminary classification assigned to each analyzed sample for a given case. The goal of multianalyte sample classification is to quickly provide criminalists and case managers more thorough data to enable more informed decisions.

FY11 Recipient Name: Arryx, Inc.
Award Number: 2011-DN-BX-K562
Award Amount: $306,748
Abstract: In recent years, automation of laboratory practices has been very effectively deployed in sample analysis, allowing much tighter quality control, simpler validation, increased workforce efficiency, lower cost, and higher throughput. In processing forensic samples, automation has played a critical role, focusing on liquid sample handling including DNA extraction, DNA quantitation, and setting up PCR reactions. However, upstream processing steps are still labor-intensive, time consuming, and performed with variability. There are presently few options for automated screening of rape kit elutes for presence of sperm, quantitative cell counting, and precise sperm isolation. Sexual assault evidence samples still require significant manual processing, subject to variability and the negative screening of weakly positive samples. Additionally, commonly used DNA quantitation methods have limited precision, ultimately causing failures in STR profiling.

Arryx has developed a powerful platform for automated microscopy which leverages machine-vision for object recognition and holographic optical trapping (HOT) for cell manipulation within aqueous cell samples on slides and active fluidic disposables. Initially developed for medical diagnostics and human blood typing, using optical traps to probe red blood cells binding to bioconjugated surfaces in an automated machine, this technology holds great promise to advance forensic science.

Ongoing work on upstream forensic processing has focused on the use of HOT to isolate individual sperm from the sexual assault samples on a microscopy platform. Our studies have demonstrated that this method is compatible with downstream PCR-based STR profiling. This automated system for isolation of individual human sperm from elutes will reduce the sample processing time, eliminate DNA carryover from the epithelial fraction to the sperm fraction, and improve the quality and uniformity of sample processing.

We propose to develop an advanced microscopy-based sample characterization system for the evaluation of sexual assault evidence samples. The core of this system will be a set of robust algorithms based on machine vision for scanning cell mixture solutions, characterizing their sperm content, and estimating the sperm DNA available from such samples. This core development will be supplemented with SOP's (standard operating procedures) for sample handling and operation, along with studies focused on characterizing its performance. This system will address three critical needs: (1) It can be used for screening sexual assault evidence for the presence of sperm, to determine if further processing should be done. This would improve performance, sensitivity, and uniformity relative to current manual methods which are labor-intensive, slow, and subject to variability. (2) It can be used to quantitate the number of sperm present in a sexual assault sample elute, and thus the amount of sperm DNA present. Current DNA quantitation methods have very high (up to 10-fold) uncertainties, since different quantitation methods such as RT-PCR, End-point PCR, Fluorescence detection for DNA binding dyes, etc, have different detection limits and sensitivities. The presence of various extraction chemicals in the elute also interfere with DNA quantitation. Automated sperm detection and counting will provide better quantitation of sperm DNA and thus lead to higher success rates for STR profiling and human identity matching. (3) It will be integrated into our platform for sperm isolation using HOT, enabling it to perform with a variety of sample input preparations and provide detailed data tracking on the input sample characteristics and the sorted-cell outputs. This work specifically addresses the priority areas of the solicitation: Applied Research and Development in Forensic Science for Criminal Justice Purposes and will advance the area of forensic DNA typing by providing capability to reduce manual labor of processing and to produce more robust and informative DNA analysis of forensic samples.

FY11 Recipient Name: EOIR Technologies, Inc.
Award Number: 2011-DN-BX-K536
Award Amount: $208,085
Abstract: The capture of latent fingerprints in the field can sometimes be a daunting task. Although various systems exist to collect fingerprints, they can be bulky and require the use of chemicals that are difficult and messy to deal with in the field. Furthermore, when the latent fingerprint is detected, the ability to determine if a residue existed on the finger is an even tougher task. EOIR Technologies proposes to utilize its expertise in electro-optics (EO), spectral measurements, and systems integration to: 1) determine the feasibility of reliably collecting latent fingerprints with current high-definition photography, 2) determine the feasibility of spectrally detecting the presence

of nefarious fingerprint residues, and 3) develop a prototype latent fingerprint EO collection system. The technology being exploited is the EO fluorescence of latent fingerprints in the UV/Blue wavelengths and the spectral detection capability of materials in the Visual-Near-Infrared (VNIR) and Short-Wave-Infrared (SWIR) regions of the electromagnetic spectrum. EOIR will utilize its remote sensing laboratory (RSL) with existing cameras and VNIR/SWIR Spectro-Vista Corporate (SVC) spectrometer. A prototype system will be developed using Smartphone technology that will be ruggedized and portable for field use. The National Forensic Science Technology Center (NFSTC) will act as a collaborative partner to provide forensics expertise as well as independent testing and evaluation of the developed prototype.

FY11 Recipient Name: Harris County, Texas
Award Number: 2011-DN-BX-K554
Award Amount: $76,778
Abstract: Touch samples are potentially relevant evidence in almost every type of criminal case. Unfortunately, in a majority of cases they simply do not provide sufficient DNA yield to generate interpretable DNA results.

One method utilized to overcome low level DNA yield is to increase the number of PCR cycles for these sample types. Doing so does result in increased success with respect to DNA results; however, this methodology is also highly controversial and fraught with problems such as allelic drop out, contamination and elevated stutter products.

Ideally the way to successfully generate profiles from touch DNA samples is to increase the yield from extraction. Pressure cycling technology (PCT) can be used to address the issue of low level DNA yield during the pre-extraction stage. PCT (Pressure BioSciences, South Easton, MA) uses cycles of alternating high hydrostatic and ambient pressures to assist in the recovery of DNA from a variety of sample types, including but not limited to swabs, hairs, tissues, and liquid samples.

PCT alters conformations and interactions of biomolecules, destabilizes secondary structures and does not denature or inhibit enzymes. The severe changes in pressure allow for molecular interactions to be controlled and because of baroporation, DNA is released into solution while maintaining the sample's morphological integrity.

The instrument, which is capable of processing up to three samples simultaneously, is either manually or computer controlled, can cycle pressure between ambient and 40,000 PSI, and offers a working temperature range of 4°- 37°C.

This project will validate the use of PCT on evidence samples from a variety of sample types.

Based on the validation results on sample yields and sample types that demonstrate the best way to use this methodology, a decision will be made whether to implement the technology on DNA case samples from touch evidence and other low DNA yield

samples such as hairs. Comparison of results from historical data from HCIFS touch samples or low DNA yield samples such as hairs will provide the forensic community with a thorough evaluation of the best practices for this technology.

FY11 Recipient Name: Illinois State University
Award Number: 2011-DN-BX-K552
Award Amount: $396,780
Abstract: The amount and variety of evidence collected a typical crime scene is extensive. While many significant analytical methods have been established over the years, forensic laboratories cannot keep up with the demand, and in many cases, significant backlogs of evidence have amassed. While this points to a need for more rapid, streamlined technologies for forensic analysis, a significant reduction in collected evidence, leading to a subsequent reduction in backlogged evidence, would come from the ability to access the probative value of chemical evidence at the crime scene itself, allowing only pertinent samples to be sent to off-site laboratories for confirmation. Screening of physical evidence at the crime scene also has the capability to rapidly determine whether a criminal investigation is needed and provide law enforcement personnel with necessary information in a timely manner, which in many cases is crucial. To assist in the reduction of collected samples while increasing the overall quality of said evidence, it would beneficial for forensic science practitioners to have technology at their disposal that is not only portable, allowing the screening of potential evidence before collection, but also flexible in terms of chemical species and sample substrates that can be analyzed. This flexibility, in particular, would allow this technology to be robust towards the ingenuity of criminals and emerging threats.

In an effort to fulfill the current technological needs of forensic science practitioners and associated laboratories, we seek to create a broadly-applicable, portable chemical detector based on a state-of-the-art mass spectrometer capable of “ambient” detection, i.e. detection of target compounds or “analytes” in their native environment and state without prior preparation. The proposed technology will allow sensitive analysis of gas, liquid, and solid-phase chemicals, as well as chemical traces on everyday surfaces, at low concentrations with high chemical specificity. While an array of forensic applications will be investigated, special consideration will be given to trace analysis of common illicit drugs and abused pharmaceuticals from substrates commonly found at crime scene investigations. Novel sampling methods will be coupled with this technology to allow the flexibility to analyze large surface areas, as well.

The principal scientific questions that will be addressed in order to gauge performance of the proposed technology include: (i) can a portable mass spectrometer be adapted to allow direct analysis of solid, liquid, and gas-phase chemical species? (ii) can evidence be effectively screened in a non-destructive nature? (iii) is physical transfer of chemical residues more effective that direct surface analysis? (iv) is the developed technology on par with current methods in terms of reliability, reproducibility, selectivity, and sensitivity? (v) is this technology robust in terms of the current and changing needs of forensic science and law enforcement personnel?

Project investigators will use the findings of this research, as well as interactions with local forensic science practitioners, to develop and deliver an optimized portable MS instrument prototype to NIJ for evaluation and testing, along with appropriate operational documentation and a spectral library of samples of interest. Quarterly financial reports, semi-annual progress reports, and a final technical report including a detailed description of the project findings and a thorough discussion of the implications of the project on current criminal justice practice and policy will be completed at appropriate intervals.

FY11 Recipient Name: McCrone Research Institute
Award Number: 2011-DN-BX-K528
Award Amount: $370,539
Abstract: With the production of manufactured fibers of natural origin increasing in recent years, products such as azlon and polylactic acid fibers are likely to become more common in regular case work in the forensic science laboratory. However, little is known about the changes occurring in their optical and physical properties as an effect of moisture, sunlight exposure, and exposure to various temperatures. This study investigates the effects of such degradation on the optical properties of selected fibers (polylactic acid, azlon, and rayon). These fibers, which are often proclaimed by manufacturers as being biodegradable (because they are made from naturally occurring proteins, sugars, or cellulose) are expected to show the most change compared to synthetic fibers such as polyester or nylon. Environmental conditions such as exposure to water (saltwater and freshwater), UV light, and hot and cold temperatures will be explored while documenting any change in optical properties. Polarized light microscopy observations including morphology, pleochroism, refractive index, dispersion, birefringence, extinction characteristics, sign of elongation, solubility, and thermal behavior would be monitored throughout two years of exposure to these conditions. Infrared spectra will also be collected at different time intervals to complement light microscopy data. Noticeable changes in optical properties of these types of fibers could prove to be important in a forensic setting, notably in fiber comparison and identification.

FY11 Recipient Name: McCrone Research Institute
Award Number: 2011-DN-BX-K548
Award Amount: $199,712
Abstract: A common microanalytical method for forensic drug analysis is the use of microcrystal tests. Light microscopy and microcrystal tests have been in use for more than 100 years but are sometimes incorrectly regarded as an archaic or useless method. However, they are extremely valuable when automated instrumentation is not available or when one wishes to check for the presence of one or several specific drugs. It might be noted that certain methods of analysis for drug identification, for example those specified by SWGDRUG, require the use of multiple uncorrelated techniques. This indicates that a good use of the light microscope would be to check and confirm the results obtained by other methods. Microcrystal tests, brought up to date with the

inclusion of optical properties and compiled in a modern compendium, would be an excellent confirmatory method to give that added degree of confidence in the procedures and in the courtroom. Thus, analysts would not be relying strictly on gross crystal morphology, but would be examining refractive index, birefringence, extinction, and other optical properties.

Microcrystal tests are based on the known morphology and optics of crystals obtained after dissolving the compound and obtaining a precipitate through use of a specific reagent. Because many of these tests were developed in the early part of the 20th century, they do not automatically apply to new drugs which includes new prescription drugs that are abused and diverted from their intended recipients, drugs that come in new delivery mechanisms other than a traditional tablet or powder, e.g., transdermal patches, sprays, etc., new drugs that are commonly abused and the identification of optical isomers of a compound (e.g., identification of either the d- or l- enantiomer or the dl racemate) and especially drugs such as fentanyl, where no known microcrystal tests have been discovered for the purpose of their identification.

This project serves two main purposes and consists of two parts. The first part comprises the compilation of microcrystal tests which have previously been developed for illicit drugs and diverted pharmaceuticals by determining, locating, and compiling analytical data and literature material from the numerous sources (many of which are out of print or difficult to locate) spanning past decades. Such procedures will be vetted and appraised by McCrone Research Institute microscopists, together with practicing forensic scientists in other collaborative laboratories. The resulting electronic compendium will include recommended protocols and morphologies of crystals (including photomicrographs), infrared spectra of microcrystals, and potential interferences. But most importantly, the compendium will also include optical and crystallographic properties of the resultant microcrystals. This optical data is absent in many references, which is unfortunate because microcrystals of a given substance are unique if optical properties (and not only morphology) are considered. Including this optical data will refine the application of many microcrystal tests and strengthen their use within the criminal justice system. Furthermore, this compendium will be available to all forensic scientists for free access from selected websites.

The second part concerns the development of microcrystal tests for illicit drugs and diverted pharmaceuticals where no current procedures exist. There are a number of such pharmaceuticals which are seeing a marked increase in abuse and misuse nationally, including alprazolam (trade name Xanax) and clonazepam (trade name Klonopin). Microcrystal tests are needed to aid in their identification, particularly among labs with large caseloads or those which are unable to employ GC-MS or other expensive instrumentation. These tests would be vetted and appraised as described above, for incorporation into the electronic Microcrystal Compendium.

FY11 Recipient Name: Michigan State University
Award Number: 2011-DN-BX-K540
Award Amount: $681,147
Abstract: In medicolegal death investigations, current techniques for interpreting pediatric cranial trauma are of questionable reliability due to a lack of baseline data that matches pediatric cranial fracture patterns with known impact scenarios. This research will address this significant gap in best practice through a multidisciplinary effort that: (1) continues the development of experimental data from an experimental animal model, to help correlate input forces and cranial fracture patterns; (2) develops a pattern recognition method for 'fracture-printing' to be used in the identification of injury causation, initially based on this "ground truth" data from an animal model; and (3) collects data on human pediatric deaths involving blunt force cranial fracture and known impact scenarios from current forensic case files at medical examiner offices across the country to establish a database (The Pediatric Cranial Fracture Registry).

This research will develop automated pattern recognition methods to classify cranial fracture patterns based on contact interface, impact energy, and head constraint condition based on subject age. The predictive analysis will use classification models that are generated using experimentally produced data (e.g. digital images of cranial fractures) and are accompanied with the "ground truth" data (i.e. contact interface, impact energy, and head constraint condition). The ultimate aim of this research will be that for a given cranial fracture pattern in a subject of a given age, we will be able to compute a statistical probability that a particular impact condition was the cause. Future studies will develop a computer program that will automatically generate a fracture feature set based on pediatric human fracture pattern inputs that can be compared to a known database, to help predict the most likely cause of a particular fracture print in a forensic case.

This proposal brings together a team of established researchers in forensic pathology, forensic anthropology, orthopaedic biomechanics, pattern recognition and machine learning, and database development to work on this significant gap in best practice. This research builds on studies that have been performed during a recently funded NIJ research project titled "A Forensic Pathology Tool to Predict Pediatric Skull Fracture Patterns" (Award No. 2007-DN-BX-K196).

FY11 Recipient Name: Michigan State University
Award Number: 2011-DN-BX-K560
Award Amount: $272,220
Abstract: The recent National Academy of Sciences' National Research Council (NRC) report entitled "Strengthening Forensic Science in the United States: A Path Forward," drew attention to several limitations in the current state of forensic science. Among these, the need to quantify "measures of uncertainty" in the comparison of forensic evidence was highlighted. With the exception of

DNA analysis, statistical assessments of questioned and known samples are not widely implemented in other forensic disciplines.

Currently, comparison of questioned and known samples mainly involves a visual examination of the data generated. Such visual comparisons have the potential to introduce subjectivity and do not ascribe any statistical confidence to the association, or 'match', between samples. Since complex data are generated from the instrumental techniques more commonly used for analysis, multivariate statistical procedures are needed for such statistical comparisons. The goal of the research proposed here is to evaluate numerous statistical procedures for the association and classification of different types of forensic evidence, in keeping with recommendations outlined in the NRC report.

This study will initially use three very different data sets to investigate the statistical procedures: ignitable liquids analyzed using gas chromatography-mass spectrometry, controlled substances analyzed using infrared spectroscopy, and bacterial populations in soil analyzed using real-time polymerase chain reaction. Pretreatment procedures will be investigated initially, to remove artificial sources of variance from the data that are commonly introduced when using instrumental techniques. Multivariate statistical procedures will then be applied to evaluate association, discrimination, and classification of questioned samples with respect to reference standards within each data set.

A manual generated from this research will outline advantages and disadvantages of each of the statistical procedures evaluated, along with special considerations according to evidence type. The manual will demonstrate applications using the data collected as part of the proposed research and will be made available for dissemination among forensic practitioners. The results
of this research will be one of the first steps necessary in facilitating the routine adoption of multivariate statistical procedures in forensic casework.

FY11 Recipient Name: Microtrace LLC
Award Number: 2011-DN-BX-K557
Award Amount: $242,727
Abstract: Pigments are encountered in many kinds of trace evidence, including automotive, architectural, paints, inks, fibers, and plastics. Traditionally, pigments have been studied by polarized light microscopy, microchemistry, infrared spectroscopy, py-GC/MS, SEM/EDS and X-ray diffraction. Limitations inherent to each of these techniques have constrained the practical use of pigment identification in the analysis of trace evidence. Raman spectroscopy, which is becoming more widely available in forensic science laboratories, is the first analytical technique to provide the spatial resolution, sensitivity and specificity necessary to identify pigments *in situ*.

This application proposes to continue our current grant with NIJ "Fundamentals of forensic pigment identification by Raman microspectroscopy." The initial grant focused

on developing the fundamental research needed to address pigment identification in samples of forensic interest. This research has included:

- Validation and reproducibility studies to illustrate the reliability of pigment reference samples and Raman microspectroscopy as a pigment identification method.
- The collection of a database of Raman spectra, which represents the great majority of commercially available organic pigments in existence.
- The development of a systematic method of pigment characterization from Raman spectra.
- The production of a “Practical Manual of Pigment Identification” intended for use at the laboratory bench by trace evidence examiners.

This research has resulted in the most systematic examination of organic pigments ever available to the forensic community.

With this wealth of reference pigment information in place, the next natural stage of research is to study pigments in actual paint samples. From an investigative (intelligence) perspective, it was shown in the Green River Murders that the identification of paint pigments can help to identify the manufacturer of a paint. For comparative investigations, the extent to which pigment identification can provide further discrimination is presently unknown. While pilot studies conducted by Microtrace have shown that as many as four pigments can be identified in a single paint sample, no systematic study of pigments in paints have been conducted. To address these and other topics, we propose to conduct a pigment analysis of three hundred paint samples collected from automotive and architectural paints. The results of these will provide insight into several unexplored areas:

- *Bulk in situ identification*. Analysis of paint samples with no sample preparation to determine the range of pigments that can be routinely identified in paint evidence.
- *Identification of pigments present at trace levels*. Development of methods utilizing thin sections and the spatial resolution of confocal Raman microspectroscopy in select samples to identify pigments present at low levels.
- *Evidentiary significance of pigment evidence*. Through the analysis of numerous paint samples, how many pigments can be readily identified and how common is each pigment?

All of these topics need to be addressed prior to implementing pigment identification as a laboratory tool; however none of the above questions have been previously addressed in the forensic community. The fundamental data collected in the initial grant provides, for the first time, the reference data needed to approach these questions. Preliminary research suggests that these discrete questions can be systematically addressed. The results would be compiled as an addendum to the “Practical Manual of Pigment Identification” being compiled under the initial grant and would included expanded sections on sample preparation, analysis, interpretation and evidentiary

significance. This information would be directly applicable to casework in any forensic laboratory with a macro-, micro-, or even handheld Raman spectrometer. While directed specifically at paint evidence, this research would be of utility to other areas forensic sub-disciplines including fiber examination (e.g., pigmented fibers), ink characterization, and the analysis of other colored polymers.

FY11 Recipient Name: North Carolina State University
Award Number: 2011-DN-BX-K561
Award Amount: $537,098
Abstract: The objective of the proposed project is to improve the front end of a forensic analysis process; specifically, to develop a micro-fluidic device that can automatically extract dye molecules from a small fabric sample and route the extracted molecules through a series of chemical separation processes for identification. Due to the quantity of textile materials in the environment, there is a high probability of fiber transfer during the commission of a crime. In a typical case, a sample of known origin (fiber from suspect's shirt) is compared to an evidence sample (sample found at a crime scene). The objective is to test the hypothesis that both samples have the same source. A wide variety of analytical techniques are available and each provides different type of information. To maximize productivity and efficiency while preserving the evidence, the fiber examiner begins with non-destructive microscope techniques that can discriminate samples based on morphology (e.g., fiber shape, color, etc.). If additional specificity is needed to prove the hypothesis, more sensitive techniques are employed but typically at the cost of destroying part of the evidence. These processes include high performance liquid chromatography to identify based on hydrophobicity, UV-visible spectrometry to identify based on color and capillary electrophoresis to identify based on migration time through an electric field and time-of-flight mass spectrometry to identify exact mass of ions. This combination of analytical techniques can be done serially and will provide specific dye identification. Prior to the use of these analytic techniques, dye molecules must first be separated from the fiber sample.

Although useful and pertinent research has been conducted to optimize extraction techniques, little effort has been made to provide technology that allows the Forensic Scientist to streamline the extraction process and integrate it with their current analytical techniques. This project will deliver a microfluidic system that automatically extracts the dye from a minute fiber sample (< 1 mm length) and prepares it mass spectrometer analysis with minimal handling. Currently no mass spectrometer manufacturer provides such an automated extraction system. Rather the extraction is done in a series of independent and discontinuous steps which may introduce contaminants. To identify textile dyes, dye molecules must be separated from the fiber using an extraction solvent. The solvent is then evaporated and the dye molecules dissolved in a buffer solution appropriate for mass spectrometry. These methods require large solvent volume (~100 µl) and therefore a large fiber sample to obtain detectable dye concentration. In the proposed system the trace evidence examiner will place the micro-fiber sample in a well, close and seal the lid and start the process. Streamlined dye extraction will allow identification from smaller samples, minimize the risk of

contamination, and it will improve fiber analysis repeatability by offering a standard methodology with minimal operator input. This is particularly important for natural fibers since mass spectrometry may be the only method with sufficient discriminatory resolution to produce a match.

One of the main themes in the 2009 NAS Report on forensic sciences was that improved scientific support for forensic analysis is needed. One of the main points is the need for objective analytical methods as opposed to subjective examinations as a means of reducing the potential for errors. Increasing repeatability and traceability in virtually all fields of forensic evidence processing - save DNA analysis - is necessary. Streamlining processes such as fiber analysis and making them more repeatable and reliable using detailed chemical analysis has the potential to pay dividends in the search for a more equitable and thorough justice system. Fewer false convictions and more successful prosecutions are the goals.

FY11 Recipient Name: Orchid Cellmark
Award Number: 2011-DN-BX-K555
Award Amount: $224,968
Abstract: Today's routine forensic work depends in many cases on analyzing DNA evidence with the aim to match against the DNA profile of a suspect/victim. In many instances the DNA evidence found at the scene of crime or in a mega-disaster, such as the 9/11 terrorist attacks, is comprised of DNA from more than a single individual. Commonly used STR genotyping methodologies used today have proven to be inefficient at identification of individuals in complex mixtures composed of more than two individuals mainly because the number of loci do not produce the statistical power required to derive the identity of an individual contributing to a mixed DNA sample. Our proposed research will address this unmet need by developing a method using a SNP assay based on the recent work by Voskoboinik and Darvasi [9] which elucidates a novel strategy for identification of an individual's DNA in a complex mixture composed of up to 10 individuals. Their strategy employs genotyping a DNA mixture and a "suspect" DNA sample with 1000-3000 SNPs. Their statistical framework shows that this number of markers produces the statistical power required for accurate assessment and inclusion/exclusion of a single contributor in a complex mixture. Our proposal aims to develop and thoroughly test this strategy with real forensic casework-type samples on two different SNP detection technologies currently utilized by the forensic community. We will test a SNP panel that has been pre-selected by Darvasi's group. In addition, the existing forensic SNP panels developed by the Orchid Cellmark group will be further developed and optimized for this project if so required. Following optimization of a SNP panel, thorough testing of detection limits, sensitivity, and reproducibility studies will be performed prior to testing complex mixtures containing between 3-10 individuals. All testing will be developed and performed on both Illumina's GoldenGate(R)® genotyping technology and Applied Biosystems' OpenArray® highthroughput RT-PCR platform as a means to both compare technologies and develop an assay fit for use in the widest range of forensic casework. Future experiments are planned, concomitant with funding

for year two, in order to test inhibition, degradation, and other situations common to typical forensic DNA samples.

FY11 Recipient Name: The Florida International University
Award Number: 2011-DN-BX-K538
Award Amount: $417,595
Abstract: A standardized method for combining multiple indicators of age from a single skeleton into a single, accurate, and repeatable age-at-death estimation is needed in forensic anthropology. To date there are no “best practice” guidelines in forensic anthropology for combining multiple indicators of age. Most currently published multi-factorial methods are not appropriate for
forensic anthropology because they cannot be applied to a single skeleton, do not perform better than univariate methods, do not provide a confidence in the point estimate or prediction interval,
or are restricted to a certain types of age indicators.

Recently, we presented a multi-factorial approach that uses the Sugeno fuzzy integral to produce a confidence in skeletal age-at-death. This method is novel and has multiple advantages over other multi-factorial methods. Our procedure allows investigators to use nearly any well established and tested age-at-death indicator methods and fuse the information about the accuracy of the methods with other types of quantifiable information that cause uncertainty in the age-at-death estimation. No other method allows for the fusion of information about the quality of the bone, the appropriateness of the method for the target age group, or inter-observer error in the methods used. Other advantages of the fuzzy integral method are that it can be easily used for a single skeleton, it can be used for both adult and immature skeletons, it can be customized to meet the investigator’s needs on specific cases, and it provides informative graphs and a standardized reproducible way to generate linguistic descriptions of age-at-death estimations.

We propose to develop an easy-to-use graphical user interface (GUI) that will allow forensic anthropologists to submit age-at-death indicator and bone quality information and obtain an age-at-death estimation, a measure of the confidence in the estimation, and additional results (numeric, graphical, and linguistic) regarding the type of graph and degree of specificity of an age-at-death estimation based on multiple indicators of age. In order to reach the largest audience possible and avoid requiring pricy or trendy software and libraries that have to be installed on individual personal computers and different operating systems, we propose that the GUI be webbased.

Development and testing of the GUI will be conducted over a two year period in six phases using a strategic team of experts that have the scientific, theoretical, and technological experience and expertise in forensic anthropology, computer engineering, and fuzzy set theory and fuzzy logic to successfully complete the project. The first year will primarily be devoted to designing the GUI and building the core libraries and

algorithms. The second year will focus on development and testing of the GUI and preparing it for distribution to the forensic community.

The benefit of this project to the forensic science community is an open source library and GUI that provides forensic anthropologist with an easy-to-use and standardized method for combining multiple indicators of age into a single, accurate age-at-death estimation. The method is also important to the forensic science community in that it makes the qualitative fuzzy set analysis procedure explicit so that forensic anthropologists, law enforcement agents, lawyers, and other members of the medicolegal community can understand how to interpret the results. Currently there is no standardized method or best practices in forensic anthropology for combining multiple indicators of age.

FY11 Recipient Name: The Florida International University Board of Trustees
Award Number: 2011-DN-BX-K559
Award Amount: $143,225
Abstract: In recent decades, clandestine drug lab operators have attempted to bypass controlled substance laws and legal regulations with “designer” compounds similar to current drugs of abuse, including methamphetamine, ecstasy, and khat. Presently, “bath salts” have erupted onto the drug scene containing analogs of cathinone that have produced severe side-effects in users across the globe. These “legal highs” have been sparking concern with law enforcement and emergency bans have been placed on the sales of such items. Designer drugs often carry unknown safety profiles, a high potential for abuse, unknown potency, and serious health consequences, especially when ingested unknowingly. Easy access via the internet has made such compounds more available to the general public. While seizures of these compounds only account for about 3% of all drug seizure cases in the world, severe intoxications and fatalities are not uncommon. These drugs are difficult to identify from a forensic standpoint due to the large numbers of compounds classified as “designer drugs”, the constant introduction of new structures, inadequate accessibility to standards, and the relatively limited frequency of occurrences.

With the high number of designer drugs currently on the market, few comprehensive screening techniques are available for the detection of these compounds in biological specimens. Inadequate information is available with which to assess the detectability of these drugs in currently available immunoassays designed to target amphetamine, methamphetamine, MDMA, or benzylpiperazine derivatives. For this reason, systematic research is needed in order to thoroughly understand the activity of these compounds in preexisting immunoassay platforms and to assess the need for novel assays directed towards designer drugs as a class.

In addition, comprehensive confirmatory techniques are required for the detection and quantitation of multiple classes of designer drugs and their major metabolites in human specimens. This project will develop and compare novel liquid chromatography mass spectrometry (LC-MS) and gas chromatography mass spectrometry (GC-MS) methods

for the analysis of the designer drug compounds. These methods will be applicable to both known drugs and previously uncharacterized novel modifications of known drugs, including phenethylamines, tryptamines, piperazines, and cathinone derivatives. Specific aims of the project include the following:

1. Determine the cross-reactivity, false-positive rate, and false-negative rate for a broad range of designer drugs in commercially available screening immunoassays. Studies will focus on ante-mortem blood specimens using ELISA-based assays and urine specimens using EMIT-based assays.

2. Develop improved comprehensive confirmatory analytical methods to detect a broad range of designer drugs and their major metabolites, including previously unknown structures. Applicability of LC-triple quadrupole-MS vs. GC-triple quadrupole-MS based approaches will be assessed and compared. Parameters to be optimized include sample extraction and pretreatment, derivatization for GC analysis, and selection of internal standards, in addition to evaluation of standard method validation criteria.

FY11 Recipient Name: The Research Foundation of SUNY, University at Albany
Award Number: 2011-DN-BX-K551
Award Amount: $615,575
Abstract: We are requesting support for the continuation of an ongoing research project ultimately targeting the development of an easy-to-use, portable instrument for the rapid, non-destructive, and confirmatory identification of body fluids in biological stains recovered at a crime scene. The main goals of the proposed study herein are to build a library of Raman signatures, and develop/validate the methodology and software for the automatic analysis of Raman spectroscopic data for (i) determining the age of a biological stain under various environmental conditions, (ii) differentiating human and animal blood, and (iii) determining race and gender based on human body fluid traces including blood, menstrual blood, vaginal fluid, semen, saliva and sweat.

FY11 Recipient Name: Trustees of Boston University, BUMC
Award Number: 2011-DN-BX-K558
Award Amount: $464,617
Abstract: The purpose of this proposal is to address the need to increase the knowledge and understanding associated with forensic sciences policy and practice and to produce useful systems and methods that have a forensic science application. This proposal is expected to benefit the forensic DNA/biology discipline and meets the objectives of 1) performing applied research to increase the knowledge of the behaviour of DNA evidence and 2) producing novel and useful materials/methods that have the potential to improve complex forensic DNA interpretation.

These objectives are met via the development of a novel approach to interpret complex and/or low template quantities of DNA. This enhanced method to characterize complex

DNA mixtures will be accompanied by the development of a complex DNA mixture interpretation tool designed to enhance traditional DNA interpretation by utilizing a likelihood ratio which makes no assumptions regarding the number of contributors or by determining the likelihood that a certain number of individuals contributed to the DNA mixture. Despite a number of commercially available tools, to obtain a likelihood ratio, the number of contributors is *still qualitatively assessed by the analyst*, where the common approach is to determine the minimum number of contributors based on the number of peaks observed at individual loci. This technique is fraught with problems and it is the intention of this work to utilize an *a posteriori* probability to determine the probability that a DNA mixture is from *n* contributors. We propose to overcome these difficulties by using statistical signal processing methods to accurately infer the number of contributors to a DNA stain. Specifically, we will calculate the *a posteriori* probability (APP) of the number of contributors to a stain based on the genotyping results. The APP is the probability that the stain came from a certain number of contributors given what is observed during genotyping. If it is strongly peaked, i.e. the APP says that there is a particular number of contributors that is highly likely and all others are highly unlikely, then the APP tells us the number of contributors that gave rise to the stain. If not, the APP will nevertheless tell us the range in which the number of contributors is overwhelmingly likely to lie, which can then be used to calculate a range for the LR. The APP formulates the process of assigning a number of contributors, which currently must be performed by subjective judgment, into an accurate, objective process. However, to accurately assess the APP, characterization of drop-out and stutter contributions need to be assessed such that they can be incorporated into the calculation. Determining the probability of drop-out with respect to target and analytical threshold will be determined – as well as the stability of these empirically derived figures. These new stability studies will test the probability of drop-out over kit lots and time (i.e. instrument calibration) and assess whether the likelihood method approaches currently in the literature - which typically assume the Pr(D) is constant - are appropriate. If the Pr(D) is not stable, protocols to determine Pr(D) given all parameters and variations over time will be taken into consideration. This not only would help crime laboratory analysts in appropriately determining the number of individuals and the uncertainty with respect to the number assumed, but it would ultimately aid in the ability of these laboratories to state the likelihood that it is *n* individuals. Furthermore, the LR that is ultimately reported should and can incorporate the uncertainties of the number of individuals into the likelihood calculation.

FY11 Recipient Name: University of Central Florida
Award Number: 2011-DN-BX-K539
Award Amount: $241,257
Abstract: The purpose of this project is to advance the state-of-the-art of nondestructive methodology for forensic fiber examination. Non-destructive techniques that can either discriminate between similar fibers or match a known to a questioned fiber - and still preserve the physical integrity of the fibers for further court examination - are highly valuable in forensic science. When microspectrophotometry (MSP) is used in the study of fiber evidence, variations within a fiber source lead to the recommendation

that multiple spectra be collected from each fiber to properly characterize the sample. A positive association is determined when “the questioned spectrum is consistent in all absorbance values to at least one of the known spectra” and exclusion is determined when “either the suspect spectrum is totally different to that of any known fiber, or it falls outside the range produced by the known spectra”. Although this methodology is sufficient for comparison of profiles with obvious differences, it is possible that a statistic based assessment may be better suited to exclude different samples with very similar profiles. When fibers cannot be discriminated by non-destructive tests, the next reasonable step is to extract the questioned and known fibers for dye analysis with a more selective technique. Because dye extraction destroys the evidence, the possibility for fiber court examination will no longer exist.

We will introduce a highly discriminating approach based on fluorescence microscopy. Our proposition focuses on the total fluorescence emission of fibers. In addition to the contribution of the textile dye (or dyes) to the fluorescence spectrum of the fiber, we will examine the contribution of intrinsic fluorescence impurities – i.e. impurities imbedded into the fibers during fabrication of garments - as a reproducible source of fiber comparison. Fiber comparison will be made via data formats known as room-temperature fluorescence excitation emission matrices (RTF-EEM). We will compare the discrimination power of this approach to MSP. We will provide a rigorous statistical basis for the comparison of MSP and RTF-EEM data from the analysis of fibers of questioned and known origin. We will test the statistical tool on data datasets representative of forensically relevant samples. We will provide detailed methods for the use of commercial or public sector software for the analysis of MSP and RTF-EEM data. We will investigate spectral changes that might occur in textile fibers as a result of exposure to environmental conditions such as laundering, exposure to cigarette smoke and weathering. With the examination of these effects through comparison of fibers, we will gain a better understanding of textile physical, chemical and spectral changes that might affect fiber comparison via MSP and/or fluorescence microscopy.

FY11 Recipient Name: University of Central Florida
Award Number: 2011-DN-BX-K553
Award Amount: $470,545
Abstract: The identification and classification of ignitable liquid residue in fire debris can be complicated by weathering (evaporation) and biological degradation of the residue. The ASTM E 1618-10 Standard Test Method for Ignitable Liquid Residues in Extracts from Fire Debris Samples by Gas Chromatography-Mass Spectrometry emphasizes the need for laboratories to consult libraries (databases) of GC-MS data for ignitable liquid references, including a set of weathered and biologically degraded samples. The National Center for Forensic Science (NCFS) at the University of Central Florida and the Technical Working Group for Fire and Explosions (TWGFEX) Ignitable Liquids Database Committee have collaboratively produced the Ignitable Liquids Reference Collection and Database (ILRC) and a Substrates Pyrolysis Database, both of which are freely available online and consulted daily by fire debris analysts throughout the U.S. and other countries from around the world. Although the ILRC

contains in excess of 500 datasets for ignitable liquids from the ASTM E 1618 classes, the collection contains relatively few weathered samples and no biologically degraded samples. This proposal would remedy this situation by creating a new database of weathered and biologically degraded ignitable liquids and would provide another valuable tool for the fire debris analysis community. The proposal involves six distinct activities: (1) Development of an online database to hold the degraded ignitable liquids data and link to the existing ILRC; (2) select a set of 50 “fresh” ignitable liquids for weathering from the existing ILRC; (3) weather the set of 50 ignitable liquids to six specified levels of evaporation, analyze and enter the data into the database; (4) biologically degrade the same set of 50 ignitable liquids for four specified time periods, analyze and enter the data into the database; (5) assess the possibility of misclassification due to weathering and biological degradation and (6) formulate a set of best practice guidelines to assist the fire debris community in evaluating the influence of weathering and biological degradation on the interpretation of casework samples. The data will be placed in a new Degraded Ignitable Liquids Database and linked to the existing ILRC in order to preserve the integrity of the current database, and weathered samples in the current database will be transferred to the new database. Weathering will be conducted by Dr. Sigman, Mary Williams and students at the National Center for Forensic Science (NCFS). Biological degradation will be conducted by Dr. John Goodpaster and his students at Indiana University Purdue University Indianapolis (IUPUI). Samples of ignitable liquids will be taken from the ILRC or purchased by NCFS and samples shipped to IUPUI. Non-degraded samples of the newly purchased ignitable liquids will also be analyzed at NCFS and entered into the existing ILRC following classification by the TWGFEX Ignitable Liquids Database Committee. The degraded samples generated at NCFS and IUPUI will be analyzed at those institutions and samples from IUPUI will be archived on activated carbon and shipped to NCFS for analysis under a strictly controlled ILRC protocol. The datasets generated at NCFS and IUPUI will serve two purposes: (1) the results will be published by those respective researchers to further forensic science and (2) the datasets will be used to evaluate the influence of liquid degradation on correct positive ASTM class association rates. The final activity, best practices guidelines, will be formulated by the TWGFEX Ignitable Liquids Database Committee and publicized on the database and through presentations at AAFS. This proposal also serves to provide partial support for TWGFEX, which is otherwise without support, and will allow a highly productive portion of this TWG to continue providing valuable resources to the community.

FY11 Recipient Name: University of Tennessee
Award Number: 2011-DN-BX-K537
Award Amount: $514,495
Abstract: The purpose of this research project is to improve forensic anthropology practice and policy by facilitating more complete and accurate analyses of fragmentary human skeletal remains. Project personnel will develop and launch free user-friendly software that will enable forensic anthropologists to quantify and reconstruct fragmentary human skeletal remains (crania, pelves, humeri, and femora are the focus of the initial platform; additional elements will be added with subsequent releases of the

software) from three-dimensional surface files generated by computed-tomography or laser scans. First, the system will serve as an osteological case or scene management tool. All scanned skeletal remains from each scene will be reviewable within the application. Initially the software will provide a minimum number of elements (MNE) estimate of scanned material (Grayson 1984). Following osteological protocols developed in forensic anthropology and bioarchaeology (Adams and Byrd 2008; Herrmann and Devlin, 2008), MNE estimates will allow for the determination of the Minimum Number of Individuals (MNI) represented at the scene. Once the MNI is determined, the software will provide a fully reconstructed bone along with automated measurements for the user to apply to regression equations, discriminant functions, or to use with software such as Fordisc 3.0 (Jantz and Ousley 2005). As a secondary option, the software will provide sex and ancestry classification options using nonlinear classifiers. This software will have applications in individual forensic casework as well as in situations with commingled remains, such as mass graves or mass disaster scenarios.

The development of this new technology is possible due to recent advances in statistical atlas bone modeling (Mahfouz et al. 2007a; Mahfouz et al. 2007b). A statistical bone atlas is an average mold (or template mesh) that captures the primary shape variation of a bone and allows for the comparison of global shape differences between groups or populations, as well as for the rapid generation of automated computer measurements. This research team has used the powerful exploratory capabilities of statistical atlases previously to investigate and improve upon forensic techniques (Jantz and Mahfouz 2009; Mahfouz et al. 2007a; Mahfouz et al. 2007b; Shirley 2009; Shirley et al. in press). The proposed project will expand the usefulness of the atlas into the analysis of fragmentary and commingled remains. In addition, forensic anthropologists will be provided with a means to quantify and reconstruct remains that are damaged or fragmentary, thereby enhancing analyses in challenging cases. The data management aspect of the application will allow forensic anthropologists to digitally inventory complex commingled scenes; if geospatial data is integrated with each fragment then the refitting process can proceed geographically. Therefore, the developed application will significantly impact forensic anthropologists‟ and crime scene investigators‟ ability to reconstruct mass disasters, commingled mass graves, and highly fragmentary individual burials or surface scatters.

FY11 Recipient Name: Washington State University
Award Number: 2011-DN-BX-K549
Award Amount: $249,867
Abstract: The analysis of DNA extracted from degraded human source materials is complicated by four major factors: 1) the presence of contaminating human DNA, 2) the presence of non-target DNA whether exogenous or endogenous to the sample, 3) co-extracted polymerase chain reaction (PCR) inhibitors, and 4) the degree to which template molecules have been damaged or chemically modified post-mortem or from the time of deposition of the biological material. These associated problems make the authentication of DNA profiles from low copy number (LCN) and degraded samples

particularly problematic. As such, there is continued need to develop and evaluate methods that increase the yield and purity of genetic material extracted from degraded sources. Moreover, there are still poorly understood aspects of how degraded DNA should “behave” during routine laboratory methods, and whether this behavior is useful to differentiate it from contaminating DNA.

The proposed project contains three phases, each focusing on a specific aspect of working with LCN and degraded DNA samples. First, we propose to test commercially available DNA extraction kits, specifically those marketed towards LCN and degraded DNA samples, for the presence of contaminating human DNA. Quantifying the contaminating DNA molecules and determining the strand lengths will establish the level of degradation the DNA fragments have undergone. These observations will allow us to address whether it is possible to discriminate between profiles generated from authentic DNA versus contaminating DNA based on the copy number and intactness of the template molecules.

In the second phase of the project, we propose to test the performance of common protocols and commercially available LCN and degraded DNA sample extraction kits. Using a novel synthesized standard methodology we will directly compare the extraction methods by determining the copy number originally entering the extraction process and the number of copies retained at the end of the protocol. In this way, the performance of various extraction methods can be determined relative to complete recovery of DNA rather than as a comparison to other methods.

For the final phase of the project we propose to test three different “DNA capture” methods for enriching CODIS marker DNA in LCN and degraded samples. Similar to the methods proposed in Phase II, comparison using synthesized standards will determine the efficacies of each method in absolute terms. In addition, evaluation of the three capture methods will assess their respective abilities in removing PCR inhibitors from DNA extractions. Lastly, each method will be applied to capturing CODIS markers from ~500 year old human remains. Our goal is to identify methods that hold promise for more reliably recovering and typing CODIS profiles from LCN and degraded samples.

Attachment 10: OIFS Continuation Applied Research Award

FY11 Recipient Name	Award Number	Award Amount
Las Vegas Metropolitan Police Department	2010-DN-BX-K201	$139,732
	TOTAL FUNDING	**$139,732**

FY11 Recipient Name: Las Vegas Metropolitan Police Department
Award Number: 2010-DN-BX-K201
Award Amount: $139,732
Abstract: The Las Vegas Metropolitan Police Department (LVMPD) currently utilizes commercially prepared color test kits manufactured by ODV, Inc for presumptive controlled substance field testing. LVMPD officers use this method to presumptively identify cocaine, methamphetamine, and marijuana. Police officers present their results in lieu of laboratory analysis for preliminary hearing purposes. The interpretation of color changes is difficult for some officers and some noncontrolled substances have been found to give similar results to the controlled substances being targeted.

Recognizing the need to find a more reliable and specific method for presumptive field testing, the LVMPD Forensic Laboratory began investigating the use of Raman spectroscopy in 2008. The Las Vegas Metropolitan Police Department (LVMPD) Forensic Laboratory applied for and received one year of National Institute of Justice (NIJ) research grant funds to enhance existing Raman field technology to provide a presumptive onsite analysis of controlled substances. The research conducted thus far has focused on evaluating the performance of the ReporteR device, manufactured by DeltaNu, to accurately test methamphetamine and cocaine in the field. The testing by LVMPD forensic scientists has been successful in the preliminary identification of methamphetamine through the implementation of ideas and suggestions designed to improve the ReporteR device and testing techniques. Forensic scientists have also been successful in the preliminary identification of cocaine using the ReporteR but have found that various diluents contained in street cocaine can cause interference in spectra produced with the device leading to some inconclusive results. To improve the specificity of the handheld device and validate its accuracy, especially for cocaine testing, the LVMPD laboratory proposes the purchase of Raman microscope to compare spectra of cocaine and methamphetamine to the spectra generated by the reporter.

In the original proposal, the use of Raman technology to presumptively identify marijuana was identified as a goal of the project. However, anticipated setbacks with testing plant materials prompted research that revealed a recent innovation in Raman microscopy. Fluorescence correction technology, known as convex function f baseline correction [30], purports to have the ability to test plant material. The main advantage to this specific technology is that it is applied as an algorithm and therefore may be translatable to a portable system unlike other fluorescence rejection techniques and technologies. As there is limited published data on the subject, the Forensic Laboratory would like to purchase a Raman microscope to investigate whether or not this algorithm can also aid in the testing of fluorescing dark colored and naturally-derived controlled

substances (e.g. ecstasy tablets and black tar heroin). The selectivity, sensitivity, repeatability, and reliability of such analyses will be addressed in a parallel study of the Raman ReporteR with the laboratory-grade Raman microscope utilizing convex function fluorescence correction capabilities. This type of Raman microscope is designed to provide more specific spectral information unique to the substances being tested, which may lead to further enhancement of the portable Raman technology.

The main purpose of this proposal is to complete the research already begun, determine if testing typically difficult samples with the fluorescence correction algorithm is achievable, and to explore the possibilities of applying this technology to a handheld device. If the research is successful, a new method of field testing will enhance the ability of the law enforcement community to presumptively identify controlled substance evidence. This will enhance the administration of justice and public safety by providing law enforcement with a robust tool that gives immediate and defendable preliminary results for specific controlled substances.

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding to participate in an action research project designed for State and local jurisdictions that are struggling with large quantities of untested sexual assault kits. The purpose of this study is to understand the underlying nature of the problem and to identify effective and sustainable solutions. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and justice, particularly at the State and local levels.

Solicitation:
Strategic Approaches to Sexual Assault Kit (SAK) Evidence: An Action Research Project

Eligibility

Applicants are limited to States (including territories) and units of local government (including federally-recognized Indian tribal governments as determined by the Secretary of the Interior). Each applicant must demonstrate a team approach that includes an effective partnership between the applicant jurisdiction's criminal justice practitioner agencies and a research organization partner. Please carefully review the "Program-Specific Information" section, beginning on page 3, for additional details.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 10.)

Note: A Webinar for applicants will be held on November 17, 2010 at 2:00 p.m. eastern standard time. See http://www.ojp.usdoj.gov/nij/sexual-assault-kits.htm for more details.

All applications are due by 11:59 p.m. eastern time on January 18, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact Kristina Rose, Deputy Director, at 202–307–0466 or by e-mail to Kristina.Rose@usdoj.gov; or Katharine Browning, Ph.D., Senior Social Science Analyst, at 202–616–4786 or by e-mail at Katharine.Browning@usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2808

SL# 000947

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Strategic Approaches to Sexual Assault Kit (SAK) Evidence: An Action Research Project
(CFDA 16.560)

Overview

NIJ is seeking applicants interested in participating in an action research project designed for State and local jurisdictions that are struggling with large quantities of untested sexual assault kits. The purpose of this study is to understand the underlying nature of the problem and identify effective and sustainable solutions.

The action research project will be conducted in two phases. The first phase will be a six-month planning grant in which the teams will come together, conduct an initial assessment of the problem, and develop a working plan for implementing the remainder of the action research steps in the second phase of the project. This solicitation is for the first phase of the project only.

Authorizing Legislation: Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202).

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on January 18, 2011. Please see the “How to Apply” section, page 10, for more details.

Eligibility

Please refer to the title page for eligibility under this program.

Program-Specific Information—Strategic Approaches to Sexual Assault Kit (SAK) Evidence: An Action Research Project

Over the past few years, the discovery of thousands of untested sexual assault kits (SAK) (also known as “rape kits”) in law enforcement agencies has been the topic of extensive media coverage, numerous policy discussions, and Congressional hearings. These untested SAKs are often referred to as being part of a “backlog,” but in actuality this is not the case. A backlog refers to evidence that has been submitted to a crime laboratory by a law enforcement agency and is awaiting DNA analysis.[1] In this solicitation, we are referring to SAK evidence that has **not yet been submitted to a crime laboratory and may have been recently discovered in the law enforcement agency’s property room or storage facility.**

[1]Mark Nelson. Making Sense of the DNA Backlog: Myths and Realities, Washington, DC: U.S. Department of Justice, National Institute of Justice, 2010, NCJ 230183.

The purpose of this study is two-fold. First, NIJ is interested in learning about the underlying factors that contribute to this unsubmitted SAK evidence. Second, based on what is learned, promising strategies will be developed and implemented to reduce and eliminate the untested kits in that jurisdiction. Through monitoring and assessment, all strategies will be evaluated for their effectiveness and sustainability. The primary goals of this research project are to:

- Develop transportable lessons and practices regarding SAK evidence using a proven problem-solving research model.
- Improve the criminal justice system response to sexual assault, from the initial point of contact through prosecution.

A recent NIJ study of more than 2,000 law enforcement agencies across the country found that 14 percent of all unsolved homicides and 18 percent of unsolved rapes contained evidence that was not submitted by law enforcement agencies to crime labs for analysis.[2] The same study showed that investigating officers may not have submitted the evidence to a crime lab for a number of reasons. For example, subsequent investigation may have shown that the evidence would not have probative value; charges against an alleged perpetrator may have been dropped; the suspect may have pled guilty; or, in a rape case, the issue may be "consent" and, therefore, analysis of the evidence may have been considered not to be relevant or of sufficient probative value for the purposes of helping to establish whether or not there was consent. However, the study showed that some law enforcement agencies may not fully understand the potential value of forensic evidence in developing new leads in a criminal investigation. Forty-four percent said that one of the reasons they did not send evidence to the lab was because a suspect had not been identified and 15 percent said that they did not submit evidence because analysis had not been requested by a prosecutor. Specialized training in these cases may have been beneficial and led to a different outcome. The only way to determine if the untested evidence in law enforcement custody needs to be submitted for forensic analysis is to review the case and the evidence itself.[3]

There has been little research on the nature of untested SAK evidence, and few, if any, promising practices exist to guide jurisdictions as they manage the current situation and develop valid and reliable policies and procedures for the future.

The issue of untested SAK evidence has prompted a number of research questions that include:

- What should be the course of action when a large quantity of untested SAK evidence is discovered in a given jurisdiction? Should resources be devoted to test all evidence—even cases past the statute of limitations?
- Alternatively, should a “triage” process be established to determine what SAK evidence should be sent to the lab and when? If a triage is warranted, upon what rules should it be established?
- How many untested kits contain probative evidence in one or more cases? What procedures need to be put in place to ensure these kits are processed in the future?
- When and how should sexual assault victims be notified during this process?

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[2] Kevin J. Strom, Jeri Ropero-Miller, Shelton Jones, Nathan Sikes, Mark Pope and Nicole Horstmann, The 2007 Survey of Law Enforcement Forensic Evidence Processing (pdf, 81 pages), Final Report, Washington, DC: U.S. Department of Justice, National Institute of Justice, September 2009, 228415.
[3] Ibid

- What types of follow-up services are effective for victims who have been recently notified of re-opened cases?

Applicants should consider these and other research questions when formulating their proposed action research projects.

Overview of Action Research

Action research refers to an approach where researchers engage in an active partnership with one or more practitioner agencies to solve problems. Action research often includes the following steps:

1. Identifying the problem.
2. Developing the strategies to address the problem.
3. Implementing the strategies.
4. Monitoring the progress of the implementation.
5. Providing feedback to better refine the strategies targeting the problem.
6. Assessing and evaluating the implementation and the impact the strategies have.

The research partner plays a key role in identifying the problem by analyzing data and other information that can pinpoint the issue that will be addressed. The research partner works in partnership with the practitioner agency to develop intervention strategies to target the problem. The practitioner agency implements the strategies and the researchers monitor the progress and provide feedback to better refine the approach. Finally, the researchers conduct an assessment on the implementation and impact of the strategies.

NIJ, as the research and evaluation arm of the U.S. Department of Justice, has been at the forefront of the development and support of this type of criminal justice action research, and has played a pioneering role in the advancement of this strategic problem-solving approach within the criminal justice system. Examples of previous NIJ action research include the Operation Ceasefire Program in Boston (see http://www.ncjrs.gov/pdffiles1/nij/188741.pdf) and the Strategic Approaches to Community Safety Initiative (SACSI) (see http://www.ncjrs.gov/pdffiles1/nij/216298.pdf). For further reading on action research, please refer to:

- *Action Research for Crime Control and Prevention* by Lois Felson Mock (http://www.ncjrs.gov/App/publications/Abstract.aspx?id=252402).
- *Research for Problem Solving and the New Collaborations* by David Kennedy (http://www.ncjrs.gov/pdffiles1/176979.pdf).
- *The Memphis Strategic Approaches to Community Safety Initiatives Project: A Case Study* by James R. “Chip” Coldren, Jr. and David R. Forde. (http://www.ncjrs.gov/pdffiles1/nij/grants/232198.pdf).

The Sexual Assault Kit Action Research Project

NIJ will award funding to 3-5 sites to be part of this action research project. The formal applicant must be a State or unit of local government, although each site should demonstrate a team

approach that includes an effective partnership between the practitioner agencies and a research organization or partner. The research partner should have a full understanding of the action research approach. The practitioner team should consist of, but not be limited to, representatives from police departments, the crime laboratory, the prosecutor's office, and a community-based victim services organization.[4] NIJ will provide guidance and technical assistance on action research to the practitioner team and its research partners as needed.

Note: A Webinar for applicants will be held on November 17, 2010 at 2:00 p.m. eastern standard time. See http://www.ojp.usdoj.gov/nij/sexual-assault-kits.htm for more details.

The action research project will be conducted in two phases. The first phase will be a six-month planning grant in which the teams will come together, conduct an initial assessment of the problem, and develop a working plan for implementing the remainder of the action research steps in the second phase of the project.

Phase 1: Planning

This solicitation is for proposals for the first phase of the project. In the first phase of the project, the team will need to conduct an audit of the cases in the set of untested SAKs, as a first step in the action research process.

As part of the application:

- The applicant must submit signed letters of commitment from the agency that has untested sexual assault evidence, the crime laboratory that provides DNA services to the law enforcement agency, the prosecutor's office, a community-based victim services organization, and a research organization. The letters must be included in the application to be considered for funding.

- The application should include a list of key team members from each participating agency (one from each agency) and describe the role of each team member. Each team should designate a "site coordinator" who will serve as the central point of contact for the site team. This individual will be responsible for fostering and coordinating communication among the team members and ensuring that the team is meeting its milestones.

- As part of the application, information regarding the extent of untested evidence that has yet to be submitted to a crime laboratory should be provided in detail. The number of untested kits in the crime laboratory for which an official request for testing has not been made, may be included in this description. There should be a minimum of 500 untested cases combined in this set for the purposes of this solicitation.

- The application should include a discussion of current practices and procedures regarding the submission of physical evidence in sexual assault cases and a discussion of potential outcome variables that might be appropriate for the applicant's jurisdiction.

[4] A community-based victim services organization is a nonprofit, nongovernmental organization that assists sexual assault victims, including rape crisis centers, faith-based organizations, and other organizations with a documented history of effective work concerning sexual assault.

- The applicant should demonstrate the willingness and ability of the participating agencies that make up the site team to follow up on leads generated from analysis of DNA samples from sexual assault kits.

- Funds for Phase 1 may be used to cover personnel costs (including research partners), travel expenses for meetings and project activities, group meeting expenses, and preliminary DNA screening or analysis (as appropriate for the project).

Within 60 days of award, a 2-day workshop for all the sites will take place in Washington, DC. All key site team personnel will be expected to attend. The workshop will focus on the elements of a successful action research project and key issues around DNA and untested SAK evidence. Funding for this workshop will be provided through NIJ's logistical contractor and does not need to be factored into the applicant's budget.

Phase 2: Implementation

Phase two is contingent on successful progress during phase one and the submission of an implementation plan and research design for the remaining steps of the action research project.

Amount and length of awards: For phase one, NIJ anticipates that up to a total of $1 million may become available for up to 5 planning grant awards of up to $200,000 each made through this solicitation. **All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.** NIJ funding for an individual research project rarely exceeds $500,000, though total funding for projects requiring multiple years to complete has exceeded $1 million in some cases.

NIJ envisions applicants will use funds from year 1 to analyze and define the problem, develop strategies and procedures for possible solutions, and develop a research design to provide assessment of outcomes and impacts of this action research project. Eligible funded applicants will then be allowed to apply for further assistance to implement their action research plans.

Applicants should be aware that the total period for an award ordinarily will not exceed 3 years (one year planning and two years implementation and evaluation). Additional funding, up to $4 million, subject to appropriations availability, will be made available to continue the study after the planning year has concluded.

Evaluation research: Within applications proposing evaluation research, funding priority will be given to experimental research designs that use random selection and assignment of participants to experimental and control conditions. When randomized designs are not feasible, priority will be given to quasi-experimental designs that include contemporary procedures such as Propensity Score Matching or Regression Discontinuity Design to address selection bias in evaluating outcomes and impacts.

Evaluations that also include measurements of program fidelity and implementation as part of a thorough process assessment are desirable. Measurements of program fidelity should be included as part of an assessment of program processes and operations to ensure that policies, programs, and technologies are implemented as designed. As one aspect of a comprehensive evaluation, assessments of program processes should include objective measurements and qualitative observations of programs as they are actually implemented and of services that are

delivered. These may include assessment of such aspects as adherence to program content and protocol, quantity and duration, quality of delivery, and participant responsiveness.

Proposed evaluation research designs with multiple units of analysis and multiple measurements will also be given priority. Design aspects that contribute to the validity of results are necessary to effectively address issues of generalizability and representativeness of findings.

Finally, applications that include cost/benefit analysis will be given priority. NIJ views cost/benefit analysis as an effective way to communicate and disseminate findings from evaluation research.

Please note: All applicants under this solicitation must comply with Department of Justice regulations on confidentiality and human subjects' protection. See "Other Requirements for OJP Applications" at http://www.ojp.usdoj.gov/funding/other_requirements.htm.

What will not be funded:

1. Work that will be funded under another specific solicitation.
2. Proposals that do not contain a research component or do not respond to the specific goals of this solicitation.
3. Proposals that only offer to eliminate the sexual assault kit backlog but not to participate in the research portion of the study.

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2010 salary table for SES employees is available at www.opm.gov/oca/10tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Director of the National Institute of Justice. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match requirement: See “Cofunding” paragraph under “What an Application Should Include” (below).

Performance Measures

To assist in fulfilling the Department’s responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the “Data Grantee Provides” column so that OJP can calculate values for the “Performance Measures” column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
1. To develop a plan for an action research project. 2. To implement an action research project that includes an assessment of outcomes and impact in Phase 2.	1. Develop a plan that effectively addresses a jurisdiction’s particular circumstances as assessed by peer reviewers. 2. Establish coordinating teams to implement plans as demonstrated by copies of executed agreements. 3. If applicable, effectively execute an action research project.	1. Interim and final reports concerning the status and outcomes from the action research planning grant, including an implementation plan for the research project, clearly relating the project to the jurisdictions’ circumstances. 2. If applicable, interim and final reports concerning the status and outcomes from the action research project.

Submission of performance measures data is not required for the application. Instead, applicants must discuss in their application their proposed methods for collecting data for performance measures. Please refer to the section “What an Application Should Include” (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute “research.” However, project evaluations that are intended only to generate internal improvements to a program or service, or are conducted only to meet OJP’s performance measure data reporting requirements likely do not constitute “research.” Research is subject to applicable DOJ human subjects protections. Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP Web site (www.ojp.usdoj.gov/funding/other_requirements.htm).

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding.

It is expected that reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at https://www.fsrs.gov. Additional guidance on reporting will be provided in the near future by OJP and/or the Office of Management and Budget (OMB).

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System) number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point of contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity.

Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov.** Please use the following identifying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ-2011-2808.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical

difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, tribal resolution (if applicable), resumes/curriculum vitae of key personnel, and all required sign letters of commitment (see page 13) will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to Complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
   The program narrative section of the application must not exceed 25 double-spaced pages in 12-point font with 1-inch margins. Abstract, table of contents, charts, figures, appendices, and government forms do not count toward the 25-page limit for the narrative section.

   If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

Program Narrative Guidelines:

a. **Title Page** (not counted against the 25-page program narrative limit).
The title page should include the title of the project, submission date, funding opportunity number, and the applicant's name and complete contact information (i.e., name, address, telephone number, and e-mail address).

b. **Project Abstract** (not counted against the 25-page program narrative limit)
The 400 to 600-word abstract should provide a brief summary of the proposal, including the make-up of the project team and the basic approach being used to accomplish the project.

c. **Table of Contents and Figures** (not counted against the 25-page program narrative limit).

d. **Main body.** The main body of the program narrative should describe the project in depth. The following sections should be included as part of the program narrative:
    - Statement of the Problem.
    - Project/Program Design and Implementation.
    - Capabilities/Competencies.
    - Impact/Outcomes and Evaluation.

    Note: Within the above sections, the narrative should address:
    - Purpose, goals, and objectives.
    - Detailed description of the jurisdiction's current problem and the approach that will be used to accomplish the project objectives. See "Phase 1: Planning" discussion on page 6 for additional details regarding what the narrative should include.
    - Implications for criminal justice policy and practice in the United States.
    - Management plan and organization.

e. **Appendices** (not counted against the 25-page program narrative limit) include:
    - Bibliography/references.
    - Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study.
    - Curriculum vitae, resumes or biographical sketches of all key personnel.
    - Project timeline and research calendar with expected milestones.
    - Research independence and integrity (see "Selection Criteria," below).
    - Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see http://www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).
    - Privacy Certificate (for further guidance go to http://www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
    - List of previous and current NIJ awards to applicant organization and investigator(s).

- Signed letters of commitment from participating agencies, as described in the "Phase 1: Planning" section, on page 6 (above).
- List of other agencies, organizations, or funding sources to which you have submitted this proposal (if applicable).
- Other materials specified by the solicitation.

3. **Budget Detail Worksheet and Budget Narrative**

   a. Budget Detail Worksheet
   A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet must be included.

   For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

   b. Budget Narrative
   The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative must be broken down by year.

   Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The applicant should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make, and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)
   Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval must be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution (if applicable)**
   If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership must be included with the application. In those instances when an organization or consortium of tribes proposes to apply for a

grant on behalf of a tribe or multiple specific tribes, then the application must include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in order to satisfy this requirement.

6. **Other Standard Forms**
   Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

   a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds)

   b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded)

   c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded)

   d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds)

Selection Criteria

Statement of the Problem (Understanding of the problem and its importance)—5%

Project/Program Design and Implementation (Quality and technical merit)—20%

1. Soundness of the approach to accomplish the proposed work.
2. Feasibility of proposed project and awareness of pitfalls.
3. Innovation and creativity (when appropriate).

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—45%

1. Qualifications and experience of proposed staff.
2. Demonstrated ability of proposed staff and organization to manage the effort.
3. Adequacy of the plan to manage the project, including how various tasks are subdivided and resources are used.
4. Successful past performance on NIJ grants and contracts (when applicable).

Budget—10%

1. Total cost of the project relative to the perceived benefit.
2. Appropriateness of the budget relative to the level of effort.
3. Use of existing resources to conserve costs.

Impact/Outcomes and Evaluation (Relevance to policy and practice)—20%

1. Potential for significant advances in scientific or technical understanding of the problem.
2. Potential for significant advances in the field.
3. Relevance for improving the policy and practice of criminal justice and related agencies in the United States and improving public safety, security, and quality of life.
4. Affordability and cost-effectiveness of proposed products, when applicable (e.g., purchase price and maintenance costs for a new technology or cost of training to use the technology).

Research Independence and Integrity

Regardless of a proposal's rating under the criteria outlined above, in order to receive funds, the applicant's proposal must demonstrate research independence, including appropriate safeguards to ensure research objectivity and integrity.

For purposes of this solicitation, research independence and integrity pertains only to ensuring that the design, conduct, or reporting of research funded by NIJ grants, cooperative agreements, or contracts will not be biased by any financial interest on the part of the investigators responsible for the research or on the part of the applicant.

In the appendix dealing with research independence and integrity, the applicant must explain the process and procedures that the applicant has put in place to identify and manage potential financial conflicts of interest on the part of its staff, consultants, and/or subrecipients. It must also identify any potential organizational financial conflicts of interest on the part of the applicant with regard to the proposed research. If the applicant believes that there are no potential organizational financial conflicts of interest, the applicant must provide a brief narrative explanation of why it believes that to be the case.

Where potential organizational financial conflicts of interest exist, in the appendix the applicant must identify the safeguards the applicant has put in place to address those conflicts of interest.

Considerations in evaluating research independence and integrity will include, but may not be limited to, the adequacy of the applicant's efforts to identify factors that could affect the objectivity/integrity of the proposed staff and/or the organization in carrying out the research, development, or evaluation activity; and the adequacy of the applicant's existing or proposed remedies to control any such factors.

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or

a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

All final award decisions will be made by the Director of the National Institute of Justice who also may give consideration to factors including, but not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding when making awards.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds

- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006
- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If the proposal is funded, the award recipient will be required to submit several reports and other materials, including:

Final substantive report: The final report should be a comprehensive overview of the project and should include a detailed description of the project design, data, and methods; a full presentation of scientific findings, placed in the context of existing literature; a thorough discussion of the implications of the project findings for criminal justice practice and policy in the United States; etc. It must contain an abstract of no more than 600 words and an executive summary of 2,500 to 4,000 words.

A draft of the final report, abstract, and executive summary must be submitted 90 days before the end date of the grant. The draft final report will be peer reviewed upon submission. The reviews will be forwarded to the principal investigator with suggestions for revisions. The author must then submit the revised final report, abstract, and executive summary by the end date of the grant. The abstract, executive summary, and final report must be submitted in electronic format.

Interim reports: Grantees must submit quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Future awards and fund drawdowns may be withheld if reports are delinquent.

Application Checklist

Strategic Approaches to Sexual Assault Kit (SAK) Evidence: An Action Research Project

This application checklist has been created to assist in developing an application.

Eligibility Requirement:
_____ Tribal authorizing resolution (if applicable)

What an Application Should Include:
_____ Application for Federal Assistance (SF–424) (see page 12)
_____ Program Narrative (see page 12)
_____ Appendices to the Program Narrative: (see page 13)
- _____ Bibliography/references
- _____ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study
- _____ Curriculum vitae, resumes or biographical sketches of all key personnel
- _____ Project timeline and research calendar with expected milestones
- _____ Research independence and integrity
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ List of previous and current NIJ awards to applicant organization and investigators
- _____ Signed letters of commitment from participating agencies
- _____ List of other agencies, organizations, or funding sources to which you have submitted this proposal (if applicable)
- _____ Data Archiving Strategy

_____ Budget Detail Worksheet (see page 14)
_____ Budget Narrative (see page 14)
_____ Indirect Cost Rate Agreement (if applicable) (see page 14)
_____ Tribal Authorizing Resolution (if applicable) (see page 14)
_____ Program Narrative/Abstract Format: (see page 12)
- _____ Double-spaced
- _____ 12-point standard font
- _____ 1” standard margins
- _____ Narrative is 25 pages or less

_____ Other Standard Forms as applicable (see page 15), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 13: Strategic Approaches to Sexual Assault Kit (SAK) Evidence; An Action Research Project – Phase 1 Awards

FY11 Recipient Name	Award Number	Award Amount
Wayne County Prosecutor's Office	2011-DN-BX-0001	$200,000**
City of Houston Police Department	2011-DN-BX-0002	$178,076**
	TOTAL FUNDING	**$378,076**

** Note - All awarded funds were carryover COPS DNA/Forensics funds from FY 2010

Attachment 14: FY 2011 Strategic Approaches to Sexual Assault Kit (SAK) Evidence Program Abstracts – Phase 1

FY11 Recipient Name: Wayne County Prosecutor's Office
Award Number: 2011-DN-BX-0001
Award Amount: $200,000
Abstract: Since the 1990s, thousands of untested sexual assault kits (SAKs) have been discovered in police and crime lab facilities throughout the United States. In August 2009, a tour of a Detroit Police Department property storage room turned up as many as 10,000 untested SAKs dating back to the 1980's. The Wayne County Prosecutor, Kym L. Worthy, immediately called for an investigation. A preliminary audit has confirmed at least 8,461 kits were never submitted to a crime lab for analysis. To respond to this problem, key stakeholders, including the Wayne County Prosecutor's Office, the Detroit Police Department, the Michigan State Police Crime Lab, and Detroit-area victim service organizations, have agreed to work together in an action research project to study why this happened and how it can be resolved. The mission of the Detroit SAK Action Research Project is to study the problem of untested kits in Detroit, to develop model protocols, and to implement and evaluate those protocols.

As it would be almost impossible to process approximately 10,000 kits simultaneously, a pilot project has been underway for the past five months to examine a random sample of 400 SAKs (which provides sufficient statistical power to predict within a 95% confidence interval what is likely to be found in the remaining kits). Termed "The 400 Project," this pilot work sets the stage for this proposed action research project in several ways. First, working through a smaller number of cases has helped build strong, trusting relationships among key stakeholders. Second, testing these 400 kits has given the Michigan State Crime Lab an opportunity to explore options, both internally and externally, for testing the backlog of unanalyzed kits. Finally, statistical analyses from The 400 Project SAKs will provide estimates of how many of the remaining unanalyzed kits are beyond statutes of limitations, how many may be ready for prosecution, how many may have DNA results, and how many might have CODIS hits. A draft final report of The 400 Project will be released in April 2011 to provide empirically-developed guidelines for the Detroit SAK Action Research Project as it begins to address the remaining thousands of untested SAKs.

The Detroit SAK Action Research Project will follow McEwen's (1993, 2003) action research model for locally-initiated research partnership programs. In Phase 1, we will identify the problem, conduct reconnaissance, and develop research steps. Our team will complete the audit in progress to solidify the scope of the problem in Detroit. Then, guided by the results from The 400 Project, we will begin to develop long-term response protocols. As these activities unfold, the researchers/evaluators on the team will document the debates, dilemmas, and decisions. Guided by a developmental evaluation theoretical framework, we have two evaluation goals for Phase 1. First, we will begin a

longitudinal examination of the underlying root causes of the problem—why were so many kits untested? Our objective is to conduct baseline qualitative interviews with two representatives from all stakeholder groups to assess their perceptions of the root causes. Our second goal is to document the actions taken to respond to the problem of a vast quantity of untested sexual assault kits. Our objective is to conduct qualitative ethnographic observations of all the Detroit SAK Action Research Project activities to develop timelines, decision trees, and narrative accounts of how this community decided to tackle its problem of untested kits. By combining research and action, we hope to develop long-term protocols and "transportable lessons" for other communities facing this problem.

FY11 Recipient Name: City of Houston Police Department
Award Number: 2011-DN-BX-0002
Award Amount: $178,076
Abstract: The Houston Police Department is currently storing approximately 16,000 sexual assault kits in the Property Room. A random search of 4,220 frozen SAKs identified that these SAKs were untested. A random search of the 11,780 room temperature SAKs was conducted and it was determined that 26% of the SAKs remain without a request for forensic testing. It has not been determined whether these SAKs should be tested based on investigative characteristics of the case. Action research will be conducted to help identify 1) factors inhibiting the number of sexual assault kits (SAKs) forwarded to the Houston Police Department Crime Lab for analysis and 2) factors that undermine the effective use of forensic evidence in sexual assault cases.

A Task Force comprised of members from HPD's Special Crimes, Homicide and Crime Laboratory Divisions, the Harris County District Attorney's Office, the Houston Area Women's Center, Sam Houston State University, and the University of Texas at Austin met on December 10, 2010 to begin planning for this project. Underlying factors determined by the grant study will be evaluated as to why SAKs are not submitted for testing, aid in developing strategies to determine whether all SAKs should be tested or whether to implement a triage method and ultimately reduce the backlog of stored SAKs.

Each participating agency is committed to producing a greater understanding of the problem and designing feasible solutions based on the nuances of the local problem. The diversity of perspectives amongst members brings expertise and a collaborative spirit that ensures the project will be successful and place the working group in a strong position to submit a project proposal to refine, implement, and evaluate response strategies in Phase 2 of the solicitation.

Attachment 15: Strategic Approaches to Sexual Assault Kit (SAK) Evidence;

An Action Research Project Awards – Phase 2

FY11 Recipient Name	Award Number	Award Amount
Wayne County Prosecutor's Office	2011-DN-BX-0001	$310,962**
City of Houston	2011-DN-BX-0002	$260,853***
	TOTAL FUNDING	**$571,815**

** Note The actual award was $800,000. FY 2011 DNA funds were supplemented with $239,038 in FY 2010 COPS DNA/Forensics carryover funds and $250,000 from an IAA from OVC to NIJ, agreement # KV3PIA4466.

*** Note The actual award was $821,814. FY 2011 DNA funds were supplemented with $310,961 in FY 2010 COPS DNA/Forensics carryover funds and $250,000 from an IAA from OVC to NIJ, agreement # KV3PIA4466

Attachment 16: Strategic Approaches to Sexual Assault Kit (SAK) Evidence; An Action Research Project – Phase 2 Abstracts

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FY11 Recipient Name: Wayne County Prosecutor's Office
Award Number: 2011-DN-BX-0001
Award Amount: $800,000
Abstract: Since the 1990s, thousands of untested sexual assault kits (SAKs) have been discovered in police and crime lab facilities throughout the United States. In August 2009, a tour of a Detroit Police Department property storage room revealed 10,559 untested SAKs dating back to the 1980's. To respond to this problem, key stakeholders, including the Wayne County Prosecutor's Office, the Detroit Police Department, the Michigan State Police Crime Lab, and Detroit-area victim service organizations, have agreed to work together in an action research project to study why this happened and how it can be ended. The mission of the Detroit SAK Action Research Project is to study the problem of untested kits in Detroit, to develop model protocols, and to implement and evaluate those protocols.

The Detroit SAK Action Research Project follows McEwen's (1993, 2003) action research model for locally-initiated research partnership programs. In Phase I, we identified the problem, conducted reconnaissance, and developed preliminary research steps. In Phase II, we will continue these planning efforts for an additional six months for two specific tasks. First, the confirmed sexual assault cases identified in the Phase I audit will require additional investigative effort to determine whether they can be considered for prosecution. Police files and medical records need to be matched to each case, and then as the records are successfully matched, each case will be assigned to an investigator to begin the work of evaluating the case (e.g., identifying suspect/victim, locating victim/suspect). In addition, we will be targeting cases that are near expiration for statute of limitations (SOL), and we expect that those kits will be sent for testing as quickly as possible. Our goal is to develop a "Case Response Protocol" that will detail the procedures, actions, and timelines to be followed for every case. Second, we will develop "Victim Notification Protocols" that stipulate how and when victims will be informed about the status of their cases.

Because this is a particularly sensitive and complex task, we will be reaching out to other experts in our state and at the national level to develop these materials. In Phase II, we will conduct four expert workgroup meetings, which will include staff from our core partner advocacy organizations, our collaborative partners, as well as highly experienced advocates from other Michigan rape crisis centers and research experts from the Michigan State University's Violence Against Women Research & Outreach Initiative. Following this six-month continued planning, we will begin implementing these protocols as cases move through investigation to prosecution (for one year; total Phase II project time is 18 months).

Throughout these activities, the evaluation component will continue to document the processes followed in Detroit in order to develop "transportable lessons" for other communities struggling with the problem of untested SAKs. In Phase II, the evaluators will continue to conduct longitudinal qualitative interviews to understand the underlying causes of why so many untested SAKs accumulated in Detroit. Ethnographic observations will also continue of all core and collaborative partners meetings to document the choice points, debates, and decisions made by this community. During the implementation activities in Phase II, the evaluators will conduct quantitative and qualitative analyses to examine what factors predict successful prosecution and how victims respond to being re-contacted about their assaults so long after the initial incident.

FY11 Recipient Name: City of Houston Police Department
Award Number: 2011-DN-BX-0002
Award Amount: $821,814
Abstract: The proposed project represents a continuation of the work that started April 1, 2011 under a grant from the National Institute of Justice (NIJ) to the Houston Police Department (HPD). The project proposed here is in response to NIJs interest in funding the second phase of this ongoing work. The Phase 1 grant is a reflection of the leadership that both NIJ and HPD are playing in understanding the important problem of untested rape kits that exists not only in HPD, but in many jurisdictions across the country. Through the Phase 1 grant to HPD, a diverse advisory group has been working diligently to understand multiple aspects of the problem of rape kits that have not been submitted for testing and to understand how investigators and prosecutors utilize rape kit evidence. The problem-solving nature of the project is predicated on the assumption that it is critical to have a comprehensive understanding of problems and the factors that create them before designing and implementing solutions. This a data-driven approach to changing practices.

The Phase 2 project proposes to continue studying the nature of unsubmitted rape kits, understanding the role that rape kit evidence plays in the investigation and prosecution of sexual assaults, and documenting the results of testing rape kits that have not previously been screened and tested. The main purposes of Phase 2 are to implement strategies derived from the Phase 1 research and to evaluate the results of those strategies. The Phase 2 project will accomplish 3 goals:

1. Complete the research work started in Phase 1, which will be used to identify a feasible plan to screen, test, and utilize evidence contained in rape kits that have not been submitted for forensic testing.

2. Implement the strategies identified under Goal #1.
3. Evaluate the implementation and outcomes of the strategies.

Work to accomplish the first goal has been taking place since April 2011. A working group of stakeholders has been collaborating on research to understand the procedures that have been used to screen and test rape kits and to understand the nature of sexual assault cases in which rape kits have been collected but evidence within the kit has not been submitted to the HPD Crime Lab for testing. A strength of the Phase 1 project is the diverse set of stakeholders represented on the advisory board. The research team is leading the collection of data from a variety of sources that can inform a complete understanding of the situation. This includes data in the HPD Crime Lab Information System (LIMS), relevant information contained in HPD sexual assault case files, interviews with HPD sex crime investigators, interviews with victims, victim advocates and service providers, Harris County prosecutors, SANE nurses, and hospital administrators. In addition, discussions that have occurred through advisory board meetings and conference calls have shed light on the situation.

The selection and implementation of feasible responses will occur in the second phase of the project in Houston. During Phase 1 the project advisory board has been discussing possible strategies based on the knowledge that is accumulating through project meetings and data collection. This process will be finalized during Phase 2. Project Phase 2 will entail the selection of response strategies 1) that will ensure a backlog of unsubmitted rape kits that are suitable for testing will not accumulate in the future; 2) for screening and testing the existing set of rape kits that have not previously been submitted for testing; 3) for determining whether and how rape kit test results can be used to advance active investigations or open inactive sexual cases for investigation and prosecution; and 4) that are victim-centered. Finally, the proposed Phase 2 project will assess the implementation and results of responses strategies. In achieving this goal the project will generate practical knowledge about strengths and weaknesses of the strategies. This knowledge will not only aid agencies in Houston as they refine their procedures, it will also have the ability to inform sites around the country as they wrestle with overcoming challenges in their jurisdictions.

The project will be carried out by a working group of stakeholders who initially met on December 10, 2010 to plan project Phase 1. Since that meeting the working group has expanded to include representatives from hospitals in Houston that collect rape kit evidence. The working group includes representatives from the HPD adult and juvenile sex crimes investigative units, the HPD Crime Laboratory, the Harris County District Attorney's Office, The Houston Area Women's Center, Memorial Hermann Hospital,

Harris County Hospital District, Sam Houston State University, and the University of Texas at Austin. The working group offers a diversity of perspectives and has collaborated successfully throughout project Phase 1. The working group has demonstrated a willingness to share expertise and engage in a collaborative process to ensure the project will be successfully completed. The working group is in a strong position to select, implement, and evaluate response strategies during project Phase 2.

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding basic scientific research that underlies the multidisciplinary field of forensic science. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and criminal justice, particularly at the State and local levels. The availability of funding for FY 2011 has not yet been determined. In FY 2010, NIJ provided over $30 million in grants to fund research and development projects related to forensic science.

Solicitation: Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes

Eligibility

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with, States (including territories), units of local government (including federally-recognized Indian tribal governments as determined by the Secretary of the Interior), nonprofit and for-profit organizations (including tribal nonprofit and for-profit organizations), institutions of higher education (including tribal institutions of higher education), and certain qualified individuals. For-profit organizations must agree to forgo any profit or management fee. NIJ may also enter into interagency agreements with Federal entities in appropriate cases. Foreign governments, foreign organizations, and foreign institutions of higher education are not eligible to apply.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 10.)

All applications are due by 11:59 p.m. eastern time on April 12, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact NIJ by email to forensic.research@ojp.usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2806

SL# 000945

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Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes
CFDA 16.560

Overview

With this solicitation, NIJ seeks proposals for funding basic scientific research in the physical, life, and cognitive sciences that is designed to increase the knowledge underlying forensic science disciplines intended for use in the criminal justice system.

Authorizing Legislation: Title I of the Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202); Homeland Security Act (section 232).

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on April 12, 2011. Please see the "How to Apply" section, page 10, for more details.

Eligibility

Please refer to the title page for eligibility under this program.

Program-Specific Information—Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes

This solicitation seeks applications for funding basic scientific research in the physical, life, and cognitive sciences that is designed to increase the knowledge underlying forensic science disciplines intended for use in the criminal justice system. For the purposes of this solicitation, the following definitions apply:

- Forensic—Of, relating to, or used in legal proceedings or argumentation.[1]
- Science—The observation, identification, description, experimental investigations, and theoretical explanation of natural phenomena.[2]
- Basic research—A systematic study directed toward a greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards any processes or products in mind. Basic research, however, may include activities with broad applications in mind.[3] (For the purposes of this solicitation, basic research must include activities with broad application to forensic sciences related to the criminal justice system.)

[1] Definition of "forensic" is taken from *Webster's II New Riverside University Dictionary*.
[2] Definition of "science" is taken from *Webster's II New Riverside University Dictionary*.
[3] Definition taken from: OMB Circular A–11, Preparation, Submission, and Execution of the Budget, Section 84—Character Classification (Schedule C).

- Applied research—The systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.[4]
- Development—The systematic application of knowledge or understanding, directed toward the production of useful materials, devices, systems, or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.[5]

Basic scientific research proposals to this solicitation should be designed to lead to:

a. Subsequent applied research and advanced technology developments in forensic science-related technologies intended for use in the criminal justice system, and/or

b. New and improved crime laboratory functional capabilities that result in faster, more robust, more informative, less costly, or less labor-intensive identification, collection, preservation, and/or analysis of evidence.

Proposals should describe the anticipated impact of the basic scientific research on one or more forensic science disciplines. Some of the forensic science disciplines are listed below (where available, links have also been provided to sites containing additional information).

- DNA and forensic biology (www.dna.gov, www.cstl.nist.gov/strbase/).
- Forensic crime scene analysis (www.swgstain.org).
- Latent print and other pattern/impression evidence (www.swgfast.org, www.swgtread.org).
- Forensic anthropology and forensic odontology (www.swganth.org/).
- Controlled substances (www.swgdrug.org).
- Fire debris analysis and arson scene investigations (www.ncfs.ucf.edu/twgfex).
- Firearms and toolmark identification (www.swggun.org).
- Questioned documents (www.swgdoc.org/).
- Trace evidence (www.swgmat.org).
- Forensic pathology.
- Forensic toxicology (www.swgtox.org).

Applicable physical, life and cognitive sciences may include:

- Life Sciences (e.g., biology, genetics).
- Physics.
- Medicine/Dentistry (e.g., neurology, pathology, odontology).
- Mathematical Sciences.
- Material Science.
- Computer Science.
- Chemistry and Pharmacology.
- Psychology.

[4] Ibid.
[5] Ibid.

Note: FY 2010 Solicitations That Will Not Be Reissued in FY 2011

The following FY 2010 solicitations will not be reissued in FY 2011. Applications that would previously have been submitted under these solicitations may, as appropriate, now be submitted to this FY 2011 solicitation, "Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes" or to the planned FY 2011 solicitation, "Applied Research and Development in Forensic Science for Criminal Justice Purposes."

- Forensic DNA Research and Development
- Fundamental Research to Improve Understanding of the Accuracy, Reliability, and Measurement Validity of Forensic Science Disciplines
- Research and Development in Forensic Crime Scene and Medicolegal Death Investigations
- Research and Development on Impression Evidence
- Research and Development in the Forensic Analysis of Trace Evidence
- Research and Development in Forensic Toxicology
- Research and Development in Forensic Anthropology and Forensic Odontology
- Research and Development in the Area of Controlled Substances Detection and Analysis
- Research and Development in the Forensic Analysis of Fire and Arson Evidence
- Research and Development in Instrumental Analysis for Forensic Science Applications

New Investigator Opportunities

NIJ is interested in funding new investigators in forensic science research as it pertains to NIJ's mission. Proposals whose principal investigators are defined as "new investigators" may, in appropriate circumstances, be given special consideration in award decisions.

To be considered a "new investigator" for purposes of this solicitation, one of the two sets of criteria below must be satisfied:

- The principal investigator must have, no earlier than April 1, 2007, received an initial appointment in the United States to a full-time junior faculty position at a university or to an equivalent full-time staff scientist position in a research institution; must at the time of application submission hold such a full-time appointment; and must never have received NIJ funding for a research project, other than a Graduate Research Fellowship program grant. (Typically, the appropriate faculty rank is that of Assistant Professor, although some institutions may use a different title to designate junior faculty status.)

- The principal investigator must be an established researcher who receives research funding originating from a federal science agency, but has not successfully competed for NIJ funding as a principal investigator or collaborative researcher in the last 10 years. The investigator must hold a full-time appointment in the United States to a faculty position at a university or an equivalent position as a scientist on the staff of a research institution at the time of application submission.

In the case of a grant application that involves more than one principal investigator, all principal investigators must meet the definition of "new investigator" in order for the application to be considered as one from a "new investigator."

Reading Resources:

Information on NIJ's research and development programs related to the forensic sciences (including previously funded projects) can be found at:

- www.dna.gov/research/.
- www.ojp.usdoj.gov/nij/topics/forensics/welcome.htm.

The following are examples of documents that may provide additional information to prospective applicants about forensic sciences.

- *Criminalistics, An Introduction to Forensic Science, 7th Edition*, by Saferstein, R. (Upper Saddle River, NJ: Prentice Hall, 1998) ISBN 0–13–592940–7.
- *Forensic Science Handbook, Volume I, 2nd Edition*, edited by Saferstein, R. (Englewood Cliffs, NJ: Prentice Hall, 2002) ISBN 0–13–091058–9.
- *Forensic Science Handbook, Volume II, 2nd Edition*, edited by Saferstein, R. (Englewood Cliffs, NJ: Prentice Hall, 2005) ISBN 0–13–112434–X.
- *Forensic Science Handbook, Volume III*, edited by Saferstein, R. (Englewood Cliffs, NJ: Prentice Hall, 1993) ISBN 0–13–325390–2.
- *Fundamentals of Forensic Science*, by Houck, M., Siegel, J. (Burlington, MA: Elsevier Academic Press, 2006) ISBN 0–12–356762–9.
- *Forensic Chemistry*, by Bell, S. (Upper Saddle River, NJ: Pearson Prentice Hall, 2006) ISBN 0–13–147835–4.
- *Forensic DNA Typing, Second Edition: Biology, Technology, and Genetics of STR Markers*, by Butler, J. (Burlington, MA: Elsevier Academic Press, 2005) ISBN 0–12–147952–8.
- *Fundamentals of Forensic DNA Typing*, by Butler, J. (San Diego, CA: Academic Press, 2009) ISBN 0–12–374999–4.
- *Forensic Pathology, Practical Aspects of Criminal & Forensic Investigations*, *2nd Edition*, by Di Maio, D., Di Maio, V. (Boca Raton, FL: CRC Press, 2001) ISBN 0–84–930072–X.
- *Spitz and Fisher's Medicolegal Investigation of Death: Guidelines for the Application of Pathology to Crime Investigation*, by Spitz, W., Spitz D., Fisher, R. (Springfield, IL: Charles C. Thomas Publisher, 2006) ISBN 0–398–07544–1.
- *Quantitative-Qualitative Friction Ridge Analysis: An Introduction to Basic and Advanced Ridgeology*, by Ashbaugh, D. (Boca Raton, FL: CRC Press, 1999) ISBN 0–8493–7007–8.
- *Handbook of Digital Forensics and Investigation*, by Casey, E. (London, UK: Elsevier Academic Press, 2010) ISBN 0–12–374267–4.
- *Digital Image Processing: An Algorithmic Introduction Using Java*, by Burger, W., Burge, M.J. (New York, NY: Springer Science+Business Media, LLC, 2008) ISBN 1–84628–379–6.
- *Principles of Forensic Toxicology: Revised and Updated, 2nd Edition*, by Levine, B. (Washington, DC: American Association for Clinical Chemistry, Inc., 2006) ISBN 1–59–425053–7.

- "Confirmation bias: A ubiquitous phenomenon in many guises," by Nickerson, R. S. *Review of General Psychology* 2(2):175–220.
- "The vision in 'blind' justice: Expert perception, judgment and visual cognition in forensic pattern recognition," by Dror, I. E. and Cole, S*. Psychonomic Bulletin and Review* 17(2):161–167.

Amount and length of awards: Total funding for this solicitation and the number of awards made will depend on the availability of funds, the quality of the applications, and other pertinent factors. **All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.** In fiscal year 2010, NIJ provided over $30 million in grants to fund research and development projects related to forensic science, including DNA. NIJ funding for an individual research or development project rarely exceeds $500,000 annually, though total funding for projects requiring multiple years to complete has exceeded $1 million in some cases. If feasible, NIJ recommends that applicants divide the proposed work into discrete phases, with each phase resulting in the delivery of a measurable deliverable. Applicants should try to structure the phases so that the funding required in any fiscal year will not exceed $500,000. Although NIJ cannot guarantee that subsequent phases, stages, or tasks will be funded, this approach will enable NIJ to fund the proposed work incrementally, depending on, among other things, the quality of the deliverable at the end of each phase, strategic priorities, and the availability of funds. However, applicants should not divide their work if it is not feasible to do so without impairing the technical and programmatic soundness of their approach. Note: Deliverables (e.g., technical reports) will be required at the end of each phase to enable NIJ to assess the progress of the work and assist NIJ in making reasoned determinations as to the suitability of funding the next phase of the work.

Applicants should be aware that the total period for an award ordinarily will not exceed 3 years. Award announcements are expected to be made by September 30, 2011. Applicants may wish to consider proposing project period start dates commencing on January 1, 2012.

Please note: All applicants under this solicitation must comply with Department of Justice regulations on confidentiality and human subjects' protection. See "Other Requirements for OJP Applications" at www.ojp.usdoj.gov/funding/other_requirements.htm.

What will not be funded:

1. Provision of training or direct service.
2. Proposals primarily to purchase equipment, materials, or supplies. (The budget may include these items if they are necessary to conduct basic research.)
3. Work that will be funded under another specific solicitation.
4. Proposals that do not contain a research component or do not respond to the specific goals of this solicitation.
5. Proposals addressing applied research in forensic science. Applicants proposing such studies may consider submitting applications to the planned FY 2011 solicitation entitled "Applied Research and Development in Forensic Science for Criminal Justice Purposes."
6. Proposals addressing both a basic research *and* a development component. Applicants should submit basic research studies only.

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2011 salary table for SES employees is available at http://www.opm.gov/oca/11tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Director of the National Institute of Justice. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match Requirement: See "Cofunding" under "What an Application Should Include" (below).

Performance Measures

To assist in fulfilling the Department's responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the "Data Grantee Provides" column so that OJP can calculate values for the "Performance Measures" column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
Gain knowledge and understanding of the forensic sciences for criminal justice purposes through basic scientific research.	1. Relevance to the needs of the field as measured by whether the grantee's substantive scope did not deviate from the funded proposal or any subsequent agency modifications to the scope. 2. Quality of the research as assessed by peer reviewers. 3. Quality of management as measured by whether significant interim project milestones were achieved, final deadlines were met, and costs remained within approved limits. 4. If applicable, number of NIJ final grant reports, NIJ research documents, and grantee research documents published.	1. A final report providing a comprehensive overview of the project and a detailed description of the project design, data, and methods; a full presentation of scientific findings; and a thorough discussion of the implications of the project findings for increasing the knowledge underlying forensic science disciplines intended for use in the criminal justice system. 2. Quarterly financial reports, semi-annual progress reports, and a final progress report. 3. If applicable, citation to report(s)/document(s)

Submission of performance measures data is not required for the application. Instead, applicants should discuss in their applications their proposed methods for collecting data for performance measures. Please refer to the section "What an Application Should Include" (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute "research" for purposes of applicable DOJ human subjects protections. However, project evaluations that are intended only to generate internal improvements to a program or service, or are conducted only to meet OJP's performance measure data reporting requirements, likely do not constitute "research." Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of human subjects protection for OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP "Other Requirements for OJP Applications" Web page

(www.ojp.usdoj.gov/funding/other_requirements.htm). Applicants whose proposals may involve a research or statistical component also should review the "Confidentiality" section on that Web page.

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding. Reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at www.fsrs.gov.

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System) number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point-of-contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity. Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR)

database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov.** Please use the following identifying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ–2011–2806.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, and resumes/curriculum vitae of key personnel will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
   The program narrative section of the application should not exceed 12 single-spaced pages in 12-point font with 1-inch margins, of which a minimum of 6 pages should be dedicated to the description of the project/program design and execution. If included in the main body of the program narrative, then tables, charts, figures, and other illustrations do count toward the 12-page limit for the narrative section. Abstract, table of contents, appendices, and government forms do not count toward the 12-page limit for the narrative section.

   If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

Program Narrative Guidelines:

a. **Title Page** (should include a list of Key Words/Phrases relevant to the proposed research).

b. **Project Abstract** (not counted against the 12-page program narrative limit and not to exceed 600 words).

c. **Table of Contents** (not counted against the 12-page program narrative limit).

d. **Main body.** The main body of the program narrative should describe the project in depth. The following sections should be included as part of the program narrative:
   - Statement of the Problem.
   - Project/Program Design and Execution (should account for a minimum of 6 pages of the main body of the narrative).
   - Capabilities/Competencies.
   - Impact/Outcomes, Evaluation and Dissemination.
   - Plan for Collecting the Data Required for This Solicitation's Performance Measures. **Note:** Submission of performance measures data is not required for the application. Performance measures are included as an alert that successful applicants will be required to submit specific data to NIJ as part of their reporting requirements. For the application, the applicant should indicate an understanding of these requirements and discuss how the applicant will gather the required data, should the applicant receive funding.

   Note: Within the above five sections, the narrative should address:
   - Purpose, goals, and objectives.
   - Review of relevant literature.
   - Implications of the basic scientific research for increasing the knowledge underlying forensic science disciplines intended for use in the criminal justice system.
   - Management plan and organization.

e. **Appendices** (not counted against the 12-page program narrative limit) include:
   - Bibliography/references.
   - Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study that are supplemental to such items included in the narrative (tables, charts, graphs, or other relevant illustrations essential for comprehension of the project/program design should be included in the main body of the narrative).
   - Supporting Data—Includes any preliminary data to support the investigator's ability to perform the work and/or proof of principle for the proposed research.
   - Curriculum vitae, resumes or biographical sketches of key personnel (Curriculum vitae, resumes or biographical sketches should be limited to no more than 2 pages per person).
   - Project timeline and research calendar with expected milestones.

- Research independence and integrity (see "Selection Criteria," below).
- Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).
- Privacy Certificate (for further guidance go to www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
- Documentation of "new investigator" status, if applicable.
- Other funding:
  - List of previous and current NIJ awards to applicant organization and investigator(s).
  - List of current and pending non-NIJ support for each investigator collaborating on this proposal.
  - List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- Letters of cooperation/support or administrative agreements from organizations collaborating in the project, memoranda of understanding (MOUs), or letters of intent to establish MOUs (if applicable).
- Other materials specified by the solicitation.

3. **Budget Detail Worksheet and Budget Narrative**

a. Budget Detail Worksheet

A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

b. Budget Narrative

The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)
   Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution** (if applicable)
   If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership should be included with the application. In those instances when an organization or consortium of tribes proposes to apply for a grant on behalf of a tribe or multiple specific tribes, then the application should include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in lieu of tribal resolutions.

6. **Additional Attachments**

   List of Entities Involved in the Project
   An application should include a standalone attachment entitled "List of Entities" that lists the names of all entities that will be involved in the work. This list should include, but is not limited to: the organizations at which the investigators are employed; academic institutions at which grant-funded researchers are employed or enrolled; organizations that may receive subawards or contracts; and any organization(s) named in letters of cooperation/support, administrative agreements from organizations collaborating in the project, MOUs, or letters of intent to establish MOUs.

7. **Other Standard Forms**
   Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

   a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds).

   b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded).

c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded).

d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds).

Selection Criteria

Applications that meet basic minimum requirements will be evaluated by peer reviewers using the following criteria.

Depending on the number of applications received, applications may be categorized into discrete groups for purposes of peer review and/or selection for award.

Statement of the Problem (Understanding of the problem and its importance)—5%

The proposal defines and demonstrates an understanding of the basic scientific problem.

1. Clarity of the description of the problem.
2. Strength of citations and other appropriate information to support the understanding of the problem.
3. Clarity of the description of how the scientific problem relates to a problem existing in forensic sciences as they relate to the criminal justice system.

Project/Program Design and Execution (Quality and technical merit)—50%

1. Awareness of the state of current research and identification of research gaps.
2. Soundness of methods and analytic and technical approach. (The overall strategy, methodology, and analyses should be well-reasoned and appropriate to accomplish the specific aims of the project.)
3. Feasibility of proposed project and strength of supporting data. (The proof-of-principle of the proposed basic scientific research should be established and supported by preliminary data presented in or referenced in the proposal. More innovative plans and/or plans with a higher potential for failure should be counterbalanced to manage the inherent risk (e.g., by firm theoretical basis; reasonable preliminary data, depending on the mechanism; the track record of the lead investigators; and an outstanding scientific and management plan.)
4. Practicality of the proposed timeline relative to the project design. (Are the timeline and milestones logical and realistic? Are milestones adequately developed and quantitative, to serve as effective guidance for assessment of progress by the investigators and NIJ?)
5. Awareness of pitfalls and feasibility of proposed actions to minimize and/or mitigate these. (Are key scientific and technical barriers and dependencies identified?)
6. Innovation and creativity (when appropriate). (To what extent does the proposed project suggest and explore creative, original, or potential transformative concepts?)

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—30%

1. Qualifications and experience of proposed staff. (Principal investigators (PIs) should have appropriate experience and training and should demonstrate an ongoing record of accomplishments that have advanced their field(s). If the project is collaborative or multi-PI, investigators should have complementary and integrated expertise.)
2. Qualifications of the PI(s). (The PI(s) should have a proven record of publishing in high-impact, peer-reviewed scientific journals.)
3. Demonstrated ability of proposed staff and organization to manage the effort.
4. Adequacy of the plan to manage the project, including how various tasks are subdivided and resources are used.
5. Strength of the scientific environment (e.g., institutional support, equipment and other physical resources, or collaborative arrangements) in which the work will be done and its contribution to the probability of success.

Impact/Outcomes, Evaluation and Dissemination (Relevance to increasing the scientific knowledge underlying forensic science disciplines intended for use in the criminal justice system)—15%

1. Potential for significant advances in scientific understanding of the problem.
2. Potential for significant advances in the physical, life, and cognitive science fields, with a broad impact on forensic sciences intended for use in the criminal justice system.
3. Well-defined plan for the grant recipient to disseminate results to appropriate audiences, including researchers, and, in line with NIJ's mission, forensic science researchers and practitioners in the criminal justice system. (Does the proposal include a clear description of how final research findings will be shared? Does the dissemination strategy include intentions to publish in high-impact, peer-reviewed scientific journals? Does the dissemination strategy include a plan to maximize the outreach to researchers and practitioners in the criminal justice system?)

Budget

Reviewers will consider and may comment on the following additional items in the context of scientific and technical merit.

1. Total cost of the project relative to the perceived benefit.
2. Appropriateness of the budget relative to the level of effort and proposed timeline.
3. Leveraging the existing scientific environment to conserve costs.

The budget criteria also will be considered by the program office.

Research Independence and Integrity

Regardless of a proposal's rating under the criteria outlined above, in order to receive funds, the applicant's proposal must demonstrate research independence, including appropriate safeguards to ensure research objectivity and integrity.

For purposes of this solicitation, research independence and integrity pertains only to ensuring that the design, conduct, or reporting of research funded by NIJ grants, cooperative agreements, or contracts will not be biased by any financial interest on the part of the investigators responsible for the research or on the part of the applicant.

In the appendix dealing with research independence and integrity, the applicant must explain the process and procedures that the applicant has put in place to identify and manage potential financial conflicts of interest on the part of its staff, consultants, and/or subrecipients. It must also identify any potential organizational financial conflicts of interest on the part of the applicant with regard to the proposed research. If the applicant believes that there are no potential organizational financial conflicts of interest, the applicant must provide a brief narrative explanation of why it believes that to be the case.

Where potential organizational financial conflicts of interest exist, in the appendix the applicant must identify the safeguards the applicant has put in place to address those conflicts of interest.

Considerations in evaluating research independence and integrity will include, but may not be limited to, the adequacy of the applicant's efforts to identify factors that could affect the objectivity/integrity of the proposed staff and/or the organization in carrying out the research, development, or evaluation activity; and the adequacy of the applicant's existing or proposed remedies to control any such factors.

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, "new investigator" status, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ, conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

All final award decisions will be made by the Director of the National Institute of Justice, who also may give consideration to factors including, but not limited to, underserved populations, geographic diversity, strategic priorities, past performance, "new investigator" status, and available funding when making awards.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds
- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006
- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If a proposal is funded, the award recipient will be required to submit several reports and other materials, including:

Final technical report: The final report should be a comprehensive overview of the project and should include a detailed description of the project design, data, and methods; a full presentation of scientific findings, placed in the context of existing literature; and a thorough discussion of the implications of the project findings for increasing the knowledge underlying forensic science disciplines intended for use in the criminal justice system. It must contain an abstract of no more than 600 words and an executive summary of 2,500 to 4,000 words.

A draft of the final technical report, abstract, and executive summary must be submitted 90 days before the end date of the grant. The draft final report will be peer reviewed upon submission. The reviews will be forwarded to the principal investigator with suggestions for revisions. The author must then submit the revised final report, abstract, and executive summary by the end date of the grant. The abstract, executive summary, and final report must be submitted in electronic format.

Interim reports: Grantees must submit quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Grantees should anticipate that semi-annual progress reports will be required to follow the non-budgetary components of the Research Performance Progress Report template/format. Future awards and fund drawdowns may be withheld if reports are delinquent.

Application Checklist

Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes

This application checklist has been created to assist in developing an application.

What an Application Should Include:

_____ Application for Federal Assistance (SF–424) (see page 12)
_____ Program Narrative (see page 12)
_____ Appendices to the Program Narrative: (see page 13)
- _____ Bibliography/references
- _____ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study
- _____ Supporting Data – this should include any preliminary data to support the investigator's ability to perform the work and/or proof of principle for the proposed research
- _____ Curriculum vitae, resumes or biographical sketches of key personnel
- _____ Project timeline and research calendar with expected milestones
- _____ Documentation of "new investigator" status, if applicable
- _____ Research independence and integrity
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ Other funding:
  - _____ List of previous and current NIJ awards to applicant organization and investigator(s).
  - _____ List of current and pending non-NIJ support for each investigator collaborating on this proposal.
  - _____ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- _____ Letters of cooperation/support or administrative agreements from organizations collaborating in the project, memoranda of understanding (MOUs), or letters of intent to establish MOUs (if applicable).

_____ Budget Detail Worksheet (see page 14)
_____ Budget Narrative (see page 14)
_____ Indirect Cost Rate Agreement (if applicable) (see page 15)
_____ Tribal Authorizing Resolution (if applicable) (see page 15)
_____ Program Narrative/Abstract Format: (see page 12)
- _____ Single-spaced
- _____ 12-point standard font
- _____ 1" standard margins
- _____ Narrative is 12 pages or less
- _____ Project/Program Design and Execution is at least 6 pages of the main body of the narrative

_____ Additional Attachments (see page 15)
- _____ List of Entities Involved in the Project

_____ Other Standard Forms as applicable (see page 15), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 18: FY 2011 Basic Research Awards

FY11 Recipient Name	Award Number	Award Amount
Ames Laboratory	IAA	$355,000
Auburn University	2011-DN-BX-K530	$484,819
Baylor College of Medicine	2011-DN-BX-K534	$581,213
City of New York, Office of Chief Medical Examiner	2011-DN-BX-K535	$696,879
Florida International University	2011-DN-BX-K531	$241,447
IsoForensics, Inc.	2011-DN-BX-K544	$342,606
Regents of the University of California	2011-DN-BX-K533	$151,150
Regents of the University of Colorado	2011-DN-BX-K543	$894,629
The University of Kansas Center for Research, Inc.	2011-DN-BX-K542	$587,597
University of Utah	2011-DN-BX-K532	$335,000**
University of Washington	2011-DN-BX-K541	$1,269,456
	TOTAL FUNDING	**$5,939,796**

**Note - The total amount of this award is $1,058,604, which includes $723,604 of supplemental funding that was carried over from FY 2010 COPS DNA/Forensics funds.

FY11 Recipient Name: Ames Laboratory
Award Number: IAA
Award Amount: $355,000
Abstract: As *New Investigators* we propose to investigate the underlying scientific basis for forensic analysis of fractured and torn surfaces, by employing the fundamentals from the field of fracture mechanics and the nature of the material behavior. This quantitative approach has the potential to enhance the ability of forensic scientists to capture, visualize and analyze fracture patterns, and possibly provide new methodologies for trace evidence. The project will employ spectral analysis of 3D fracture surface topography-measurements to associate or to differentiate fracture surfaces in the performance of physical comparisons. We will utilize an understanding of material failure mechanisms (developed in the field of fracture mechanics), with digital image analysis, to construct protocols for the association (or exclusion) of pairs of surfaces.

A material's fracture surface consists of 3-D features, with associated spatial frequency signatures, that are dictated by the material's intrinsic microstructure and external loading history. The topography of a fracture surface is dependent on the ratio of the local material resistance to fracture vs. the local stress state (i.e. load severity), and this relationship can be used to forensically compare fracture surfaces. The quantitative expression of complex microstructural details, combined with the quantitative characteristics of applied load, have the potential to provide quantitative *signatures* for fracture surfaces, expressed as distributions of the spatial sizes and orientations of the features of a fracture surface. These, then, can be used to support the discriminant analysis of fracture match, yielding a statistical expression of fracture match.

A 3D spectral analysis of fracture surface, based on the use of white light non-contact surface profilometers, will be evaluated to provide fracture surface measurements. The proposed analysis will be *self-calibrated* for fracture-feature-characteristics identification. This self-calibration should strengthen the methodology, and should expand its potential application across a broad range of fractured materials, with diverse textures and mechanical properties. Moreover, it would provide ease of use for forensic examiners, especially when a user-friendly interface with the analysis tools is developed.

The analytical protocol will be examined to access fracture-match threshold(s), reliability and uncertainty(ies) of measurement. Successful preliminary work supported by the USDOE Ames Laboratory-Midwest Forensic Resource Center suggests a two-year development. First phase, Year-1, a detailed validation study will be conducted on controlled laboratory samples from prey tool steel, with focus on analysis tool

assessment and improvements. Efforts will focus on morphological measurement practices, development of a mathematical framework for describing non-continuous fracture events, and establishment of measurement uncertainties. Second phase, Year-2, a broader range of materials class such as metals, glass and plastic fragments will serve as the subjects for further protocol applicability and evaluation. We will explore the role of environmental degradation effects (moisture, heat/cold and corrosives) on the topology of fracture surfaces, to ascertain the applicability of the technique to weathered specimens. Our forensic collaborator will examine the testing protocol to identify its shortfalls and possible improvements.

Assuming developmental success, the proposed technique may be utilized in; (i) Evaluating the 3D surface characterization for representative metal, glass and plastic fragments, (ii) analysis of fracture fragments or torn sections where a visual jig-saw match between fragments cannot be established, (iii) understanding the role of environmental deterioration of fracture surfaces, and (iv) possible expansion to address fibrous materials and torn taps. A detailed report with the scientific findings and implications will be generated, for forensic analysts' use of spectral analysis of 3D fracture surface topography-measurements to associate, or differentiate, metal, ceramic and plastic fracture surfaces. This research will be conducted in response to the NIJ's expressed need for knowledge underlying forensic science disciplines, and in collaboration with forensic scientists working in a forensic laboratory.

FY11 Recipient Name: Auburn University
Award Number: 2011-DN-BX-K530
Award Amount: $484,819
Abstract: This project will address issues of resolution and discriminatory capabilities in controlled substance analysis providing additional reliability and selectivity for forensic evidence and analytical data on new analytes of the piperazine class. A number of piperazine-containing compounds have appeared on the illicit drug market in recent years including N-benzylpiperazine (BzP), 1-(3-trifluoromethylphenyl)piperazine (3-TFMPP), 1-(3-chlorophenyl)piperazine (mCPP), 1-(3,4-methylenedioxybenzyl)piperazine (3,4- MDBP) and 1-(4-bromo-2,5-dimethoxybenzyl)piperazine (BrDMBP). While some of these piperazines are commercially available others are designer analogues that have been synthesized in clandestine labs.

Exploration and designer development in the piperazine drugs using models based on substituted amphetamines and related phenethylamines is likely to continue for many years. Current clandestine recipes/procedures used for amphetamine-type molecules

can be applied directly for piperazine synthesis. Thus, clandestine labs will not need to learn any new synthetic techniques. Restricting the availability of piperazine would require placing dozens of substances from commercial sources around the globe under federal control. Therefore, legal control of the key precursor substance, piperazine, will not prevent the further clandestine/designer exploration of this group of compounds. It could be argued that isomer differentiation is not necessary in forensic drug science because of the Controlled Substance Analog Act. However, the courts expect forensic drug chemistry to be able to identify a substance as an individual compound, not report it as an unknown member of a large group of isomeric substances. Furthermore, the forensic chemist must identify the compound in order to know if it falls under the Controlled Substance Analog Act. These circumstances all point to the strong need for a thorough and systematic investigation of the forensic chemistry of these substituted piperazines.

The broad objective of this research is to improve the specificity, selectivity and reliability of the analytical methods used to identify ring substituted benzylpiperazines, phenylpiperazines, benzoylpiperazines, phenethylpiperazines and related compounds. This improvement will come from methods which allow the forensic analyst to identify specific regioisomeric forms of substituted piperazines among many isomers of mass spectral equivalence. Mass spectrometry is the most common method of confirmation in forensic analysis. This project will provide methodology and analytical data to discriminate between those regioisomeric and isobaric molecules having the same molecular weight and major fragments of equivalent mass (i.e. identical mass spectra). Furthermore, this work will anticipate the future appearance of some designer piperazines and develop analytical reference data and analytical reference standards for these compounds.

The initial phase of this work is the organic synthesis of the regioisomeric piperazines and in this phase of the work more than 90 substituted piperazines of potential forensic interest will be evaluated. Complete chemical characterization, using tools common to forensic science labs such as MS and IR will be carried out on each of the compounds. The chromatographic retention properties for each series of isomers will be evaluated by gas and liquid chromatographic techniques on a variety of stationary phases. These studies will establish a structure-retention relationship for the regioisomers and isobaric piperazines on a number of chromatographic stationary phases.

The results of this project will significantly increase the forensic drug chemistry knowledge base for piperazine-type designer drugs. When compounds exist which produce the same mass spectrum (same MW and fragments of equivalent mass) as the drug of interest, the identification by GC-MS must be based entirely upon the ability of

the chromatographic system to resolve these substances. This project involves the synthesis and generation of complete analytical profiles as well as methods of differentiation for those regioisomeric and isobaric substances related to the aromatic ring substituted benzyl, phenyl, benzoyl, and phenethyl piperazines. The following application is a request for support to carry out this investigation.

FY11 Recipient Name: Baylor College of Medicine
Award Number: 2011-DN-BX-K534
Award Amount: $581,213
Abstract: Microbial forensics is an emerging field that presents enormous challenges for both the scientific and legal communities. Unlike human forensic analysis, microbial pathogens of humans represent a highly diverse set of organisms known to cause disease. Microbes have also developed a number of elaborate mechanisms for generating natural genetic diversity, including high mutation and recombination rates as well as the horizontal transfer of gene(s). One major goal of microbial forensics is to use this genetic diversity to identify the source of a pathogen used to commit a crime. While phylogenetic analysis of nucleotide variation within a small number of genes has been used in past forensic studies to assess relationships among pathogens, a large fraction of those genomes remain uncharacterized, ignoring useful information contained in the presence or absence of different genes and other structural variation. Additionally, complex evolutionary processes that generate variation in phylogenetic signal across genomes, such as lateral gene transfer, incomplete lineage sorting, recombination, and convergent selection, have not been accounted for in current forensic studies. Recent advances in next-generation sequencing (NGS) technologies and phylogenetic analysis of complete genomes (phylogenomics) have the potential to significantly alter the technological approaches used in characterizing case samples. This proposal seeks to expand our existing scientific work on HIV forensic studies by developing a robust 'pathogen toolkit' for source identification across a range of biological agents. We will do this by (*i*) gathering whole genome sequences from multiple isolates of forensically relevant pathogens, (*ii*) characterizing the overall genomic diversity of these isolates, and (*iii*) testing for the signatures of evolutionary processes usually ignored in phylogenetic forensics. Initially, we will fully sequence the genomes of HIV isolates already collected in the course of previous forensic work. Expanding beyond HIV, methods are also proposed to enrich for desired microbial isolates prior to sequence analysis as pathogens typically exist in complex mixtures. Comprehensive surveys to characterize the diversity of pathogens found naturally are proposed to better understand (*i*) the extent of natural genomic diversity determines the limits of pathogen source identification and (*ii*) the 'microbial background' within local geographic regions. This is important in providing unrelated control groups to assess the relatedness of case

samples. Appropriate controls safeguard against misinterpretation of the scientific evidence, which might lead to wrongful incrimination. Model microbial systems that will be characterized are *Salmonella* sp., *Vibrio cholerae*, and *Francisella tularensis*. Proposed studies will test for more complete evolutionary processes and identify situations in which simplistic analyses may be misleading. Our results will greatly extend the available data and statistical rigor of microbial forensic work with direct applications to the field of criminal justice.

FY11 Recipient Name: City of New York, Office of Chief Medical Examiner
Award Number: 2011-DN-BX-K535
Award Amount: $696,879
Abstract: Sudden unexplained deaths are one of the most vexing challenges facing medical examiners today. Even after a thorough autopsy, including toxicology, microbiology, review of clinical history and scene investigation, the cause of death often remains unknown. Such deaths, when unobserved, can leave medical examiners and law enforcement with difficult decisions. This is particularly true in the case of young children who are often found only in the presence of a caregiver, or when there are there are multiple child deaths in a family.

In recent years, advances in molecular genetics have begun to push back this shroud of uncertainty and shed light on the genetic contribution to sudden deaths. But even here, the number of known genes remains relatively small, accounting for only 10 to 15% of cases.

There are two major roadblocks impeding the discovery of new genes that may contribute to sudden unexplained deaths. The first is a lack of the large number of cases necessary to give statistical power to a genetic study. The second is the requirement for a thorough medicolegal investigation of every case before it can be included in a study. This latter point is crucial, since failure to exclude cases where the cause of death can clearly be attributed to other factors confounds results by mistakenly including a “normal” genome with the genomes of the affected population. These formidable obstacles can most readily be addressed in a metropolitan area where the population is large (and by necessity will have a significant number of cases), and where medical examiners are in training - learning and practicing the latest methods for evaluating pediatric deaths.

We believe that the New York City Office of Chief Medical Examiner is one such municipality. The NYC OCME is a nationally recognized training center for medical examiners, and is perhaps unique in having frozen tissue samples from several hundred

well-defined cases of sudden deaths. In addition, the Molecular Genetics Laboratory of NYC OCME now sequences selected exon from six genes known to be risk factors for sudden death as a routine part of forensic death investigations, and is, therefore, experienced in sequencing technology and interpretation.

In this application, we propose to sequence the entire coding regions of 52 candidate genes believed to be involved in sudden unexplained deaths in 200 samples, as well as sequence all identified variants in an additional 50 cases and 1,000 gender and ethnically matched controls. Data will be evaluated for new variants as well as combinations of variants that alone may not be disease causing, but in concert may predispose victims to sudden death. To achieve these goals, we propose to use the massive parallel sequencing technology available in next generation sequencing platforms.

We believe this application not only addresses this NIJ Solicitation for *"basic scientific research designed to increase the knowledge underlying forensic science disciplines intended for use in the criminal justice system,"* but also directly addresses the recent recommendations made by the National Research Council's report *Strengthening Forensic Science in the United States: A Path Forward*, which specifically stated – *"Investigations of unexplained sudden deaths, especially in young people and infants, would benefit from greater access to molecular diagnostics."*

FY11 Recipient Name: Florida International University
Award Number: 2011-DN-BX-K531
Award Amount: $241,447
Abstract: The recent development of the concept of chiral ion mobility spectrometry (CIMS) allows rapid separation and identification of enantiomers and other stereoisomers within seconds. Ion mobility spectrometry (IMS) is a widely accepted analytical method used in a variety of detection scenarios including trace detection of controlled substances. IMS is listed by SWGDRUG as a category B technique, in the same class of specificity as gas and liquid chromatography. However, IMS application in the forensic science laboratory has been limited because of its poor resolution compared to chromatographic and mass spectrometry techniques. We propose capitalizing on the recently completed development of a *commercial high resolution IMS* that will enable a CIMS to have *separation performance comparable to that obtained by chromatographic methods*. The high resolution CIMS will also include a unique sample introduction system that allows liquid samples to be directly analyzed. A combined Electrospray/Secondary Electrospray Ionization (ESI/SESI) source will be used, not only

to eliminate the traditional radioactive ion source normally employed in IMS, but also to allow introduction and detection of non-semivolatile controlled substances by ESICIMS. Most importantly, the CIMS system has the ability to separate stereoisomers of controlled substances, and then detect them in the form that is of interest. A total of 16 chiral drugs will be investigated representing a large number of illicit drugs and pharmaceutical preparations that are of current interest to forensic scientists. The Almirall research group already maintains an Excellims ESI high resolution chiral IMS system that is coupled to a quadrupole mass spectrometer and we propose to develop methods for high resolution separation of drugs by ESI-IMS with the already available instrumentation in the Almirall laboratory. This project will involve close collaboration between the FIU team of researchers, scientists at Excellims Inc., (the developer of the only commercial ESI-IMS and CIMS instrument) and the scientific staff of the drug analysis section of the Miami-Dade Police Department Forensic Services Bureau in Miami, FL. The aims of the project are 1) a fundamental investigation of the use of ESI-IMS-MS for the purpose of separation of controlled substances commonly encountered in the forensic laboratory and 2) research to improve the understanding of chiral separations in the gas phase using CIMS of compounds that are currently difficult or impossible to analyze by other methods. Preliminary results by the developer of the instrumentation and also in the Almirall laboratory suggest that chiral separation of drugs of abuse is attainable but the exact mechanism of action is still not well understood. The ESI-IMS-MS already installed in the Almirall laboratory will be used for the research requiring some fundamental experiments to optimize the ion chemistry in the IMS and to study the selection of the best chiral modifiers to be used in the gas-phase separations. The coupling of a SWGDRUG category B technique (IMS) with a category A3_ technique (MS) would provide an additional tool for forensic scientists for the fast (on the order of a few seconds) analysis of drugs using a high resolution separation and unambiguous identification of organic compounds. This tool will be useful for the identification of chiral drugs that require the enantiomer to be identified but also for drug analysis in general as ESI/SESI sample introduction would offer an alternative for the analysis of other drugs (such as GHB) that are thermally labile and do not survive the temperatures of a GC injector but would be amenable to ESI-IMS-MS analysis. Commercial ESI-CIMS-MS instruments are currently available in the ~ $ 165.k price range and are becoming less expensive.

FY11 Recipient Name: IsoForensics, Inc.
Award Number: 2011-DN-BX-K544
Award Amount: $342,606
Abstract: Recent critical advances in high resolution multi-collector inductively coupled plasma mass spectrometry (HR-MC-ICP-MS) technologies allow for increased

application of strontium isotope (87Sr/86Sr) analysis of human hair to determine an individual's travel histories and region-of-origin. It has been previously established that 87Sr/86Sr ratios of internal tissues (e.g., bones and teeth) relate to geography, however human hair differs from other Sr-containing human tissues in that hair it is primarily influenced by exogenous, rather than endogenous, Sr contributions. Each distinct Sr-source imparts a unique Sr isotope signature to hair that is of forensic use and each source has the potential to be an ideal forensic tool for law enforcement personnel to assist in the reconstruction of an individual's geographic-movement histories. Until very recently, technological limitation did not allow these two Sr-source signals to be separated. Here, we propose to analyze strontium isotope ratios of (a) 200+ in-house archived hair samples previously collected from throughout the United States and originating from regions with different soil strontium isotope ratio values and (b) new intra-city collections needed to differentiate exongenous from endogenous strontium contributions. We will measure the strontium isotope values to understand how hair 87Sr/86Sr values relate to geography. We will then build a geospatial model and map of hair 87Sr/86Sr values across the U.S. and develop mechanistic models to describe the exogenous Sr-signal incorporation to hair. In addition, all inhouse hair samples to be used in this study have been previously analyzed for hydrogen and oxygen isotope ratios. The proposed hair 87Sr/86Sr model/map will be combined with previously developed hair hydrogen and oxygen isotope models/maps to create a multi-proxy and high fidelity geo-location tool of forensic relevance. Applications of this product are diverse and include reconstructing travel histories of unidentified murder victims, reconstructing monthly movements of trans-nationals associated with crimes and having uncertain origins, and reconstructing the region-of-origin of exploited individuals transported across state and/or national boundaries.

FY11 Recipient Name: Regents of the University of California
Award Number: 2011-DN-BX-K533
Award Amount: $151,150
Abstract: This project investigates a method to obtain potentially probative information from human hair samples by analyzing their profiles of constituent proteins. Such information would increase the value of hair as evidence. While a thorough microscopic examination of hair provides valuable information, the search for more objective criteria by which to judge hair matches continues. Hair evidence is ordinarily supplemented by DNA evidence whenever possible, but in the great majority of cases only mitochondrial DNA from the shaft is available. Information from proteomic characterization is complementary to that from microscopic examination and DNA analysis. This project exploits recent advances in protein identification by mass spectrometry coupled with database searching. Previous and ongoing work has shown that mouse strains can be

distinguished by their pelage hair proteomes using a small number of sentinel proteins. Mouse strains provide homogenous populations to test the discrimination of analytical methods before addressing the generally highly heterogeneous human population; in this sense, an inbred mouse strain is equivalent to a single individual (with both sexes) from the human population. The hypothesis will be tested that the proteome of human hair shaft can distinguish among humans by comparing the proteomes of hair samples provided by subjects (20 total) from Caucasian, Korean and African ancestry. The hair will be trypsinized and the protein profiles will be determined by a shotgun approach. From the data, a small subset of sentinel proteins (5-10) will be chosen that are distinctive among the samples analyzed. In the second phase of the work, the samples will be reanalyzed by a targeted approach. For this purpose isotopically labeled sentinel proteins or proteotypic peptides from them will be used as internal standards for relative quantitation. The normalized profiles of proteotypic peptides from sentinel proteins will be compared to find whether individual donor profiles can be reliably distinguished. If the comparison of protein profiles gives promising results, future work can concentrate on increased sample sizes for determining the limits of discrimination in the population, increasing the method sensitivity, developing a processing protocol compatible with mitochondrial DNA extraction, optimizing the panel of sentinel proteins and extending the approach to hair from other anatomic sites.

FY11 Recipient Name: Regents of the University of Colorado
Award Number: 2011-DN-BX-K543
Award Amount: $894,629
Abstract: Elucidating the time since death and locating clandestine graves are crucial in many forensic cases, but can often be a challenge. Biotic signatures of corpse decomposition, such as chemicals or the succession of insects, are commonly used to determine the post-mortem interval and to detect gravesoil, but no method is successful under every scenario (Carter et al. 2008b). Therefore, the development of new forensic tools is important. Microbes are ubiquitous in the environment and they play a key role in regulating the speed of decomposition, but microbial communities are not currently utilized to their full potential as a forensic tool. Testing whether changes in microbial communities are predictable over the timeline of decomposition is crucial for assessing whether microbes can be used as a 'biological clock' to assess time since death. Large-scale surveys of microbial diversity have become possible only recently. Due to advances in culture-independent DNA methods and sequencing technologies, recent research has revealed that microbial communities are quantifiable and predictable across habitats such as the human mouth and skin (Costello et al. 2009) and soil (Lauber et al. 2009). Taking advantage of 16S (bacteria) and 18S (fungal) ribosomal gene sequencing and computational pipelines developed by PI Knight and Co-PI Fierer,

we aim to characterize the succession of bacterial and fungal communities during the decomposition of corpses, and to test whether corpse decomposition leads to distinct microbial signatures in grave-associated soils. The proposed experiments address two basic questions: Is the succession of microbial communities associated with corpse decomposition predictable and potentially useful for estimating the postmortem interval? And, do characteristic decomposer communities of bacteria and fungi measurably change the endogenous soil community, enabling detection of clandestine gravesites? We propose a three-phase research project coordinated by an interdisciplinary research team, which will bring together experts in high-throughput sequencing, microbiology, ecology, and forensics research. For phase 1, we propose an experiment to assess the succession of corpse and gravesoil communities on sterile and untreated soils. For phase 2, we propose an experiment across multiple soil types to assess the specificity of decomposer communities to the endogenous soil community. Finally, to determine the specificity of decomposer communities associated with mammalian taxa, we will survey pig and human-corpse associated gravesoils, which were sampled as part of previous studies by Co-PI's Carter and Vass. This basic research will assess the usefulness of tracking compositional changes in bacterial and fungal communities as a tool for forensic taphonomy.

FY11 Recipient Name: The University of Kansas Center for Research, Inc.
Award Number: 2011-DN-BX-K542
Award Amount: $587,597
Abstract: Methods of characterizing low copy number and degraded DNA samples with little or no amplification using single molecule biophysical techniques will be studied. Fluorescence and atomic force microscopy techniques for imaging single molecules are now widespread. Quantitative characterization of the number, length, size, and mobility are routinely applied to biological samples, and these same techniques can be applied to characterize forensic DNA samples. In particular, DNA samples containing only trace amounts of DNA or DNA degraded by age, radiation, or chemical erosion will be studied. Such samples are challenging to analyze due to the inherent limitations of PCR amplification. By adapting the sensitivity and specificity of single molecule techniques to forensic analysis, low copy number and degraded samples can be imaged with a minimum of manipulation and little or no amplification. Such technology will make a large impact by providing means of interrogating samples which are currently beyond the reach of existing technology.

To apply technologies originally developed for relatively pristine laboratory samples to forensics, specialized specialized protocols will be developed. Issues of sample purity will be addressed by characterizing the effectiveness of current purification protocols

and developing specialized protocols for the additional purification that may be necessary for single molecule investigations. Suitable methods of quantifying DNA markers will be determined. Possibilities include using florescence correlation spectroscopy, step-wise photodestruction of fluorophores, AFM imaging of lengths, and fluorescence localization experiments.

In addition, single molecule techniques may be used to complement existing protocols. For example, single molecule techniques excel at detecting heterogeneities and may be useful in characterizing mixtures. The ability to detect and measure small quantities can provide specific information about sample composition that investigators need to properly interpret the data. Finally, the basic science associated with this project can clarify how different contaminants inhibit PCR and will therefore suggest new protocols for sample treatment to make current molecular biology approaches more effective.

FY11 Recipient Name: University of Utah
Award Number: 2011-DN-BX-K532
Award Amount: $335,000
Abstract: A near epidemic of opioid-related deaths has surged over the past decade. While not the primary cause, a mitigating factor is drug interactions that increase the concentration of active opioid to higher concentrations than intended. This factor is not only involved in causation, but also must be considered in the forensic toxicology interpretation during investigation of cases. Three highly used, and all too often abused, opioids are methadone, buprenorphine and oxycodone. While some knowledge exists on certain drugs that cause drug interactions with these opioids, this is limited, and a major focus for methadone and buprenorphine has been with the antiretrovirals.

We have recently developed and validated sensitive liquid chromatographic-tandem mass spectrometric (LC-MS/MS) assays to study the in vitro metabolism of methadone, buprenorphine and oxycodone. To assist in increasing knowledge about opioid drug interactions we propose to test the hypothesis that in vitro inhibition of opioid metabolism can predict potential drug interactions. To test this hypothesis, we will use our LC-MS/MS assays to:

1. Each drug will first be tested at three different concentrations in human liver microsomes. This will be done with and without a 15-minute pre-incubation with the drug to test for metabolism-based inhibition.

And

2. Drugs showing ≥ 25% inhibition will be further tested using cDNA-expressed cytochrome P450s, or UDP glucuronosyltransferases relevant to the specific opioid.
    a. Those with no pre-incubation effect will be tested at eight concentrations to determine a 50% inhibitory concentration (IC50).
    b. Those with a pre-incubation effect will be tested at selected times and 4 concentrations using a primary and secondary incubation system to determine a concentration of inactivator required for half-maximal rate of inactivation at saturation (KI) and maximal rate of inactivation at saturation (kinact).

3. These data will then be compiled along with literature values for interactions to provide a relative ranking of interaction potential.

The results of these findings will be disseminated through presentations at the annual meeting of the Society of Forensic Toxicologists and through publication in peer-reviewed journals. In this manner we propose to add to the knowledge base concerning the basic science of drug interaction potentials for three highly used opioids. The PI, an NIJ new investigator, and his colleagues are aptly suited to carry out these studies.

FY11 Recipient Name: University of Washington
Award Number: 2011-DN-BX-K541
Award Amount: $1,269,456
Abstract: A group of experienced investigators at the University of Washington, the University of Auckland and ESR, the New Zealand government forensic agency, propose to continue their collaborative efforts to address population genetic issues in the interpretation of forensic DNA profiles. Although DNA typing has had a major beneficial effect on the criminal justice system in the United States, there are still issues where doubts are being raised about how best to quantify the evidential strength of matching profiles and to present that strength appropriately in court. The investigators have published many scientific papers and three textbooks and are well-positioned to consider the following topics:

Relatedness and Inbreeding Remains identification and familial searching are two of the activities that exploit the genetic nature of DNA profiles. Related individuals have similar profiles, although the current panels of forensic STR markers do not allow distinguishing among different classes or relatedness. The implications of adding lineage markers, more STR markers, or SNP markers will be explored. Tests of relatedness, as opposed to calculating likelihood ratios or specified degrees of relatedness will be developed.

Population Structure The interpretation of matching DNA profiles was improved by the "theta- correction" that allows for population structure, and the use of population-wide allele frequencies as surrogates for frequencies in a relevant sub-population. It is proposed to clarify the meaning of "theta" and to develop appropriate estimates to replace current ad-hoc assumed values. Use will be made of an extensive collection of published allele frequencies from around the world.

Lineage Markers Mitochondrial sequence and Y-chromosome STR data have the potential of improving relatedness inference, familial searching and the recovery of forensic profiles from de- graded samples. It is proposed to work further to remove current uncertainty on how to quantify the evidential strength of these lineage markers when the profiles of interest have not been seen in a database.

Mixtures As DNA typing technology becomes more sensitive, it is more likely that evidentiary samples contain DNA from multiple contributors. The investigators on this proposal were part of a Commission of the International Forensic Science Genetics group that recommended likelihood ratios, as opposed to "Random Man Not Excluded" calculations be used for mixtures. They now propose to conduct further theoretical and empirical studies to amplify that recommendation, especially for low template DNA typing.

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding to support forensic science education projects that will: (1) increase the number of no-cost educational opportunities for public crime laboratory personnel and practitioners in forensic science disciplines and provide forensic science training to other relevant criminal justice partners and professionals involved in treating victims of sexual assault, and (2) support targeted research of formal and informal forensic science training programs employed by the forensic science community at the State and local levels. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and justice, particularly at the State and local levels.

Solicitation: Forensic Science Training Delivery and Research Program

Eligibility

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with, States (including territories), units of local government (including federally-recognized Indian tribal governments as determined by the Secretary of the Interior), nonprofit and for-profit organizations (including tribal nonprofit and for-profit organizations), institutions of higher education (including tribal institutions of higher education), and certain qualified individuals. For-profit organizations must agree to forgo any profit or management fee. Foreign governments, foreign organizations, and foreign institutions of higher education are not eligible to apply.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 10.)

All applications are due by 11:59 p.m. eastern time on April 11, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact Brigid O'Brien, Program Manager, at 202–305–1983 or by e-mail to Brigid.O'Brien@usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2812

SL# 000949

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Forensic Science Training Delivery and Research Program
CFDA 16.560

Overview

With this solicitation, NIJ seeks proposals for forensic science education projects that will: (1) increase the number of no-cost educational opportunities for public crime laboratory personnel and practitioners in forensic science disciplines and provide forensic science training to other relevant criminal justice partners and professionals involved in treating victims of sexual assault, and (2) support targeted research of formal and informal forensic science training programs employed by the forensic science community at the State and local levels.

Authorizing Legislation: Title I of the Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202); Homeland Security Act of 2002 (section 232).

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on April 11, 2011. Please see the “How to Apply” section, page 10, for more details.

Eligibility

Please refer to the title page for eligibility under this program.

Program-Specific Information—Forensic Science Training Delivery and Research Program

Providing high-quality educational opportunities for forensic science practitioners continues to be a critical challenge. In order to increase the number of forensic science training opportunities available to the forensic science, law enforcement, medical, and legal communities, NIJ invested approximately $12 million in FY 2010. This funding supported the development and delivery of forensic science training projects and programs.

NIJ’s Forensic Science Training Delivery and Research Program supports proposals in two major tracks: “Delivery of Training” and “Targeted Research on Forensic Science Training Programs.” Proposals in both tracks should demonstrate awareness of previous NIJ awards, research on effective science education and workforce training, and contemporary scientific and training developments in forensic science disciplines. Applicants should review the selection criteria found on page 16 used in the evaluation of submitted proposals.

This solicitation seeks to accomplish two goals.

Track Number 1: To increase the number of no-cost educational opportunities for public crime laboratory personnel and practitioners in forensic science disciplines and provide forensic science training to other relevant criminal justice partners and professionals involved in treating victims of sexual assault.

NIJ seeks to fund the delivery of (1) courses leveraging existing forensic science training curricula or (2) courses developed under a previous NIJ award. Forensic disciplines supported by the program include, DNA, pattern evidence, trace evidence, digital evidence, and medicolegal death investigation. NIJ is particularly interested in trainings related to:

a. The identification, collection, preservation, and analysis of DNA evidence for law enforcement, forensic science professionals, correctional personnel, and court officers.

b. The identification, collection, preservation, analysis, and use of DNA evidence for medical personnel, victim service providers, forensic science practitioners, and other professionals involved in treating victims of sexual assault and sexual assault examination programs, including SANE (Sexual Assault Nurse Examiner), SAFE (Sexual Assault Forensic Examiner), and SART (Sexual Assault Response Team) programs.

All proposed curricula content must be in accordance with the appropriate Scientific Working Group (SWG), and/or discipline-specific national training guidelines or certification tests/competency exams (if applicable). Proposals may have either a national or regional training focus, but not a purely local or State one.

Projects should make clear the learning domain that will be explored (e.g., content, subject matter, topics, skills, practices) and make a research-based case for the potential success of the particular technological innovation or teaching methodology for promoting learning in this domain. Proposals should outline training deliverables and provide a detailed project timeline that describes various milestones throughout the award period. Data should be collected and analyzed to produce evidence of learning outcomes. The data collection strategy should be described.

Proposals should not include costs associated with further curricula development or modification. The budget should reflect low administrative costs. Training must be provided at no charge to participants. Costs associated with travel and lodging for the participants must be included in the budget. Proposals should also describe the cost of the training per student, which should be calculated by including all budget line items with the exception of student travel and expenses associated with certification exams or continuing education credits. Proposals should describe the location(s) of the training and how the location(s) will help ensure cost effectiveness and access to a geographically diverse group of forensic science practitioners.

Information on NIJ's Forensic Science Training Programs (including previously funded projects) can be found at:

- http://www.dna.gov/training/.
- http://www.ojp.usdoj.gov/nij/training/welcome.htm.
- http://www.ojp.usdoj.gov/nij/awards/welcome.htm.

Track Number 2: To support targeted research on formal and informal forensic science training programs employed by the forensic science community at the State and local levels.

NIJ seeks to fund targeted research on forensic science training programs employed by the forensic science community at the State and local levels and other topics that advance the knowledge base needed to make forensic science or SANE/SAFE/SART training programs more effective and more forward-looking.

Project proposals should pose a research question or outline of a topic of broad interest and importance to the forensic science or SANE/SAFE/SART community. Forensic science training content and context employed by the practitioner group (not degree-track academic programs) should be a central factor of any projects proposed. The project should describe how it builds upon previous research and scholarship on the issue. The application should describe the theoretical model and research methodology that will be used when conducting the research, gathering and analyzing data, and developing conclusions. The applicant should demonstrate in the proposal that the research methodology is appropriate to the topic and the research protocols are being followed. The application should describe how the results can inform practices in forensic science training at the State and local levels and how the community will learn about the results.

Some research initiatives may target specific forensic science practitioner groups and/or disciplines, while others may focus on crime laboratory, crime scene investigation, sexual assault forensic examination, and external training programs. NIJ is particularly interested in research focused on training and educating forensic science practitioners and professionals involved in treating victims of sexual assault. This training and education should be related to the identification, collection, preservation, and analysis of DNA evidence.

Proposals may include a wide range of training design features (e.g., apprenticeship model, innovative delivery mechanisms) and goals (e.g., standardized training, competency and proficiency, certification) that exist within and across specific forensic science disciplines, crime laboratory, and SANE/SAFE/SART workforce training initiatives. These examples are presented to illustrate that the solicitation permits a broad range of entry points, issues, and settings. NIJ encourages the field to engage these issues creatively in preparing proposals.

Projects must represent a true collaboration—reflected in the activities, the leadership, and the budget—between well-qualified researchers and crime laboratories. When appropriate, these collaborations may also include participants from universities, forensic science training providers, and other non-profit organizations. Proposals should make the roles of all team members (principal investigators, supporting investigators, advisors, and others) clear, state why the proposed team is an appropriate one, and describe what expertise each team member contributes. Teams should include members who have experience with the practitioners and environments being targeted and should note the experts within the forensic science disciplines. The applicant should describe the challenges associated with assessment and evaluation of training programs and the robustness and broader usability that they anticipate, and the application should note which team members will help with which assignments.

Additional examples of studies that NIJ is also particularly interested in include, but are not limited to, the following:

- Which training strategies have proven most effective in improving practitioner learning within the forensic science or SANE/SAFE/SART community? What impacts have strategies, such as on-site training, external training, conference workshops, and symposia, had on the effectiveness of forensic analysis, case/sample throughput, courtroom testimony, and/or case progression? What are the reasons for these impacts? What are the barriers for their success?
- Which components of training programs work (or don't work), with whom do they work, why, and under what circumstances?
- How is cyber learning (online training platforms and simulation training environments) employed by State and local forensic science practitioners? How do the practitioners learn? Is this an effective learning tool for the forensic science or SANE/SAFE/SART community? What are the barriers for its success?
- What new approaches may help determine the impact and usefulness of evaluations of forensic science training programs? Is there a way to adapt or apply evaluation methods used in other fields (e.g., organizational theory, public health, economics) to forensic science practitioner training and learning settings?
- What are the economic influences that affect training strategies for newly hired forensic scientists? Is there a way to measure and compare the economic impact of various training strategies (academies vs. mentor-in-lab models)?

Amount and length of awards: Total funding for this solicitation and the number of awards made will depend on the availability of funds, the quality of the applications, and other pertinent factors. **All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law. Please note that award announcements are typically made by October 1, 2011.** In FY 2010, approximately 13 percent of applications to NIJ's annual Forensic Science Training solicitation were funded. NIJ funding for an individual research or development project rarely exceeds $500,000 annually, though total funding for projects requiring multiple years to complete has exceeded $1 million in some cases. If feasible, NIJ recommends that applicants divide the proposed work into discrete phases, with each phase resulting in the delivery of a measurable deliverable. Applicants should try to structure the phases so that the funding required in any fiscal year will not exceed $500,000. Although NIJ cannot guarantee that subsequent phases, stages, or tasks will be funded, this approach will enable NIJ to fund the proposed work incrementally, depending on, among other things, the quality of the deliverable at the end of each phase, strategic priorities, and the availability of funds. However, applicants should not divide their work if it is not feasible to do so without impairing the technical and programmatic soundness of their approach. Note: Deliverables (e.g., technical reports, proof-of-concept demonstrations, prototypes, etc.) will be required at the end of each phase to enable NIJ to assess the progress of the work and assist NIJ in making reasoned determinations as to the suitability of funding the next phase of the work.

Applicants should be aware that the total period for an award ordinarily will not exceed 3 years.

Please note: All applicants under this solicitation must comply with Department of Justice regulations on confidentiality and human subjects' protection. See "Other Requirements for OJP Applications" at www.ojp.usdoj.gov/funding/other_requirements.htm.

Evaluation research (Track 2 proposals only): Within applications proposing evaluation research, funding priority will be given to experimental research designs that use random selection and assignment of participants to experimental and control conditions. When randomized designs are not feasible, priority will be given to quasi-experimental designs that include contemporary procedures such as Propensity Score Matching or Regression Discontinuity Design to address selection bias in evaluating outcomes and impacts.

Evaluations that also include measurements of program fidelity and implementation as part of a thorough process assessment are desirable. Measurements of program fidelity should be included as part of an assessment of program processes and operations to ensure that policies, programs, and technologies are implemented as designed. As one aspect of a comprehensive evaluation, assessments of program processes should include objective measurements and qualitative observations of programs as they are actually implemented and of services that are delivered. These may include assessment of such aspects as adherence to program content and protocol, quantity and duration, quality of delivery, and participant responsiveness.

Proposed evaluation research designs with multiple units of analysis and multiple measurements will also be given priority. Design aspects that contribute to the validity of results are necessary to effectively address issues of generalizability and representativeness of findings.

Finally, applications that include cost/benefit analysis will be given priority. NIJ views cost/benefit analysis as an effective way to communicate and disseminate findings from evaluation research.

What will not be funded:

1. Work that will be funded under another specific solicitation.
2. Proposals without a national or regional training focus.
3. Federal agency requests to develop training for Federal employees.
4. Proposals that request funding for:
    - Equipment or instrumentation that is not primarily for use in the project.
    - Replacement equipment or instrumentation that does not significantly improve instructional capability.
    - Vehicles, laboratory furnishings, or general utility items such as office equipment (including word-processing equipment), benches, tables, desks, chairs, storage cases, and routine supplies.
    - Maintenance equipment and maintenance or service contracts.
    - Modifying, constructing, or furnishing laboratories or other buildings.
    - Installing equipment or instrumentation.

5. Proposals to conduct casework.
6. Proposals that do not respond to the specific goals of this solicitation.
7. Evaluation proposals that do not contain a research component. Please review “Note on project evaluations” found on page 9**.**

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used

to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2011 salary table for SES employees is available at www.opm.gov/oca/11tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Assistant Attorney General (AAG) or OJP. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match Requirement: See "Cofunding" paragraph under "What an Application Should Include" (below).

Performance Measures

To assist in fulfilling the Department's responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the "Data Grantee Provides" column so that OJP can calculate values for the "Performance Measures" column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
1) To increase the number of no-cost training opportunities to forensic science and criminal justice practitioners. 2) To support targeted research of formal and informal forensic science training programs employed by the forensic science community at the State and local levels.	1. Relevance to the needs of the field as measured by whether the grantee's substantive scope did not deviate from the funded proposal or any subsequent agency modifications to the scope. 2. Quality of the training or research as assessed by peer reviewers. 3. Quality of management as measured by whether significant interim project milestones were achieved, final deadlines were met, and costs remained within approved limits. 4. If applicable, number of NIJ final grant reports, NIJ research documents, and grantee research documents published.	1. Track 1: A description of the relevant training provided to the forensic community and its effectiveness. The number of forensic science personnel successfully completing the developed/delivered training. The number of participants who felt the training was relevant to their needs. Track 2: A final report providing a comprehensive overview of the project and a detailed description of the project design, data, and methods; a full presentation of scientific findings; and a thorough discussion of the implications of the project findings for criminal justice practice and policy in the United States. 2. Quarterly financial reports, semi-annual progress reports, and a final progress report. 3. If applicable, each data set that was collected, acquired, or modified in conjunction with the project. 4. If applicable, citation to report(s)/document(s)

Submission of performance measures data is not required for the application. Instead, applicants should discuss in their applications their proposed methods for collecting data for performance measures. Please refer to the section "What an Application Should Include" (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute "research" for purposes of applicable DOJ human subjects protections. However, project evaluations that are intended only to generate internal improvements to a program or

service, or are conducted only to meet OJP's performance measure data reporting requirements, likely do not constitute "research." Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of human subjects protections for OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP "Other Requirements for OJP Applications" Web page (www.ojp.usdoj.gov/funding/other_requirements.htm). Applicants whose proposals may involve a research or statistical component also should review the "Confidentiality" section on that Web page.

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding. Reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at www.fsrs.gov.

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System)

number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point-of-contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity. Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov.** Please use the following identifying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ–2011–2812.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, and resumes/curriculum vitae of key personnel will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
   The program narrative section of the application should not exceed 15 single-spaced pages in 12-point standard font with 1-inch margins. If included in the main body of the

program narrative, then tables, charts, figures, and other illustrations do count toward the 15-page limit for the narrative section. Abstract, table of contents, appendices, and government forms do not count toward the 15-page limit for the narrative section. If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

Program Narrative Guidelines:

a. **Title Page** (should indicate if applying to Track 1 "Delivery of Training" or Track 2 "Targeted Research on Forensic Science Training Programs").

b. **Project Abstract** (not counted against the 15-page program narrative limit and not to exceed 600 words).

c. **Table of Contents and Figures** (not counted against the 15-page program narrative limit).

d. **Main body.** The main body of the program narrative should describe the project in depth. The following sections should be included as part of the program narrative:
    - Statement of the Problem.
    - Project/Program Design and Implementation.
    - Capabilities/Competencies.
    - Impact/Outcomes, Evaluation, and Dissemination.
    - Plan for Collecting the Data Required for This Solicitation's Performance Measures. **Note:** Submission of performance measures data is not required for the application. Performance measures are included as an alert that successful applicants will be required to submit specific data to NIJ as part of their reporting requirements. For the application, the applicant should indicate an understanding of these requirements and discuss how the applicant will gather the required data, should the applicant receive funding.

    Note: Within the above five sections, the narrative should address:
    - Purpose, goals, and objectives.
    - Review of relevant literature.
    - Implications for criminal justice policy and practice in the United States.
    - Management plan and organization.

f. **Appendices** (not counted against the 15-page program narrative limit) include:
    - Bibliography/references.
    - Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study.
    - Curriculum vitae, resumes or biographical sketches of key personnel (Curriculum vitae, resumes or biographical sketches should be limited to no more than 2 pages per key personnel).
    - Project timeline and research calendar with expected milestones.
    - Research independence and integrity (see "Selection Criteria," below).

- Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).
- Privacy Certificate (for further guidance go to www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
- Other funding:
  - List of previous and current NIJ awards to applicant organization and investigator(s).
  - List of current and pending non-NIJ support for each investigator collaborating on this proposal
- Letters of cooperation/support, administrative agreements from organizations collaborating in the project, Memoranda of Understanding (MOUs) or letters of intent to establish MOUs (if applicable).
- List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- Other materials specified by the solicitation.
- For Track 2 projects, Data Archiving Strategy (see descriptive paragraph below).

Data Archiving Strategy: NIJ requires that each data set resulting from funded research be submitted as a grant product or deliverable for archiving with the National Archive of Criminal Justice Data. (Data sets are to be submitted 90 days before the end of the project period.) Applicants for NIJ research grants are strongly encouraged to include a brief (one- or two-page) data archiving strategy, whenever applicable. For purposes of research replication and extension, the inclusion of only the final data set often prevents other researchers from replicating or extending the study because there are no original data, intermediate data, or documentation detailing how the data changed throughout the project. This data archiving strategy therefore should briefly describe the—

- Anticipated manipulations of original, intermediate, and final data sets (as applicable).
- Methods of documentation of such manipulations.
- Preparation of original, intermediate, and final data sets for archive submission.

The data archiving strategy should be submitted as an appendix to the application and will not count toward the 15-page limit. Please label this appendix "Data Archiving Strategy."

3. **Budget Detail Worksheet and Budget Narrative**

   a. **Budget Detail Worksheet**
   A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

b. Budget Narrative

The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)
Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution** (if applicable)
If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership should be included with the application. In those instances when an organization or consortium of tribes proposes to apply for a grant on behalf of a tribe or multiple specific tribes, then the application should include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in lieu of tribal resolutions.

6. **Other Standard Forms**
Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds).

b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded).

c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded).

d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds).

Selection Criteria

Applications that are complete and responsive to this solicitation will be evaluated for scientific and technical merit by an appropriate peer review group convened by the National Institute of Justice and in accordance with Office of Justice Programs peer review procedures, using the following review criteria:

Statement of the Problem (Understanding of the problem and its importance)—5%

1. Clarity of the description of the problem.
2. Demonstrated understanding of the training issues/gaps that exist in an identified forensic science field/discipline.
3. Strength of citations and other appropriate information to support the understanding of the problem and the expected contribution of the proposed training or research to the identified field of forensic science.
4. For Track 1 proposals, a list of existing training opportunities that are similar in scope to the proposed training.

Project/Program Design and Implementation (Quality and technical merit)—40%

1. Awareness of the state of current training programs, research on effective science education and workforce training, and contemporary scientific and training developments in forensic science disciplines.
2. Soundness of methods and analytic and technical approach. (The overall strategy, methodology, and analyses should be well-reasoned and appropriate to accomplish the specific aims of the project.)
3. Feasibility of proposed project and awareness of pitfalls.
4. Reality of the proposed timeline relative to the project design. (Are the timeline and milestones logical and realistic? Are milestones adequately developed and quantitative? Can they serve as effective guidance for assessment of progress by the investigators and the National Institute of Justice?)
5. Innovation and creativity (when appropriate). (Innovative projects are those that challenge and seek to shift training practices or current research by utilizing novel theoretical concepts, approaches or methodologies.)

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—15%

1. Qualifications and experience of proposed staff. Principal Investigators (PIs) should demonstrate an ongoing record of accomplishments in education, training, and forensic science. If the project is collaborative or multi-PI, investigators should have complementary and integrated expertise. For Track 1 projects, has the applicant identified the instructors for the training and are they qualified to deliver the material?
2. Experience and demonstrated ability of proposed staff and organization to manage all efforts related to the training (e.g., curricula delivery, travel logistics, administrative activities).
3. Has the applicant clearly explained the roles of **all** team members (PIs, instructors, support staff, contractors, advisors, and others)? Why is the proposed team an appropriate one? What expertise does each team member bring? Is each member's level of effort appropriate?
4. Does the team possess expertise in the forensic science discipline being targeted? What is the proposed learning environment (e.g., web-based training)? Which technologies are being investigated (e.g., web-based learning management system)? How will the team engage in data collection and analysis?

Budget—15%

1. Total cost of the project relative to the project's perceived benefit. (Track 1: Cost per student compared to the number of hours of training).
2. Appropriateness of the budget relative to the level of staffing and proposed deliverables.
3. Use of existing resources to conserve costs.
4. Consistency between the budget narrative and budget detail worksheet for budget line items and all proposed activities.

Impact/Outcomes, Evaluation and Dissemination (Relevance to policy and practice)—25%

1. Potential for significant advances in educational understanding of the problem. (How will successful completion of the aims change the training methods, strategies, or technologies employed by the forensic science field? How will a successful project address the identified problem or a critical barrier to progress in the field?)
2. Potential for significant advances in the field. (If the aims of the project are achieved, how will technical capability and/or forensic science practice be improved? What is the likelihood for the project to exert a sustained, powerful influence on the forensic science field(s) involved?)
3. Relevance for improving the policy and practice of criminal justice and related agencies in the United States and improving public safety, security, and quality of life.
4. Inclusion of a well-defined plan for the grant recipient to disseminate results to appropriate audiences, including practitioners, researchers, and policymakers. (The dissemination strategy should be consistent with the goals of the solicitation and proposed project. Additionally for Track 2, a strong dissemination plan will be detailed and will go beyond a basic confirmation that the findings will be presented at national/regional forensic science meetings or through NIJ work products. Does the proposal include a clear description of how final research data will be shared, or explain why data-sharing is not possible? Does the dissemination strategy include suggestions for print and electronic products NIJ might develop for practitioners and policymakers?)

Relevance of the project for policy and practice in the United States

Higher quality applications clearly explain the practical implications of the project. They connect technical expertise with criminal justice policy and practice. To ensure that the project has strong relevance for policy and practice, some researchers and technologists collaborate with practitioners and policymakers. The application may include letters showing support from practitioners, but they carry less weight than clear evidence of the applicant's understanding of how policymakers and practitioners can best use and benefit from the proposed work. While a partnership may affect State or local activities, it should also have broader implications for other communities nationwide.

Research Independence and Integrity (Track 2 proposals only)

Regardless of a proposal's rating under the criteria outlined above, in order to receive funds, the applicant's proposal must demonstrate research independence, including appropriate safeguards to ensure research objectivity and integrity.

For purposes of this solicitation, research independence and integrity pertains only to ensuring that the design, conduct, or reporting of research funded by NIJ grants, cooperative agreements, or contracts will not be biased by any financial interest on the part of the investigators responsible for the research or on the part of the applicant.

In the appendix dealing with research independence and integrity, the applicant must explain the process and procedures that the applicant has put in place to identify and manage potential financial conflicts of interest on the part of its staff, consultants, and/or subrecipients. It must also identify any potential organizational financial conflicts of interest on the part of the applicant with regard to the proposed research. If the applicant believes that there are no potential organizational financial conflicts of interest, the applicant must provide a brief narrative explanation of why it believes that to be the case.

Where potential organizational financial conflicts of interest exist, in the appendix the applicant must identify the safeguards the applicant has put in place to address those conflicts of interest.

Considerations in evaluating research independence and integrity will include, but may not be limited to, the adequacy of the applicant's efforts to identify factors that could affect the objectivity/integrity of the proposed staff and/or the organization in carrying out the research, development, or evaluation activity; and the adequacy of the applicant's existing or proposed remedies to control any such factors.

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible

applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ, conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

Final award decisions, which may be made by the Assistant Attorney General (AAG) or the Director of the National Institute of Justice, may also involve the consideration of factors including, but not limited to, underserved populations, geographic diversity, strategic priorities, past performance, as award decisions are made.

Additional Requirements

Applicants selected for awards should agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds
- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide

- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006
- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If a proposal is funded, the award recipient will be required to submit several reports and other materials, including:

Final reports:

Track 1: The recipient shall submit a final report no later than 90 days following the close of the original award period (or the expiration of any extension periods) documenting all relevant project activities during the entire period of support under the award. At a minimum, the report shall include: (1) a summary and assessment of the program carried out with the funds made available under the award, and (2) a description of the relevant training provided to the forensic community, the number of forensic science personnel successfully completing the developed/delivered training, and the number of forensic science personnel who reported that the training was relevant to their needs. The recipient shall ensure that all data and information necessary for the report is collected throughout the award period.

Track 2: The final technical report should be a comprehensive overview of the project and should include a detailed description of the project design, data, and methods; a full presentation of scientific findings, placed in the context of existing literature; a thorough discussion of the implications of the project findings for criminal justice practice and policy in the United States; etc. It must contain an abstract of no more than 600 words and an executive summary of 2,500 to 4,000 words.

A draft of the final report, abstract, and executive summary must be submitted 90 days before the end date of the grant. The draft final report will be peer reviewed upon submission. The reviews will be forwarded to the principal investigator with suggestions for revisions. The author must then submit the revised final report, abstract, and executive summary by the end date of the grant. The abstract, executive summary, and final report must be submitted in electronic format.

Interim reports: Grantees must submit quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Future awards and fund drawdowns may be withheld if reports are delinquent.

Data sets: For Track 2 projects, NIJ requires submission of all data sets (original, intermediate, and final) produced or collected for the funded project, and any artifact associated with the project data. Included with the final sets of data should be the plan outlined in the Data Archiving Strategy section of the proposal.

Application Checklist

Forensic Science Training Delivery and Research Program

This application checklist has been created to assist in developing an application.

What an Application Should Include:

_____ Application for Federal Assistance (SF–424) (see page 12)
_____ Program Narrative (see page 12)
_____ Appendices to the Program Narrative: (see page 13)
- _____ Bibliography/references
- _____ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study
- _____ Curriculum vitae, resumes or biographical sketches of key personnel
- _____ Project timeline and research calendar with expected milestones
- _____ Research independence and integrity
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ Other funding
- _____ Letters of cooperation/support or administrative agreements from organizations collaborating in the project (if applicable)
- _____ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable)
- _____ Data Archiving Strategy

_____ Budget Detail Worksheet (see page 14)
_____ Budget Narrative (see page 15)
_____ Indirect Cost Rate Agreement (if applicable) (see page 15)
_____ Tribal Authorizing Resolution (if applicable) (see page 15)
_____ Program Narrative/Abstract Format (see page 12)
- _____ Single-spaced
- _____ 12-point standard font
- _____ 1” standard margins
- _____ Narrative is 15 pages or less

_____ Other Standard Forms as applicable (see page 15), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 21: FY 2011 Forensic Science Training Awards

FY11 Recipient Name	Award Number	Award Amount
Bureau of Alcohol, Tobacco Firearms and Explosives (ATF)	2008-DN-R-122 (Mod 4)	*
California Department of Justice	2011-DN-BX-K565	$404,226
City of New York, Office of Chief Medical Examiner	2011-DN-BX-K570	$796,867
City of Oakland - Oakland Police Department	2011-MU-BX-K572	$342,963**
National Forensic Science Technology Center, Inc.	2011-DN-BX-K568	$350,000
National Forensic Science Technology Center, Inc.	2011-DN-BX-K571	$576,931
Odyssey Research Associates, Inc. DBA ATC-NY	2011-DN-BX-K573	$235,000
The University of Tennessee	2011-DN-BX-K567	$450,000
Virginia Center for Policing Innovation	2011-DN-BX-K566	$373,169
	TOTAL FUNDING	**$3,529,156**

* Note - The award to ATF was funded with $1,079,000 in FY2010 COPS DNA/Forensics carryover funds.

** Note - Total award was $514,444. FY 2011 SANE/SART funds in the amount of $171,481 were used for relevant portions of this award.

Attachment 22: FY 2011 Forensic Science Training Program Abstracts

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FY11 Recipient Name: Bureau of Alcohol, Tobacco Firearms and Explosives (ATF)
Award Number: 2008-DN-R-122 (Mod 4)
Award Amount: $1,079,000
Abstract: The National Firearms Examiner Academy (NFEA) provides training for apprentice/entry-level firearm and toolmark examiners from federal, state and local law enforcement agencies. The Academy curriculum is composed of the fundamentals of firearms and toolmark examinations and serves as a basis for the trainee, under supervision, to develop into a qualified firearm and toolmark examiner.

During the early 1990's ATF began a serious discussion regarding the feasibility of developing a nationally recognized training program for entry level Firearm and Toolmark examiners. As new ballistic technologies became available to support criminal investigations, two salient points became clear. It was evident that firearms-related violent crime was on the increase and only trained firearm and toolmark examiners are qualified to make ballistic comparisons. Second, there were, at the time, approximately 400 qualified firearm examiners in the United States. While crime labs across the country were dealing with imminent retirement of many in this pool they were also facing increased volumes of casework. This became an impediment to the amount of time a qualified senior examiner could devote to training an entry-level examiner or new hire.

Although a number of crime labs have developed in-house training programs for new examiners the majority of entry level personnel have learned from working alongside senior examiners. The usual accepted time frame for training a new hire to a level where they can independently perform examinations is two years. The NFEA provides trainees with their crucial first year of training through a standardized curriculum. In existence since 1999 the Academy has trained and graduated 101 examiners from thirty eight states.

The NFEA curriculum was developed in conjunction with the Association of Firearms and Toolmark Examiners (AFTE) and the content subjected to peer review by experts outside ATF. The applicability of the training provided to the students is continually monitored by the Academy Staff. Following completion of each of the 18 modules of instruction students complete written evaluations. The evaluations allow the staff to monitor whether the training is relevant to the students needs and / or adjust the content to address recent developments in the discipline.

FY11 Recipient Name: California Department of Justice
Award Number: 2011-DN-BX-K565
Award Amount: $404,226
Abstract: The California Criminalistics Institute (CCI) is requesting funding in the amount of $404,225.94 to deliver its Firearms and Toolmarks (FATME) Academy to members of public forensic laboratories in the western states without cost to the students or their agencies.

This application addresses the particular need for greater numbers of competent firearms and tool marks examiners in the forensic laboratories of the United States. In fact, CCI originally pursued the FATME Academy concept in response to the burgeoning need for new examiners to replace those who are retiring in the early decades of the 21st century and to address the need for additional staff in response to increasing laboratory workloads. CCI offered the first FATME Academy in 2004. The CCI FATME Academy was updated in 2006 and further expanded in 2009 with the aid of a National Institute of Justice (NIJ) award. This request seeks to continue this successful training program.

Although most of the training will be accomplished via the traditional methods of instructor-led classroom sessions and practical laboratory and field exercises, the training program will involve practical exercises that will be performed in the students' home laboratories. Webinar presentations and contacts will be used for delivery of some topics as well as to follow-up with individual students.

The CCI FATME Academy is an ongoing effort that will continue to fulfill the need for trained firearm and toolmark examiners. The program is economical, and affordable for most agencies.

FY11 Recipient Name: City of New York, Office of Chief Medical Examiner
Award Number: 2011-DN-BX-K570
Award Amount: $796,867
Abstract: Equity in the administration of justice rests on the consistent, accurate and reliable application of tools to investigate crime. Such application requires the collaboration of multiple disciplines and individuals, often with a wide variety of professional and academic training. A lapse in agency coordination, or the uneven application of proper techniques, can frustrate efforts to ensure accurate outcomes. Proper training, tight controls, and effective leadership within the forensic science community can guard against these outcomes.

The Forensic Sciences Training Program (FSTP) is specifically designed to take full advantage of all of NYC – OCME's resources: forensic investigators, pathologists, odontologists, DNA scientists, attorneys, criminalists, and forensic anthropologists. Our courses are taught by resident faculty who are expert practitioners in their respective disciplines. Moreover, facilities such as our crime scene reconstruction lab, our forensic biology laboratories, and our specialized mass fatality response equipment are all available to our trainees. This kind of exposure is unparalleled by the experience of students in more conventional classroom settings.

With 2011 funds, the FSTP will sustain our current training program while increasing the number of students and classes: two Bloodstain Pattern Analysis Courses, four Level I Courses, six Level II Courses, and the Forensic Anthropologist In Residence Fellowship Program, thus allowing the FSTP to train an additional 470 forensic professionals for the 2 year grant period.

Even as we continue to expand the current number of training sessions, we are actively exploring new courses to meet the needs of the Forensic community. Foremost among these are:

1) DNA Science, Applications and Evidence for the non-scientist
2) Investigation of sexual assault
3) Mass Fatality management for the ME/C

The FSTP will also be enhancing the web-based educational component of our training program, exploring the possibility of having lectures on-line prior to training on-site. We are now writing distance-learning class in advanced techniques in death scene investigation, and one refresher course for practitioners in the field.

FY11 Recipient Name: City of Oakland - Oakland Police Department
Award Number: 2011-MU-BX-K572
Award Amount: $342,963*
Abstract: *DNA Evidence for Investigators* is a course developed with input from DNA analysts, crime scene personnel, and police officers on how to train criminal investigators on effective DNA uses. Biological evidence has played a major role in solving cold cases, identifying missing persons or unknown individuals, and providing leads in homicide, sexual assault, and burglary cases. Crime scene investigators, criminal investigators, and district attorney investigators each play a vital role in the collection of biological evidence recovered in a criminal case. Often times these investigators relay the results of the laboratory examination to the district attorney. These different investigative units are often compartmentalized and the investigators are not aware of the upstream or downstream role biological evidence plays in the overall investigation. The purpose of this course is to teach investigators what, why, and how evidence is processed from various criminal incidences (i.e. homicides, sexual assaults, burglaries, robberies) and how to more effectively use laboratory analysis to further their investigation. This 24-hour interactive course addresses the role biological evidence plays in a criminal investigation from the crime scene to adjudication.

*The total funding for this award is $514,444, of which $342,963 was provided through DNA funds and the remainder of $171,481 was from SANE/SART funding.

FY11 Recipient Name: National Forensic Science Technology Center, Inc.
Award Number: 2011-DN-BX-K568
Award Amount: $350,000
Abstract: According to the National Association of Medical Examiners (NAME), only 400-500 full time forensic pathologists are practicing in the United States. Annually, more than 2.7 million people die in this country. In 2004, about 487,000 cases were accepted by medical examiner/coroner offices around the country. NAME estimates that more than 780 full-time forensic pathologists are needed to adequately investigate this number of cases.

To help address these challenges, NFSTC successfully delivered two *Forensic Science for Forensic Pathology Fellows* training sessions in 2008 and the nearly complete *Medicolegal Death Investigation Training* (2010-2011), which provided training for forensic pathology fellows, coroners and medicolegal death investigators.

In the National Academy of Sciences (NAS) report, *Strengthening Forensic Science in the United States: A Path Forward,* one of the recommendations included improving medicolegal death investigation. To accomplish this, the authors recommend enhancements to the existing system, including "…development of standardized best practices both in death investigation and in the performance of medicolegal autopsies."[1]

This training supports the NAS initiative by delivering the *Medicolegal Death Investigation Training Program* to medicolegal death investigators supporting State, local and tribal agencies. The course will be delivered online to 200 participants; up to 100 who successfully complete the online course will attend an onsite capstone session. Additionally, NFSTC will make available resources from the 2008 training sessions to reinforce knowledge gained during the training.
The goals of this project are to:

- Improve the expertise of medicolegal death investigators by providing knowledge of the scope and application of forensic sciences within the criminal justice system.
- Provide access to forensic science training to State, local and tribal medicolegal death investigators, including coroners and medical examiners
- Reduce the financial impacts providing training has on public agencies

Leveraging content and feedback from the Bureau of Justice Assistance pilot program, *Forensic Science for Forensic Pathology Fellows* (#2007-DD-BX-K072), and the *Medicolegal Death Investigation Training* (#2009-DN-BX-K197) currently being delivered by NFSTC to make these online and onsite curricula widely available. In 2010, the American Board of Medicolegal Death Investigators (ABMDI) approved this training

for continuing education units (CEU) for both online and onsite deliveries. With funding from NIJ for this project, NFSTC will meet the following objectives:

- Deliver and administer online training utilizing content from NFSTC's current *Medicolegal Death Investigation Training* and resources from the *Forensic Science for Forensic Pathology Fellows* pilot training program to approximately 200 participants
- Provide practical-based capstone training to up to 100 participants who have successfully completed the online course
- Provide up to 4,800 CEUs in forensic science disciplines to medicolegal death investigators

The benefits of this training include:

- Online training for up to an additional 200 medicolegal death investigation practitioners and onsite training for up to 100 medicolegal death investigators
- Post-program survey indicating the training was relevant to participant needs with a positive response goal of 90 percent
- Improved expertise in forensic science applications within the medicolegal death investigation community

The online course will be delivered via NFSTC's Online Learning System (NOLS). To ensure comprehension, self-assessment opportunities will be available throughout the course and knowledge assessments will be administered upon completion. The scenario-based capstone will be delivered at NFSTC's training facility. All participants earn certificates of completion for successfully completing the online training, as well as for successful completion of the onsite training. Recipients of the online certificate of completion or both online and onsite certificates of completion are eligible to apply for up to 32 CEUs through ABMDI.

[1] National Academy of Sciences. *Strengthening Forensic Science in the United States: A Path Forward,* The National Academies Press: Washington, DC, 2009; p 252.

FY11 Recipient Name: National Forensic Science Technology Center, Inc.
Award Number: 2011-DN-BX-K571
Award Amount: $576,931
Abstract: This proposal seeks funding to deliver an existing training program initially developed by the National Institute of Justice under Cooperative Agreement Awards 2007-IJ-CX-K233, 2008-DN-BX-K186 and 2010- DN-BX-K265. The original Pattern Evidence Training Program was developed by the National Forensic Science

Technology Center (NFSTC) in partnership with Ron Smith and Associates, Inc. (RS&A). The FY07- funded program offered instruction for fingerprint (both latent print and tenprint) and footwear/tire track examination. The *Latent Print Examiner Training Program* was delivered September 2008 through July 2009. Subsequent FY08 and FY10 supplemental funding made additional offerings of latent print training available. The FY08 training program began in October 2009 and concluded in June 2010; FY10 program delivery will be conducted September 2011 through July 2012. At that time, the combined trainings will have delivered more than 24,000 hours of latent print examination instruction to pattern evidence practitioners.

This project will enable NFSTC and RS&A to continue offering the *Latent Print Examiner Training Program* to approximately fifteen (15) additional practitioners, resulting in the delivery of up to 7,500 additional hours of pattern evidence instruction. The goals of the proposed training program are to:

- Provide access to forensic science training to State, local and tribal public crime laboratory forensic science practitioners, at no charge.
- Inform State, local and tribal criminal justice practitioners/policymakers on forensic science developments.
- Provide pattern evidence practitioners the opportunity to further their experiential development by offering a fully funded training program which helps meet professional development requirements.
- Increase the number of investigators who are prepared to meet certification requirements in latent print examination.

This training initiative will redeliver the existing *Latent Print Examiner Training Program* while leveraging trademarked curricula and program materials to meet the training needs of entry-level pattern evidence practitioners. This training solution will help reduce the impact of in-house training programs upon agency operations, saving organizations valuable funds and allowing them to focus on their core mission – investigating cases.

By securing funding from NIJ for this project, NFSTC can move forward to meet the following objectives:

- Deliver a comprehensive 11-course *Latent Print Examiner Training Program* utilizing content from NFSTC's FY07, FY08 and FY10 training programs.
- Provide a blended learning training approach that maximizes participant interaction while minimizing time away from their home agency.
- Provide over 7,500 hours of training in forensic science disciplines to pattern evidence practitioners.

The benefits of this comprehensive training program will be demonstrated by:

- Up to 15 latent print practitioners receiving a proven training program.
- A post-program survey report indicating the training was relevant to participant needs with a goal of 90 percent positive response rate.
- Improved expertise of forensic applications within the pattern evidence community.

The training program will be delivered in a blended learning format that combines instructor-led training with pre- and post-coursework activities delivered via NFSTC's Online Learning System (NOLS), a robust, easy to-use learning content management system that uses the latest web-based technology. The course sessions will be facilitated by subject matter experts provided by RS&A. To ensure comprehension, knowledge assessments will be administered upon completion of each course, and a comprehensive program assessment as well as a 3-part mock certification examination will be conducted during the final course session. All participants who successfully complete the program will earn a certificate of completion. Program hours earned meet the International Association for Identification (IAI) technical training requirement.

The combination of classroom training, online distance learning, and practical exercises, in conjunction with mentor-based training conducted at their home agency, will help to prepare trainees to successfully challenge the written certification examination provided by the IAI.

FY11 Recipient Name: Odyssey Research Associates, Inc. DBA ATC-NY
Award Number: 2011-DN-BX-K573
Award Amount: $235,000
Abstract: Digital forensic investigators encounter peer-to-peer (P2P) file sharing software on most of the machines they examine. This software is often used to download and distribute illicit material. These P2P programs, referred to as P2P clients, leave an abundance of evidence on a computer that allows an investigator to determine what occurred. Each P2P client logs different information, stores files in different locations, and has different default configuration options and different ways to override those options. An investigator must understand the subtleties of each of the particular clients, as well as the properties of the P2P network on which they run, in order to properly understand what the evidence shows.

ATC-NY developed a P2P Forensics Training course to instruct investigators on the use of our P2P forensic tool, P2P Marshal™ (the tool was developed under NIJ grant 2006-DN-BX-K-013). This training improves the investigator's understanding of the fundamentals of P2P and provides a chance to use P2P Marshal to automate the acquisition and analysis of evidence. With NIJ funding (2009-DN-BX-K211), we have offered ATC-NY's P2P Forensic Training 22 times and have trained 375 law enforcement personnel in 16 states. Our courses have received high marks on evaluation questionnaires and host organizations have invited us to return. With NIJ support, ATC-NY will make this training widely available to state and local investigators, at no cost to participants.

In the proposed year-long effort, we will hold a minimum of 12 one-day training classes, accommodating 20 to 45 students each. Our goal is to train approximately 300 students. We have been very successful securing training sites for our P2P Forensics Training in the past and have already received offers to host P2P Marshal training in several states.

FY11 Recipient Name: The University of Tennessee
Award Number: 2011-DN-BX-K567
Award Amount: $450,000
Abstract: In recent years, forensic investigation has become an increasingly integral component of the administration of justice. As technology has increased, so have the expectations that are placed on forensic practitioners. While crime scene investigators often attempt to maintain knowledge through forensic training, the forensic science system was recently described as "badly fragmented" and in need of overhaul in the National Research Council Committee on
Identifying the Needs of the Forensic Community's report *Strengthening Forensic Science in the*

United States: A Path Forward. This report is only one indication of the need for a comprehensive, interdisciplinary approach to crime scene investigation training that not only instills proper forensic theory and requires practical application but also provides resources to forensic practitioners that make them more effective within the criminal justice system.

Beginning in 2001, the University of Tennessee National Forensic Academy™ (NFA™) embarked on an unprecedented endeavor to create a knowledge- and evidence-based crime scene investigator training program to increase the capacity of forensic science practitioners and promote greater skills in forensic investigation techniques, approaches and use of technology.

The intent of the NFA is to increase the skills of the crime scene investigator in a practical, hands-on, knowledge-based interdisciplinary training environment in which participants learn the best practices and standards in collecting, preserving, packaging and submitting evidence. This is accomplished through 10 weeks of intense, in-residence training. To date, the cutting edge practical program has successfully trained more than 495 forensic practitioners from 47 states and the District of Columbia. The successes of the NFA cannot be overstated. In recognition of its significant contribution to forensic science, the NFA was awarded the August Vollmer Excellence in Forensic Science award by the International Association of Chiefs of Police.

In 2008, the NFA opened a new, state-of-the-art forensic training facility in Oak Ridge, Tenn. This new facility, which boasts an interactive classroom, a room for evidentiary photography, a bloodstain pattern analysis and forensic experimentation room, and a full teaching lab for latent evidence processing, was made possible by the University of Tennessee as well as private donations. Inside this building, training participants are exposed to both proven and emerging technologies and processes.

Despite this success, the overwhelming majority of crime scene investigators throughout the country do not have access to this training. This proposal is designed to leverage the tremendous resource of the infrastructure offered by the NFA in order to provide segments of the National Forensic Academy as stand-alone modules at host locations throughout the country.

Courses of instruction in forensic digital photography, crime scene mapping, bloodstain pattern analysis and shooting scene reconstruction will provide 9,600 hours of essential training and skill- building opportunities to crime scene investigators, detectives and forensic practitioners from across the country. These specialized courses are valuable to the forensic community, and will contribute to the practitioner's holistic understanding of the theory and practice of forensic investigation in a hands-on and practical way. Utilizing the existing curriculum currently offered in the 10 week program of the National Forensic Academy, this proposal will offer stand-alone 40-hour courses in the identified disciplines at host locations throughout the United States reaching 240 forensic practitioners who might otherwise be unable to receive this training.

FY11 Recipient Name: Virginia Center for Policing Innovation
Award Number: 2011-DN-BX-K566
Award Amount: $373,169
Abstract: Through an extraordinarily successful partnership, NIJ and the Virginia Center for Policing Innovation developed and delivered *Unsolved Cases: Cold Case Analysis Training for Law Enforcement and Prosecutors* (CCAT-LEP), a program designed to enhance the efforts of police investigators and prosecutors to successfully investigate and resolve cold cases. Through the 2007 award, VCPI trained 356 law enforcement professionals and prosecutors nationwide in classroom training and nearly 1,000 in an online initiative. However, there is still much work to be done. The demand for both the classroom and the online training is extensive.

CCAT-LEP, developed under award 2007-IJ-CXK026, addressed the ever present need for training law enforcement and prosecutors in cold case analysis. Forensic and DNA advanced technology and capabilities have allowed for immense gains in solving crimes, but have also complicated the processing of evidence at crime scenes and by virtue, have increased the potential of mishandling evidence and processes. Law enforcement is presented the initial opportunity for professional oversight or mishandling of forensic evidence when acting as first responders to a crime scene. Much of the available forensic training focus has been on the professional further along in the process such as forensic techs, scientists, medical examiners, etc. However, when an initial call to police is made and the patrol law enforcement officer is the first to respond, the training provided to the forensic techs, scientists, crime scene specialists, and

medical examiners, isn't realized. It's the responding law enforcement officer that needs to be trained.

The continuing need is best captured in these excerpts from letters received from regional course applicants under the 2007 award: *"Recently, my investigations unit has undertaken the responsibility of analyzing unsolved homicide cases from years past. These cases have proven to be challenging and difficult. I have no training in investigating a cold case homicide. It is for this reason that your training is necessary for my own development and the investigators I supervise."* and *"We are both long-time homicide detectives who have recently been assigned the task of developing a new cold case homicide unit... We can use all the help we can get."*

Like many critical training endeavors, one of the major concerns is accessibility. VCPI, in partnership with NIJ, successfully navigated this concern through regional placement of the four courses with all travel expenses covered for participants. VCPI received approximately 700 applications; nearly two-fold the number of seats available in the training programs. Those applications represent 41 states and nearly 300 agencies. VCPI is *still* fielding inquiries about additional CCAT-LEP courses.

Another concern is the *effective* development of technical knowledge and skills in course participants. CCAT-LEP is an existing and proven course with a demonstrated knowledge increase between participant pre and post test evaluations. CCAT-LEP utilized simulation technology, the Virtual Case File Simulator, to allow participants the opportunity to apply the tools and skills presented in the course to cold case scenarios.

Feedback on the original regional training events has been very positive. The courses received evaluation rankings of approximately 4.44 on a 5-point scale (5 being the highest score) for both the classroom and online courses. VCPI proposes to meet the continuing need for this training the continuation of *Unsolved Cases: Cold Case Analysis Training for Law Enforcement and Prosecutors* (CCAT-LEP). The funding provided in this award will allow for two additional regional CCAT-LEP courses, training an additional 200 in the classroom course and continuation of the no-cost online training program for an additional 1,000 online participants.

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding a Forensic Science Technology Center of Excellence (FTCOE) within the National Law Enforcement and Corrections Technology Center System (the "NLECTC System"). The FTCOE will provide testing, evaluation, technology assistance, and other services with regard to technologies intended for use by crime laboratories, forensic service providers (supporting criminal justice applications), law enforcement and other criminal justice agencies to combat crime. This program furthers the Department's mission by improving the safety and effectiveness of criminal justice technology and by providing better access to this technology for law enforcement and other criminal justice agencies.

Solicitation:
Forensic Science Technology Center of Excellence

Eligibility

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with, States (including territories), units of local government (including federally-recognized Indian tribal governments as determined by the Secretary of the Interior), nonprofit and for-profit organizations (including tribal nonprofit and for-profit organizations), institutions of higher education (including tribal institutions of higher education), and certain qualified individuals. For-profit organizations must agree to forgo any profit or management fee. Foreign governments, foreign organizations, and foreign institutions of higher education are not eligible to apply.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 9.)

All applications are due by 11:59 p.m. eastern time on April 4, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact Charles Heurich, Program Manager, at 202–616–9264 or by e-mail to Charles.Heurich@usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2807

SL# 000950

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Forensic Science Technology Center of Excellence
CFDA 16.560

Overview

With this solicitation, NIJ seeks proposals from qualified applicants to establish and operate a Forensic Science Technology Center of Excellence (FTCOE) to support its research, development, testing, and evaluation (RDT&E) process in all areas of forensic science. The FTCOE will support the NIJ RDT&E process by providing scientific and technical support to NIJ's research and development efforts; supporting the demonstration, transfer, and adoption of appropriate technology into practice by crime laboratories, forensic service providers, and law enforcement and other criminal justice agencies; assisting in the development and dissemination of technology guidelines and standards; providing technology assistance, information, and support to law enforcement and other appropriate criminal justice agencies; and providing access to resources for research, education, and outreach in the forensic science and criminal justice community.

Authorizing Legislation: Title I of the Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202); Homeland Security Act of 2002 (section 232).

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on April 4, 2011. Please see the "How to Apply" section, page 9, for more details.

Eligibility

Please refer to the title page for eligibility under this program.

Program-Specific Information—Forensic Science Technology Center of Excellence

NIJ, through its Office of Science and Technology (OST), is the national focal point for work on law enforcement technologies, including corrections, investigative, and forensic technologies, as well as technologies that support the judicial process. NIJ administers programs that improve the safety and effectiveness of these technologies, as well as criminal justice agency access to them. NIJ seeks applications to establish and operate, within the existing NLECTC System, a Forensic Science Technology Center of Excellence for all forensic science disciplines that support criminal justice.

The Centers of Excellence are the authoritative resource within the NLECTC System for both practitioners and developers in their technology area(s) of focus. Their primary role is to assist in the transition of law enforcement technology from the laboratory into practice by first adopters within the criminal justice community. To that end, applicants must be knowledgeable of both practitioner requirements and potential technology solutions, including those developed by NIJ and other sources. Each Center of Excellence must provide a high level of knowledge and skills necessary to support NIJ's RDT&E process in the relevant technology investment portfolio area.

Forensic Science is a multidisciplinary fields that incorporates the investigation, analysis, prevention, and prosecution of crime involving not only crimes against persons but also property crimes. It also involves the methods and tools for collecting, preserving, and examining evidence and the related educational/training programs that build capacity within criminal justice agencies to address forensic science and its use. The FTCOE will coordinate and facilitate all NIJ projects and programs in these fields in order to leverage resources and provide comprehensive forensic technology support to State and local criminal justice agencies. Through these efforts, the FTCOE will increase the capabilities of State and local law enforcement to effectively and professionally serve the public in matters involving forensic science and crime.

Ideally, the FTCOE will have established partnerships with agencies including, but not limited to, institutions of higher learning, agencies performing forensic science research, and public forensic science laboratories.

Note: For the purpose of this solicitation, higher education institutions are defined as colleges, universities, and community colleges which must be accredited by an appropriate accreditation organization. Proposals will be strengthened by partnering with institutions that have additionally obtained Forensic Science Education Programs Accreditation Commission (FEPAC) accreditation.

The FTCOE should designate a director who has the knowledge, skills, abilities, and vision to lead their team and should have an internal management structure capable of supporting the research, development, evaluation, education, and outreach missions of the FTCOE and the community.

The FTCOE and its partners will use their capabilities and expertise to develop and advance forensic science through, but not limited to, the following activities:

- **Identifying technology requirements.** The FTCOE will accomplish this primarily by hosting and supporting NIJ‘s Forensic Science Technology Working Group (TWG) activities.

  A Technology Working Group (TWG) is a practitioner-based committee of 25 to 30 experienced practitioners from local, State, tribal, and Federal agencies and laboratories associated with a particular NIJ technology investment portfolio, such as Biometrics. Each portfolio has a TWG, which identifies criminal justice technology needs within that portfolio. TWGs are hosted by the relevant Center of Excellence.

  TWG members participate in the peer-review panels that evaluate potential solutions to address practitioner needs. Agencies from which TWG members are drawn are routinely involved in testing and evaluating the resulting solutions. The TWGs, and through them

the criminal justice practitioner community, are embedded in the NIJ RDT&E process from beginning to end.

TWGs normally meet twice a year. A three-day meeting, exclusive of travel time, is representative. Venues will vary, but sites in the Washington, DC area are preferred.

In supporting these TWGs, the FTCOE will, in close coordination with the relevant NIJ program manager(s):

- Identify the key agencies, professional organizations, and individual practitioners that should participate in a particular TWG.
- Schedule TWG meetings.
- Develop meeting agendas.
- Secure a venue and required logistic services, including audiovisual support.
- Pay the travel and per diem expenses, but not the salaries, of the non-Federal participants.
- Moderate the meetings.
- Record and publish the proceedings.

The FTCOE will also be expected to conduct relevant, focused studies to support program development, and participate in relevant technical conferences and symposia. The FTCOE will provide general logistics in support of its TWG. The FTCOE is expected to capture and disseminate technology needs, including assessment metrics for each identified gap.

- **Supporting NIJ's research and development programs.** The FTCOE is expected to help NIJ program managers define program objectives, assess ongoing research and development projects, find relevant technology efforts for NIJ collaboration, and participate in national and regional groups that support the adoption of technology as needed.

- **Testing, evaluating, and demonstrating technologies.** The FTCOE will be expected to focus its efforts primarily on the demonstration of new technologies in field environments. Demonstrations must be designed to determine whether a technology meets all of the assessment criteria for a technology need area and develop guidelines for the adoption of the technology by other practitioners. To the greatest extent feasible, demonstrations should also be designed to determine criminal justice outcomes through evaluation research in collaboration with the NIJ program manager and with NIJ's Office of Research and Evaluation. Technology demonstrations may range from 2 hours to 12 months. Findings will be disseminated through reports, conferences, standards, and technology assistance activities.

- **Supporting the adoption of new technology.** The FTCOE's efforts will focus on facilitating the effective transfer into practice of new tools and technologies, including those funded by NIJ and others. Efforts are to include introducing new tools and technologies to the practitioner, introducing practitioner requirements to developers, and assisting developers in the commercialization of their products. Commercialization activities are to include providing feedback to technology developers in the criminal justice marketplace; describing criminal justice requirements and practices; providing opportunities for the demonstration of technologies; and presenting strategies for the

commercialization of developers' technologies. In this assistance to commercialization, the FTCOE is expected to play a vital role in providing practitioner agencies access to new technologies and improved capabilities. NIJ will not provide direct financial assistance to companies to commercialize products. NIJ may support pilot programs for first adopters of new technology, particularly for those that evaluate the effectiveness of a technology or develop best practices for the use of a technology.

- **Developing and/or updating technology guidelines.** The FTCOE's efforts will include the development of comprehensive guides for crime laboratories, forensic service practitioners, law enforcement, and other appropriate criminal justice practitioners that describe how to plan for, select, and implement technology solutions based on actual experience with application of the technology in practice as well as sound research and development and science. Topics for guides may be discussed with NIJ and initiated with its approval.

- **Providing technology assistance and support to criminal justice agencies on a national basis.** The FTCOE is expected to provide specialized technology assistance within its particular technology areas of responsibility. These efforts will focus on providing science and support to assist first-adopter law enforcement, crime laboratory, forensic service provider, corrections, and other criminal justice agencies with the use of new technologies or the adaptation of existing technologies to enhance their effectiveness, efficiency, and safety. The FTCOE will be expected to provide national expertise for the criminal justice community's ongoing efforts to continuously improve operations through the adoption of new tools and methods. (**Note:** The FTCOE will not fund or provide assistance to agencies that are adopting technologies that are well established in practice.) Appropriate assistance will be provided to all facets of the criminal justice community, including small and rural law enforcement, corrections, forensic service providers, school resource officers, or other State and local practitioner communities.

While the FTCOE will, to a certain extent, perform ongoing work related to responding to calls for assistance forwarded from the Regional Technology Centers, the FTCOE should expect that the majority of its work will be on projects specifically defined by NIJ in support of the specific technology investment portfolio areas. For this reason and others (such as the possibility of establishment, modification, or elimination of particular technology investment portfolios by NIJ; changes in the availability of funds; or the desire to capitalize on technology opportunities), applicants should expect that the level of effort may vary significantly during the project period (or from year to year, should supplemental funding be made available). The successful applicant therefore must demonstrate the ability to add or reduce capacity in relevant areas without adversely affecting the ability to provide services or incurring unacceptable additional costs. In this connection, NIJ is very interested in entertaining applications that propose to leverage existing programs, facilities, and personnel.

Amount and length of awards: NIJ anticipates that up to a total of $6,200,000 may become available for one (1) award made through this solicitation. **All NIJ awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.** NIJ expects to make one award for FY 2011, depending on funds available, the number of high-quality applications, and other pertinent factors. Subject to the availability of future funds, between $6 million and $9 million may be made available on an annual basis for a 12-month supplement to an award made from this solicitation. NIJ cannot

guarantee, however, that any such supplements will be funded. Such additional funding depends on, among other things, NIJ resources, strategic priorities, and satisfactory completion of each phase, stage, or task.

Applicants should be aware that the total period of an award, including one that receives additional funding, ordinarily will not exceed 3 years.

Please note: All applicants under this solicitation must comply with Department of Justice regulations on confidentiality and human subjects' protection. See "Other Requirements for OJP Applications" at www.ojp.usdoj.gov/funding/other_requirements.htm.

What will not be funded:

1. Proposals primarily to purchase equipment, materials, or supplies. (The budget may include these items if they are necessary to conduct applied research, development, demonstration, evaluation, or analysis.)
2. Work that will be funded under another specific solicitation.
3. Proposals that do not respond to the specific goals of this solicitation.
4. Applications that do not demonstrate the capability to perform the work proposed.
5. Applications to provide general technology assistance on a regional basis or to rural law enforcement agencies. This work will be supported within the existing structure of the NLECTC System.
6. Applications that propose the execution of research and development.

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2011 salary table for SES employees is available at www.opm.gov/oca/11tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Assistant Attorney General of the Office of Justice Programs. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match Requirement: See "Cofunding" paragraph under "What an Application Should Include" (below).

Performance Measures

To assist in fulfilling the Department's responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the "Data Grantee Provides" column so that OJP can calculate values for the "Performance Measures" column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
To facilitate the adoption of new forensic tools and technologies into practice by appropriate criminal justice agencies through testing, evaluation, and the provision of technology assistance	1. Quality of the research/work performed as assessed by a peer review process involving relevant technical and practitioner experts and the appropriate NIJ program manager(s). 2. Quality of the management as measured by whether significant interim project milestones were achieved, final deadlines were met, and costs remained within approved limits. 3. If applicable, number of NIJ final grant reports, NIJ research documents, and grantee research documents published. 4. If applicable, number of evaluated technologies.	1. Individual project reports responding to the requirements of a specific project detailing the FTCOE's activities including; the number of research, testing, and evaluation, and demonstration activities conducted; the number of technologies successfully adopted into service; the number of technology guides published; and the number of calls for assistance responded to. 2. Quarterly financial reports, semi-annual progress reports, and a final technical progress report providing a comprehensive overview of the FTCOE's activities during the period of performance. 3. If applicable, citation to report(s)/document(s) 4. If applicable, description of evaluated technologies

Submission of performance measures data is not required for the application. Instead, applicants should discuss in their applications their proposed methods for collecting data for performance measures. Please refer to the section "What an Application Should Include" (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute "research" for purposes of applicable DOJ human subjects protections. However, project evaluations that are intended only to generate internal improvements to a program or service, or are conducted only to meet OJP's performance measure data reporting requirements, likely do not constitute "research." Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of human subjects protections for OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP "Other Requirements for OJP Applications" Web page (www.ojp.usdoj.gov/funding/other_requirements.htm). Applicants whose proposals may involve a research or statistical component also should review the "Confidentiality" section on that Web page.

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding. Reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at www.fsrs.gov.

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System) number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point-of-contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity. Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov.** Please use the following identifying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ–2011–2807.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, and resumes/curriculum vitae of key personnel will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of

applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
The program narrative section of the application should not exceed 25 double-spaced pages in 12-point font with 1-inch margins. Abstract, table of contents, charts, figures, appendices, and government forms do not count toward the 25 page limit for the narrative section and should be attached separately.

If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

Program Narrative Guidelines:

a. **Title Page**

b. **Project Abstract** (not counted against the 25-page program narrative limit and not to exceed 600 words).

c. **Table of Contents and Figures** (not counted against the 25-page program narrative limit).

d. **Main body.** The main body of the program narrative should describe the project in depth. The following sections should be included as part of the program narrative:
    - Statement of the Problem.
    - Project/Program Design and Implementation.
    - Capabilities/Competencies.
    - Impact/Outcomes and Evaluation.
    - Plan for Collecting the Data Required for This Solicitation's Performance Measures. **Note:** Submission of performance measures data is not required for the application. Performance measures are included as an alert that successful applicants will be required to submit specific data to NIJ as part of their reporting requirements. For the application, the applicant should indicate an understanding of these requirements and discuss how the applicant will gather the required data, should the applicant receive funding.
    - Dissemination Strategy.

Note: Within the above six sections, the narrative should address:
    - Purpose, goals, and objectives.
    - Review of relevant literature.
    - Implications for criminal justice policy and practice in the United States.
    - Management plan and organization.

f. **Appendices** (not counted against the 25-page program narrative limit) include:
    - Bibliography/references.
    - Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the projects.

- Curriculum vitae, resumes or biographical sketches of key personnel.
- Project timelines and calendar with expected milestones.
- Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).
- Privacy Certificate (for further guidance go to www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
- List of previous and current NIJ awards to applicant organization.
- Letters of cooperation/support or administrative agreements from organizations collaborating in the project, (if applicable).
- List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- Other materials specified by the solicitation.

3. **Budget Detail Worksheet and Budget Narrative**

   a. Budget Detail Worksheet
   A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

   For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

   b. Budget Narrative
   The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

   Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)
   Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ

is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution** (if applicable)
   If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership should be included with the application. In those instances when an organization or consortium of tribes proposes to apply for a grant on behalf of a tribe or multiple specific tribes, then the application should include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in lieu of tribal resolutions.

6. **Additional Attachments**
   Please provide the following:

   - Provide an organizational chart of the FTCOE and all proposed partners.
   - Provide a narrative supporting each organizational chart.
   - Provide two short (3 to 4 pages each) Technology Transition Workshop proposals demonstrating the knowledge base of the applicant.

7. **Other Standard Forms**
   Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

   a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds).

   b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded).

   c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded).

   d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds).

Selection Criteria

Statement of the Problem (Understanding of the problem and its importance)—5%

Project/Program Design and Implementation (Quality and technical merit)—25%

1. Understanding of the unique challenges of criminal justice agencies and the role of forensic technology in meeting those challenges and actions to investigate these challenges.
2. Relevance of the proposed work to accomplishing the objectives of this solicitation.
3. Soundness of the approach to accomplishing the proposed work.
4. Innovation and creativity (when appropriate).

Note: Strong proposals will clearly explain how each of the solicitations goals/objectives will be accomplished by the applicant.

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—25%

1. Qualifications and experience of proposed staff with regard to specific project objectives.
2. Demonstrated ability of proposed staff and organization to manage the effort.
3. Adequacy of the plan to manage the project, including how various tasks are subdivided and resources are used.
4. Successful past performance on NIJ grants and contracts (when applicable).

Budget—20%

1. Total cost of the project relative to the perceived benefit.
2. Appropriateness of the budget relative to the level of effort.
3. Use of existing resources to conserve costs.

Impact/Outcomes and Evaluation (Relevance to policy and practice)—20%

1. Potential for significant advances/impact in scientific or technical understanding of the problem.
2. Potential for significant advances/impact in the field.
3. Relevance for improving the policy and practice of criminal justice and related agencies in the United States and improving public safety, security, and quality of life.
4. Affordability and cost-effectiveness of proposed products, when applicable (e.g., purchase price and maintenance costs for a new technology or cost of training to use the technology).
5 Perceived potential for commercialization and/or implementation of a new technology.

Relevance of the project for policy and practice in the United States

Higher quality applications clearly explain the practical implications of the project. They connect technical expertise with criminal justice policy and practice. To ensure that the project has strong relevance for policy and practice, some researchers and technologists collaborate with practitioners and policymakers. The application may include letters showing support from practitioners, but they carry less weight than clear evidence of the applicant's understanding of how policymakers and practitioners can best use and benefit from the

proposed work. While a partnership may affect State or local activities, it should also have broader implications for other communities nationwide.

Dissemination Strategy—5%

1. Well-defined plan for the grant recipient to disseminate results to appropriate audiences, including researchers, practitioners, and policymakers.
2. Suggestions for print and electronic products that NIJ should consider developing for practitioners and policymakers.
3. Affordability and cost-effectiveness of proposed end products, when applicable (e.g., purchase price and maintenance costs for a new technology or cost of training to use the technology).
4. Perceived potential for commercialization and/or implementation of a new technology (when applicable).

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ, conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

Absent explicit statutory authorization or written delegation of authority to the contrary, all final grant award decisions will be made by the Assistant Attorney General (AAG), who may also give consideration to factors including, but not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding when making awards.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information

pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds
- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006
- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If the proposal is funded, the award recipient will be required to submit several reports and other materials, including quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Future awards and fund drawdowns may be withheld if reports are delinquent.

Application Checklist

Forensic Science Technology Center of Excellence

This application checklist has been created to assist in developing an application.

What an Application Should Include:

_____ Application for Federal Assistance (SF–424) (see page 11)
_____ Program Narrative (see page 12)
_____ Appendices to the Program Narrative: (see page 12)
- _____ Bibliography/references
- _____ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the projects
- _____ Curriculum vitae, resumes or biographical sketches of key personnel
- _____ Project timelines and calendar with expected milestones
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ List of previous and current NIJ awards to applicant organization.
- _____ Letters of cooperation/support or administrative agreements from organizations collaborating in the project (if applicable)
- _____ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable)

_____ Budget Detail Worksheet (see page 13)
_____ Budget Narrative (see page 13)
_____ Indirect Cost Rate Agreement (if applicable) (see page 13)
_____ Tribal Authorizing Resolution (if applicable) (see page 14)
_____ Program Narrative/Abstract Format: (see page 12)
- _____ Double-spaced
- _____ 12-point standard font
- _____ 1” standard margins
- _____ Narrative is 25 pages or less

_____ Additional Attachments (see page 14)
- _____ Organizational chart of the FTCOE and all proposed partners.
- _____ Narrative supporting each organizational chart.
- _____ Two short (3 to 4 pages each) Technology Transition Workshop proposals demonstrating the knowledge base of the applicant.

_____ Other Standard Forms as applicable (see page 14), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 24: FY 2011 Forensic Science Technology Center of Excellence Grant Award

FY11 Recipient Name	Award Number	Award Amount
Research Triangle Institute International	2011-DN-BX-K564	$5,994,631
	TOTAL FUNDING	**$5,994,631**

** Note - Total award amount included $1,494,631 in FY 2010 COPS DNA/Forensics carryover funds

Attachment 25: FY 2011 Forensic Science Technology Center of Excellence Abstract

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FY11 Recipient Name: Research Triangle Institute International
Award Number: 2011-DN-BX-K564
Award Amount: $5,994,631
Abstract: RTI International (RTI) and its FEPAC-accredited partners—the University of North Texas Health Science Center Department of Forensic and Investigative Genetics and the Center for Human Identification (UNT), Duquesne University Center for Forensic Science and Law (Duquesne), and Virginia Commonwealth University Department of Forensic Science (VCU)—are pleased to submit this proposal to the National Institute of Justice in response to the Forensic Science Technology Center of Excellence (FTCOE) solicitation. This proposed FTCOE partnership brings an array of capabilities and resources, including 1) expertise across all forensic disciplines, 2) infrastructure that includes laboratory sciences, criminal justice operations, Web-based training, data collection, project management, research and evaluation, and technology assessment, 3) national exposure and outreach capabilities, 4) over 40 years of technology-transfer support for government, university, and commercial entities, and 5) more than 50 years of successfully managing contracts with the technical and business infrastructure needed to operate a center of excellence.

Dr. Michael Baylor, Co-Director of RTI's Center for Forensic Sciences, will lead the FTCOE partnership and brings over 35 years of experience in Forensic Toxicology, including serving as a Laboratory Director in both federal and commercial laboratories. Senior scientists from each partnering organization with expertise in disciplines ranging from forensic sciences to criminology to technology assessment will provide leadership for each FTCOE task. These individuals include leading experts from Duquesne (Dr. Frederick Fochtman), VCU (Dr. Michelle Peace), and UNT (Dr. Arthur Eisenberg). The FTCOE partnership has also secured support from professional organizations, including NAME, ASCLD, and IACME, and from leading experts in the forensic science community.

Through close collaboration with NIJ, the FTCOE partnership will leverage its strengths, capabilities, and resources to not only successfully operate the FTCOE, but also to expand its impact to meet the changing needs of the criminal justice system with respect to forensic science technology. The RTI-led team has a vision for the FTCOE that directly builds off the challenges and recommendations presented in the 2009 NRC report, *Strengthening Forensic Science in the United States: A Path Forward*. We believe that the FTCOE has an opportunity to contribute to improvements in the field by 1) serving as a trusted partner for the criminal justice community and for NIJ, 2) raising the level of functioning of forensic science in the criminal justice community, 3) quickly identifying the changing needs and capabilities of the criminal justice community with respect to the forensic sciences, 4) bridging the disconnect between criminal justice practitioners and the available technology, and 5) preventing "unproven" technologies from being used in the field and presented in court.

The FTCOE partnership will fully meet all tasks and objectives put forward by NIJ, including: 1) determining technology needs, 2) developing technology program plans to

address those needs, 3) developing solutions, 4) demonstrating, testing, evaluating, and adopting potential solutions into practice, 5) developing and updating technology guidelines, and 6) building capacity and conducting outreach. We will fulfill these tasks by enhancing long-standing FTCOE activities such as the operations of TWG meetings, but also by implementing new strategies to make the FTCOE more effective. Examples include conducting gap analyses to identify technology needs, improving dissemination and support mechanisms to help the end user, and providing effective in-person technology-transition workshop content that will be accessible to individuals online. The FTCOE partners will also leverage the experience and infrastructure associated with RTI's existing Web-based training program as a foundation for training and outreach proven to reach thousands of stakeholders, both domestically and internationally. Furthermore, the research capabilities of the partners can help ensure that technologies are effectively evaluated and that meaningful recommendations are disseminated to the field.

NOTICE

NamUs Solicitation Changes:

The closing date for this solicitation has been changed from **March 4, 2011 to April 4, 2011.**

Also, the following section has been inserted on page 5.

Important Note:

All applications to the NamUs solicitation should include in-house or contract system developer support for any NamUs system development or NamUs system upgrades that may be needed during the period of performance.

The NamUs system is currently supported utilizing: Cisco ASA 5505 Firewall, Redhat, Ruby on Rails, My SQL, Apache, as well as the internet.

Please see: http://www.ojp.usdoj.gov/nij/funding/2011/namus-faqs.htm for Frequently Asked Questions and additional NamUs solicitation information.

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding under the National Missing and Unidentified Persons System (NamUs) Program. NamUs responds to the need to assist State and local law enforcement, medical examiners and coroners, allied professionals, and the general public with resolving missing and unidentified persons cases. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and justice, particularly at the State and local levels.

Solicitation: National Missing and Unidentified Persons System (NamUs)

Eligibility

Eligible applicants include States (including territories), units of local government (including federally recognized Indian tribal governments as determined by the Secretary of the Interior), nonprofit organizations (including tribal nonprofit organizations), and institutions of higher education (including tribal institutions of higher education) to manage the National Missing and Unidentified Persons System.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 8.)

All applications are due by 11:59 p.m. eastern time on April 4, 2011. (See "Deadlines: Registration and Application," page 3.)

Note: A Teleconference call for applicants and prospective applicants will be held on January 19, 2011, at 1:00 p.m. eastern standard time. The telephone numbers to participate are 202–353–0880 in the Washington, D.C., metropolitan area or the toll-free number 1–800–521–6079. The pass code to join the teleconference is 1561.

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact Charles Heurich, Program Manager, at 202–616–9264 or by e-mail to Charles.Heurich@usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2809

SL# 000951

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National Missing and Unidentified Persons System (NamUs)
CFDA 16.560

Overview

With this solicitation, NIJ seeks applications for funding for the National Missing and Unidentified Persons System (NamUs) Program. This program furthers the Department's mission by responding to the need to assist State and local law enforcement, medical examiners and coroners, allied professionals, and the general public with resolving missing and unidentified persons cases.

Currently in the United States, thousands of people are searching for those who are missing. NamUs was developed to provide national assistance in this search, for those living and deceased, in hopes of resolving these cases. NIJ seeks proposals from eligible candidates to partner with NIJ to administer and manage NamUs, support ongoing NamUs programs, continue national outreach efforts, provide national assistance, and oversee the forensic services provided through NamUs.

Authorizing Legislation: Title I of the Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202); Homeland Security Act of 2002 (section 232).

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on April 4, 2011. Please see the "How to Apply" section, page 8, for more details.

Note: A Teleconference call for applicants and prospective applicants will be held on January 19, 2011, at 1:00 p.m. eastern standard time. The telephone numbers to participate are 202–353–0880 in the Washington, D.C., metropolitan area or the toll-free number 1–800–521–6079. The pass code to join the teleconference is 1561.

Eligibility

Please refer to the title page for eligibility under this program.

Program-Specific Information—National Missing and Unidentified Persons System (NamUs)

Background

NamUs was created to respond to an overwhelming need for a central reporting system for unidentified human remains cases. In the Spring of 2005, NIJ assembled Federal, State, and local law enforcement officials, medical examiners and coroners, forensic scientists, key

policymakers, and victim advocates for a national strategy meeting in Philadelphia called the "Identifying the Missing Summit." Shortly after this Summit, the work to develop NamUs began.

NamUs is the first national online repository for missing persons and unidentified dead cases. NamUs brings together two distinct data bases—the Unidentified Decedent System and the Missing Persons System—to provide a powerful tool for creating matches between them. NamUs is searchable and accessible by everyone including the general public, the law enforcement community, medical examiners and coroners, victim advocates, and others. NamUs can be used to search and track cases, print missing persons posters, find resources, and even map out travel routes in an effort to locate a missing person. Both systems provide access to free DNA testing and forensic services such as anthropologists and odontologists to allied professionals (e.g., law enforcement agencies, medical examiners, coroners, and the general public as appropriate).

In 2009 NamUs became a fully searchable system. NamUs will now search cases in the missing persons database against cases in the unidentified decedents database in an effort to identify unidentified human remains and solve missing persons cases.

A census by the Bureau of Justice Statistics (BJS) demonstrated the magnitude of the number of unidentified decedents nationwide. A Special Report, entitled *Medical Examiners and Coroners' Offices, 2004* (available at bjs.ojp.usdoj.gov/content/pub/pdf/meco04.pdf) stated that over 4,000 unidentified human decedents are reported each year by medical examiners and coroners, and of those, an estimated 1,000 remain unidentified 1 year later and become "cold cases." As of 2004, almost 13,500 unidentified human decedents were on record. The true number may actually be higher, as this census did not include unidentified human remains that are stored in other locations, such as law enforcement agencies. Experts refer to this national crisis as a "mass disaster over time" ("Missing Persons and Unidentified Remains: The Nation's Silent Mass Disaster." *NIJ Journal No. 256*. January 2007). (Also see the BJS Fact Sheet *Unidentified Human Remains in the United States, 1980–2004,* available at bjs.ojp.usdoj.gov/content/pub/pdf/uhrus04.pdf.)

More detailed information about NamUs and the missing and unidentified persons databases can be viewed at www.namus.gov and www.namus.gov/about.htm.

Goals, Objectives, and Deliverables

NIJ is seeking applicants to manage the NamUs program and provide the following tasks:

(1) Assist stakeholders within the missing persons and/or unidentified human remains communities by entering data, locating data, and upgrading existing data in the NamUs system in support of the efforts of States and units of local government to identify missing persons and unidentified remains.

(2) Provide forensic services to eligible stakeholders, including but not limited to: acquisition and analysis of DNA, coordination/collection of family reference samples, anthropological and odontological review and evaluation, and fingerprint examination.

(3) When appropriate, have the resulting DNA profiles entered into the FBI's National DNA Index System using the Combined DNA Index System (CODIS) version 6.0.

(4) Provide ongoing day-to-day management by overseeing the NamUs system, its personnel, and the overall program.

(5) Provide quality assurance and quality control over the NamUs system data.

(6) Develop and sustain national outreach and training efforts by:
   a. Coordinating training and outreach presentations at national and regional conferences.
   b. Making contacts within the law enforcement, medical examiners, and coroners communities to increase user awareness.

(7) Track and analyze quantitative matrices to demonstrate the national impact of NamUs by providing summaries of the collected analytics.

(8) Work closely with NIJ to further expand the offerings that NamUs can provide by working in partnership with NIJ to expand applications as NamUs continues to mature and expand.

(9) Work closely with the Federal Bureau of Investigation's Criminal Justice Information Services unit (CJIS). Through an Interagency Agreement, CJIS has agreed to house and maintain the information technology (IT) portion of NamUs. The details of this agreement have not yet been finalized.

Important Note:

All applications to the NamUs solicitation should include in-house or contract system developer support for any NamUs system development or NamUs system upgrades that may be needed during the period of performance.

The NamUs system is currently supported utilizing: Cisco ASA 5505 Firewall, Redhat, Ruby on Rails, My SQL, Apache, as well as the internet.

Please see: http://www.ojp.usdoj.gov/nij/funding/2011/namus-faqs.htm for Frequently Asked Questions and additional NamUs solicitation information.

Amount and length of awards: NIJ anticipates that up to a total of $2,500,000 may become available for one (1) award made through this solicitation. **All NIJ awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.** NIJ expects to make one award for FY 2011, depending on funds available, the number of high-quality applications, and other pertinent factors. Subject to the availability of future funds, between $2 million and $3 million may be made available on an annual basis for a 12-month supplement to an award made from this solicitation. NIJ cannot guarantee, however, that any such supplements will be funded. Such additional funding depends on, among other things, NIJ resources, strategic priorities, and satisfactory completion of each phase, stage, or task associated with the award.

Applicants should be aware that the total period of an award, including one that receives additional funding, ordinarily will not exceed 3 years.

Please note: All applicants under this solicitation must comply with Department of Justice regulations on confidentiality and human subjects' protection. See "Other Requirements for OJP Applications" at www.ojp.usdoj.gov/funding/other_requirements.htm.

What will not be funded:

Proposals primarily to purchase equipment, materials, or supplies. (The budget may include these items if they are necessary to manage the program.

1. Work that will be funded under another specific solicitation.
2. Vehicles.
3. Construction.
4. Renovation.
5. Rental costs for space.

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2011 salary table for SES employees is available at www.opm.gov/oca/11tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Assistant Attorney General of the Office of Justice Programs. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match Requirement: See "Cofunding" paragraph under "What An Application Should Include" (below).

Performance Measures

To assist in fulfilling the Department's responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the "Data Grantee Provides" column so that OJP can calculate values for the "Performance Measures" column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
To manage NamUs in partnership with NIJ to identify, review, and enter missing and unidentified persons cases into the NamUs system with relevant stakeholders; to maximize the use of forensic services to assist in solving these cases; and to provide national outreach to maximize potential user awareness.	1. Percent increase in the number of missing and unidentified persons cases entered into the NamUs system. 2. Percent increase in the number of users registered in the NamUs system. 3. Percent of cases where forensic service information (anthropology, dental, DNA, and fingerprints) was entered into the system. 4. Percent increase in the number of DNA profiles and/or family reference samples entered into CODIS 6.0. 5. Percent of cases resolved by use of the NamUs system.	1a. The number of new missing persons cases entered into NamUs. 1b. Number of existing missing persons cases in NamUs. 1c. The number of new unidentified persons cases entered into NamUs. 1d. Number of existing unidentified persons cases in NamUs. 2a. Number of new users registered in the NamUs system. 2b. Number of users currently registered in the NamUs system. 3a. The number of cases where forensic service information (anthropology, dental, DNA, and fingerprints) was utilized and entered into the NamUs system. 3b. Number of cases currently entered into the system. 4a. The number of new DNA profiles and/or family reference samples entered into CODIS 6.0. 4b. Number of cases currently entered into CODIS 6.0. 5a. The number of cases resolved due to NamUs assistance. 5b. Number of cases reviewed.

Submission of performance measures data is not required for the application. Instead, applicants should discuss in their applications their proposed methods for collecting data for performance measures. Please refer to the section “What an Application Should Include” (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute “research” for purposes of applicable DOJ human subjects protections. However, project evaluations that are intended only to generate internal improvements to a program or service, or are conducted only to meet OJP’s performance measure data reporting requirements, likely do not constitute “research.” Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of human subjects protections for OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP "Other Requirements for OJP Applications" Web page (www.ojp.usdoj.gov/funding/other_requirements.htm). Applicants whose proposals may involve a research or statistical component also should review the "Confidentiality" section on that Web page.

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding. Reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at www.fsrs.gov.

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System) number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point-of-contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity.

Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov.** Please use the following identifying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ–2011–2809.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical

difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, and resumes/curriculum vitae of key personnel will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
   The program narrative section of the application should not exceed 25 double-spaced pages in 12-point font with 1-inch margins. Abstract, table of contents, charts, figures, appendices, and government forms do not count toward the 25-page limit for the narrative section.

   If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

Program Narrative Guidelines:

a. **Title Page**

b. **Project Abstract** (not counted against the 25-page program narrative limit and not to exceed 600 words).

c. **Table of Contents and Figures** (not counted against the 25-page program narrative limit).

d. **Main body.** The main body of the program narrative should describe the project in depth. The following sections should be included as part of the program narrative:
   - Statement of the Problem.
   - Project/Program Design and Implementation.
   - Capabilities/Competencies.
   - Impact/Outcomes and Evaluation.
   - Plan for Collecting the Data Required for This Solicitation's Performance Measures. **Note:** Submission of performance measures data is not required for the application. Performance measures are included as an alert that successful applicants will be required to submit specific data to NIJ as part of their reporting requirements. For the application, the applicant should indicate an understanding of these requirements and discuss how the applicant will gather the required data, should the applicant receive funding.
   - Dissemination Strategy.

   Note: Within the above six sections, the narrative should address:
   - Purpose, goals, and objectives.
   - Review of relevant literature.
   - Implications for criminal justice policy and practice in the United States.
   - Management plan and organization.

e. **Appendices** (not counted against the 25-page program narrative limit) include:
   - Bibliography/references.
   - Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed project.
   - Curriculum vitae, resumes or biographical sketches of key personnel.
   - Project timeline and calendar with expected milestones.
   - Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).
   - Privacy Certificate (for further guidance go to www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
   - List of previous and current NIJ awards to applicant organization.
   - Letters of cooperation/support or administrative agreements from organizations collaborating in the project, (if applicable).

- List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- Other materials specified by the solicitation.

3. **Budget Detail Worksheet and Budget Narrative**

   a. Budget Detail Worksheet
   A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

   For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

   b. Budget Narrative
   The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

   Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)
   Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution** (if applicable)
   If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership should be included with the application. In those instances when an organization or consortium of tribes proposes to

apply for a grant on behalf of a tribe or multiple specific tribes, then the application should include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in lieu of tribal resolutions.

6. **Additional Attachments**
   Provide an organizational chart illustrating the structure of key personnel and other NamUs project support personnel.

   Provide a narrative of the roles and responsibilities of the personnel included in the organizational chart as outlined above.

7. **Other Standard Forms**
   Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

   a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds).

   b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded).

   c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded).

   d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds).

Selection Criteria

Statement of the Problem (Understanding of the problem and its importance)—10%

Applicants should include appropriate citations and other information to demonstrate an understanding of the problem regarding missing and unidentified persons in the United States and the expected impact of NamUs.

Project/Program Design and Implementation (Quality and technical merit)—20%

1. Awareness of the state of current capabilities, research, or technology.
2. Soundness of methods and analytic and technical approach.
3. Feasibility of proposed project and awareness of pitfalls.
4. Innovation and creativity (when appropriate).

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—20%

1. Qualifications and experience of proposed staff.
2. Demonstrated ability of proposed staff and organization to manage the effort.
3. Adequacy of the plan to manage the project, including how various tasks are subdivided and resources are used.
4. Successful past performance on NIJ grants and contracts (when applicable).

Budget—20%

1. Total cost of the project relative to the perceived benefit.
2. Appropriateness of the budget relative to the level of effort.
3. Use of existing resources to conserve costs.

Impact/Outcomes and Evaluation (Relevance to policy and practice)—15%

1. Potential for significant advances in scientific or technical understanding of the problem.
2. Potential for significant advances in the field.
3. Relevance for improving the policy and practice of criminal justice and related agencies in the United States and improving public safety, security, and quality of life.
4. Affordability and cost-effectiveness of proposed products, when applicable (e.g., purchase price and maintenance costs for a new technology or cost of training to use the technology).

Relevance of the project for policy and practice in the United States

Higher quality applications clearly explain the practical implications of the project. They connect technical expertise with criminal justice policy and practice. To ensure that the project has strong relevance for policy and practice, some researchers and technologists collaborate with practitioners and policymakers. The application may include letters showing support from practitioners, but they carry less weight than clear evidence of the applicant's understanding of how policymakers and practitioners can best use and benefit from the proposed work. While a partnership may affect State or local activities, it should also have broader implications for other communities nationwide.

Dissemination Strategy—15%

1. Well-defined plan for the grant recipient to disseminate results to appropriate audiences, including researchers, practitioners, and policymakers.
2. Suggestions for print and electronic products that NIJ should consider developing for practitioners and policymakers.
3. If applicable, a clear strategy leading to the adoption into practice of any equipment or software.

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or

a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ, conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

Absent explicit statutory authorization or written delegation of authority to the contrary, all final grant award decisions will be made by the Assistant Attorney General (AAG), who may also give consideration to factors including, but not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding when making awards.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds

- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006
- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If a proposal is funded, the award recipient will be required to submit several reports and other materials, including quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Future awards and fund drawdowns may be withheld if reports are delinquent.

Interim reports: Grantees must submit weekly data reports (with content agreed upon by NIJ Program Office) and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Future awards and fund drawdowns may be withheld if reports are delinquent.

Application Checklist

National Missing and Unidentified Persons System (NamUs)

This application checklist has been created to assist in developing an application.

What an Application Should Include:

_____ Application for Federal Assistance (SF–424) (see page 10)
_____ Program Narrative (see page 10)
_____ Appendices to the Program Narrative (see page 11)
- _____ Bibliography/references
- _____ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed project
- _____ Curriculum vitae, resumes or biographical sketches of key personnel
- _____ Project timeline and calendar with expected milestones
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ List of previous and current NIJ awards to applicant organization.
- _____ Letters of cooperation/support or administrative agreements from organizations collaborating in the project (if applicable)
- _____ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable)

_____ Budget Detail Worksheet (see page 12)
_____ Budget Narrative (see page 12)
_____ Indirect Cost Rate Agreement (if applicable) (see page 12)
_____ Tribal Authorizing Resolution (if applicable) (see page 12)
_____ Program Narrative/Abstract Format (see page 10)
- _____ Double-spaced
- _____ 12-point standard font
- _____ 1” standard margins
- _____ Narrative is 25 pages or less

_____ Additional Attachments (see page 13)
- Organizational chart illustrating the structure of key personnel and other NamUs project support personnel.
- _____ Narrative of the roles and responsibilities of the personnel included in the organizational chart as outlined above.

_____ Other Standard Forms as applicable (see page 13), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 27: FY 2011 National Missing and Unidentified Persons Program Grant Award

FY11 Recipient Name	Award Number	Award Amount
University of North Texas Health Science Center (UNT)	2011-90776-TX-DN	$2,600,000
	TOTAL FUNDING	**$2,600,000**

Attachment 28: FY 2011 National Missing and Unidentified Persons Program Grant Award

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FY 11 Recipient Name: University of North Texas Health Science Center (UNT)
Award Number: 2011-90776-TX-DN
Award Amount: $2,600,000
Abstract: UNTCHI (UNT Center for Human Identification) personnel within the Laboratory for Molecular Identification, the Laboratory for Forensic Anthropology, and the Forensic Services Unit (FSU) will operate in a collaborative environment to manage and administer NamUs. UNTCHI is recognized as a leading provider of scientific and technical support to agencies throughout the United States. The UNTCHI Laboratory for Molecular Identification is one of only a few facilities that integrates STR, Y-STR and mitochondrial DNA (mtDNA) analyses and directly enters those profiles into the Combined DNA Index System (CODIS), version 6.1. The UNTCHI FSU coordinates laboratory analyses, provides investigative assistance, provides training related to missing and unidentified person investigations, and provides assistance to NamUs stakeholders. As employees of UNTCHI and/or the UNT Health Science Center Police Department, all NamUs personnel will be sworn or civilian law enforcement personnel. Twelve specialized Regional System Administrators (RSAs) will provide NamUs assistance in assigned regions throughout the United States. UNTCHI has proposed to develop a video library for NamUs (MP and UP) trainings, as well as standing up a 24 hour call center and also converting NamUs into Spanish.

Attachment 29: FY 2011 Federal Partners

FY11 Recipient Name	Award Number	Award Amount
National Institute of Standards and Technology (NIST)	2010-DN-R-7121	$256,559*
	TOTAL FUNDING	**$256,559**

*Note - The total amount of this award is $1,256,559, which includes $1,000,000 from Justice Assistance DNA/Forensic funds.

Attachment 30: FY 2011 Federal Partner Abstract

FY11 Recipient Name: National Institute of Standards and Technology (NIST)
Award Number: 2010-DN-R-7121 (IAA)
Award Amount: $256,559
Abstract: The primary focus of this year's funding will be a continuation of efforts in five areas: (1) projects to aid compromised DNA analysis including mixture interpretation and low-level DNA, (2) projects to support better understanding of DNA variation, (3) resources and training materials for state and local laboratories, (4) work to assist other NIJ-funded projects, and (5) examination of rapid DNA processing to aid potential biometric applications. Most of the effort in the final topic area of DNA biometrics is being funded by the FBI Science and Technology Branch through an interagency agreement with the NIST Information Access Division.

ANTICIPATED DELIVERABLES:

Projects to Aid Analysis of Challenging Samples

Forensic laboratories face the difficulties of dealing with and interpreting data from challenging samples, particularly in the areas of mixture interpretation and low-level DNA analysis. We plan to study reproducibility of low-level DNA samples and explore software solutions for mixture deconvolution and statistical analysis of DNA mixtures.

Low-level DNA Research

As STR typing kits have become more sensitive and investigators are pushing their use of DNA technology, laboratories are often being requested to conduct work in the low-copy number (LCN) or low template DNA (LT-DNA) realm. This is particularly true with minor components in some mixture samples. This coming year we plan to continue experiments to define low-level DNA performance under different amplification conditions and to aid establishment of meaningful stochastic thresholds. The next generation STR typing kits, such as Identifiler Plus and PowerPlex 16 HS, with improved buffer formulations will be examined. We will explore the reproducibility of DNA mixture levels with elevated cycle numbers and low level DNA samples.

Mixture Interpretation

Interpretation of mixed DNA profiles represents a major challenge to forensic labs particularly in court largely because approaches to mixture interpretation are varied and far from standardized in the field. In April 2010, the Scientific Working Group on DNA Analysis Methods (SWGDAM) released new autosomal STR interpretation guidelines (John Butler served as the chair of the SWGDAM mixture committee that prepared these guidelines). In order to help promote a more uniform approach to DNA mixture interpretation, training slides with worked examples addressing each point in the SWGDAM guidelines will be prepared and shared through the NIST STRBase website as well as through individual training workshops. Experiments will also be conducted to test various software programs for mixture deconvolution (including TrueAllele Casework, which was purchased via NIJ FY2009 funds). We plan to conduct extensive validation of the TrueAllele software and share these results with the community through training workshops and publications. Funding is being requested to conduct three one-day training workshops on mixture interpretation to be held at individual forensic

DNA laboratories. We would like to develop or acquire through collaborators a standard set of mixture data with multiple sets of samples and mixture ratios that can be used to verify software performance over time and version changes.

Projects to Support Better Understanding of DNA Variation

Variant Allele Sequencing

We have developed a sequencing strategy for identifying the causes of allele dropout due to primer binding site mutations. Since 2005 we have sequenced more than 150 variant alleles from the commonly used CODIS STR loci that were provided by forensic laboratories. The information on more than 530 variants have supplied and cataloged on STRBase: http://www.cstl.nist.gov/biotech/strbase/var_tab.htm. A number of forensic laboratories have found this NIJ-funded service very useful, and we continue to receive a steady-stream of new alleles for sequence analysis. Typically we receive around 20-25 new samples to sequence each year. In addition, we sequence STR alleles as needed from concordance studies being conducted.

Expansion of U.S. Core Loci

The FBI CODIS Unit has asked our group to be involved in exploring possible autosomal STR loci that could extend the core 13 STRs currently in use. Additional STR loci are needed to improve international comparison capabilities and to strengthen powers of discrimination when searching DNA databases containing millions of profiles. Our NIST U.S. population sample set, parts of which have been studied in over 45 autosomal STR loci and 90 Y-STR loci, will play an important role in being able to evaluate genetic variation of potential loci from the same set of samples. Information from our samples could help standardize allele frequencies used in DNA profile frequency estimates.

Evaluation of New STR Kits

Promega Corporation and Applied Biosystems are developing new STR typing kits with new loci and new enhanced performance capabilities. We would like to continue to assist in evaluating U.S. population variation and concordance studies with previously used primer sets. Building on our previous experience with examining these new kits, we believe that we can help these companies get their kits validated and to market faster, which will benefit the efficiency of state and local crime laboratories. In recent years, our testing of over 1300 samples with MiniFiler and the PowerPlex ESI/ESX kits has helped standardize concordance testing and bring these new kits to the community faster. Our well-characterized U.S. population samples have become an invaluable resource for PCR primer concordance testing. In addition, we will continue to track Y-STR and mtDNA efforts in the literature and provide input to the community as needed for encouraging an expansion of commercially available kits.

Evaluating Alternative Genetic Markers

We plan on having a world-class guest researcher from Angel Carracedo's laboratory in Spain work with our group for six months this coming year. The goal is to evaluate 30-50

insertion/deletion and/or autosomal single nucleotide polymorphisms (SNPs) in our U.S. population samples with multiplex assays. Gathering data from these alternative genetic markers will enable us to provide an understanding of how additional loci with low mutation rates can benefit kinship analysis with missing persons work.

Kinship Analysis

Using our 660 U.S. population samples and almost 800 father-son samples, which have been typed with numerous STR and SNP markers, we are exploring issues surrounding extended relationship testing, which is of particular interest to immigration testing. Extended family samples with defined pedigrees have been acquired and typed with over 40 STR loci to evaluate the capabilities of different software programs. Improving kinship analysis will aid disaster victim identification and missing persons investigations. Kinship analysis will also provide a better understanding of the capabilities and limitations of familial searching using DNA databases—should policies permit such procedures in the future. Helpful information and data from a standard family reference data set is available on a new STRBase kinship section and will be expanded to aid validation efforts with familial searching software programs.

Resources and Training Materials for State and Local Crime Laboratories

Standard Reference Material (SRM) Updates

NIST SRM 2391b (autosomal STRs) will need to be replaced by mid-2011 and SRM 2395 (Y-chromosome STRs) shortly thereafter due to consistent use by state and local DNA laboratories since they are mandated by the FBI Quality Assurance Standards. Based on feedback from a number of forensic DNA laboratories in 2009, we are proceeding with compiling and characterizing six components for SRM 2391c. These DNA samples will be typed and sequenced at all of the autosomal and Y-chromosome loci available in commercial STR kits and commonly used in forensic DNA laboratories. Over 20 different STR kits will be evaluated with SRM 2391c. Funding from NIJ is crucial in this area in order to keep the cost of the SRMs we develop more affordable for state and local crime laboratories.

ABI 3500 Studies

We purchased an ABI 3500 instrument in FY2010 using NIJ and NIST funds. In this coming year, we plan to study the sizing, sensitivity, and spectral performance of the 3500 compared to the current ABI 3130xl instruments that will in the near future no longer be sold by Applied Biosystems. The information learned from these studies will aid in future forensic validation as these instruments become the only available choice for the forensic DNA community. We are leading an effort to improve communication between Applied Biosystems and the community.

STRBase Updates

We continue to support one of the most valuable web sites for forensic DNA scientists using STR markers. STRBase is located at http://www.cstl.nist.gov/biotech/strbase and contains extensive information on the CODIS STR loci including downloadable PowerPoint files to

permit training of new DNA analysts. Much of the information on STRBase is being included as content for http://www.dna.gov. Updates are made on at least a monthly basis to the comprehensive STR reference listing and the variant allele database. These tools have become widely used throughout the forensic DNA typing community for standardization of information and in the courtroom to demonstrate the reliability of STR typing. In the last several years, we have added new miniSTR, validation, and interlaboratory study sections to STRBase and in the coming years we plan to expand STRBase with other helpful resources. We will also continue to catalog on STRBase any discordance issues due to allele dropout from sequence variation under primer binding sites: http://www.cstl.nist.gov/biotech/strbase/NullAlleles.htm. In October 2010, we launched new sites on kinship analysis (http://www.cstl.nist.gov/biotech/strbase/kinship.htm) and mixture interpretation (http://www.cstl.nist.gov/biotech/strbase/mixture.htm).

Training Materials

New training materials are regularly added to STRBase to help students, laboratory personnel, and the legal community better understand the science behind forensic DNA analysis. Several of our project team members have participated in the President's DNA Initiative training workshops (validation, qPCR, mtDNA) conducted at the National Forensic Science Technology Center in Largo, FL, which will benefit DNA analyst training—and we have and will continue to conduct training in individual forensic laboratories as time and funding permits. Much of our training focus this coming year will be on mixture interpretation with data and slides made available through our STRBase website.

The *Forensic DNA Typing* textbook has being expanded into two volumes for the third edition. Volume 1 (*Fundamentals of Forensic DNA Typing*) became available in September 2009. Volume 2 (*Advanced Topics in Forensic DNA Typing: Methodology*) is scheduled for publication in September 2011. Volume 3 (*Advanced Topics in Forensic DNA Typing: Interpretation*) will be written in FY2011 and FY2012 with a planned release date in the fall of 2012. Because these books are part of John Butler's performance agreement at NIST, they include acknowledgments of funding from NIJ (through the NIST interagency agreement). These textbooks will continue to serve the international community as the standard sources of information on forensic DNA analysis.

<u>Work to Assist Other NIJ-Funded Projects</u>

We will continue to support other NIJ-funded research projects as requested by NIJ with priorities mutually agreed upon depending on the time available. We will do our best to provide assistance to NIJ, the FBI Laboratory, SWGDAM, or other DNA grantees to further forensic DNA development here in the United States. For example, we plan to assist Robin Cotton from Boston University, who has an NIJ grant for DNA mixture training, in teaching a workshop at the International Symposium on Human Identification in October 2011. In addition, our group is collaborating with Danielle Podini and Katherine Butler (PhD candidate) of George Washington University to help develop assays for SNP typing to aid ancestry and phenotype prediction. We plan to continue work with software solutions to aid analysis of DNA mixture samples. We welcome further opportunities to assist other NIJ-funded projects as requested.

Attachment 30: FY 2011 Federal Partner Abstract

Rapid DNA Processing for Potential Biometrics Applications
(almost entirely funded by the FBI Science &Technology Branch through an interagency agreement with the NIST Information Access Division)

Based on the foundation of early work in our lab funded by NIJ, the FBI in 2008 began funding our group efforts with rapid DNA testing. To support on-going efforts in the biometrics community, our group is developing rapid PCR protocols, evaluating kinship analysis software, supporting other government funded rapid DNA efforts, designing standards materials for device testing, and preparing validation plans for testing prototype rapid DNA devices. We are also exploring direct PCR testing and evaluating DNA extraction efficiencies from buccal swabs. The FBI has also asked us to test and validate the Abbott/IBIS mass spectrometer for mitochondrial DNA base composition analysis. In addition, Peter Vallone is a member of the SWGDAM committee on rapid DNA analysis. Discussions regarding validation and policy for rapid DNA typing are currently underway.

U.S. Department of Justice
Office of Justice Programs
National Institute of Justice

OMB No. 1121-0329

The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is pleased to announce that it is seeking applications for funding for social science research on forensic science. This program furthers the Department's mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of crime and justice, particularly at the State and local levels.

Solicitation:
Social Science Research on Forensic Science

Eligibility

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with, States (including territories), units of local government (including federally-recognized Indian tribal governments as determined by the Secretary of the Interior), nonprofit and for-profit organizations (including tribal nonprofit and for-profit organizations), institutions of higher education (including tribal institutions of higher education), and certain qualified individuals. For-profit organizations must agree to forgo any profit or management fee. Foreign governments, foreign organizations, and foreign institutions of higher education are not eligible to apply.

Deadline

Registration with Grants.gov is required prior to application submission. (See "How to Apply," page 8.)

All applications are due by 11:59 p.m. eastern time on February 22, 2011. (See "Deadlines: Registration and Application," page 3.)

Contact Information

For technical assistance with submitting the application, contact the Grants.gov Customer Support Hotline at 800–518–4726 or via e-mail to support@grants.gov.

Note: The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except Federal holidays.

For assistance with any other requirement of this solicitation, contact Katharine Browning, Senior Social Science Analyst, at 202–616–4786 or by e-mail to Katharine.Browning@usdoj.gov.

Grants.gov number assigned to announcement: NIJ–2011–2822

SL# 000971

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Social Science Research on Forensic Science
(CFDA 16.560)

Overview

With this solicitation, NIJ seeks proposals for social science research on forensic science. The many disciplines of forensic science are constantly changing and evolving, particularly as technological advancements improve law enforcement's ability to use forensic evidence more effectively and efficiently. NIJ is interested in a wide range of research that will improve public safety and advance the administration of justice by helping to improve the use of forensic evidence in the criminal justice system and ensure the integrity of forensic processes.

Authorizing Legislation: Title I of the Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202).

Deadlines: Registration and Application

Registration is required prior to submission. OJP strongly encourages registering with Grants.gov several weeks before the deadline for application submission. The deadline for applying for funding under this announcement is 11:59 p.m. eastern time on February 22, 2011. Please see the "How to Apply" section, page 8, for more details.

Eligibility

Please refer to the title page for eligibility under this program.

Program-Specific Information—Social Science Research on Forensic Science

The disciplines of forensic science have experienced numerous advances over the last decade. Improvements in technology have increased capabilities to make use of forensic evidence, both in terms of what can be analyzed and how quickly it can be processed. As forensic evidence plays an increasingly important role in solving crimes, NIJ continues to examine the social science questions related to the effective use of forensic evidence to identify and process criminal offenders and the impact of these advances on the criminal justice system.

A recent NIJ-funded study examined the role and impact of forensic evidence in the criminal justice process, www.ncjrs.gov/pdffiles1/nij/grants/231977.pdf. This study provided valuable baseline information about the kinds of forensic evidence collected at various types of crime scenes and the use and attrition of evidence as cases progress through the system. The study also examined questions related to the types of forensic evidence that contribute most frequently to successful case outcomes. Overall, the study found that with the exception of homicides, forensic evidence is being submitted and/or analyzed for other crimes at a fairly low rate. Although the study found that crime scene evidence was a consistent predictor of arrest across all crimes; forensic evidence is typically not analyzed until after arrest. Thus, the study raises almost as many questions as it answers and is the focus of this solicitation.

The report identifies 10 follow-up research initiatives that would advance the understanding of the role played by forensic evidence in criminal case processing. Applicants should choose from the following list of research topics, which are based on some of these initiatives. Research proposed under this solicitation should have direct implications for policy and/or practice for forensic science in the criminal justice system, and these implications should be clearly stated in the application.

Perhaps the most intriguing finding in the study is that forensic evidence is associated with arrests, even though it is typically not analyzed until after arrest. NIJ is interested in research that explores in greater detail the role that forensic evidence plays in the investigation process. For example, how does unanalyzed evidence contribute to the investigation? How does forensic evidence combine with other investigative procedures to lead to arrest? How do investigators decide which pieces of evidence to submit to the laboratory? When it is analyzed, how often does it exclude a suspect or change the direction of the investigation in some way? Further research on the tracking of evidence utilization in various offense categories may identify factors that shape decisions to collect evidence, submit it to laboratories, and request examination. These are just some of the possible questions and issues that could be explored under this topic.

NIJ is interested in the broader issue of how forensic evidence can be used more efficiently and effectively in this time of limited resources. Several of the report's recommendations discuss these issues. Thus, the following research topics are among those of interest:

- Evaluations of alternative systems for evaluating and prioritizing forensic evidence once it has been submitted to forensic crime laboratories.
- Research examining the impacts of moving to a fee-for-service public crime laboratory. Applicants could propose either a pre-post design in a laboratory that recently converted to fee-for-service or do some type of comparison to public laboratories for which services are essentially free for submitting agencies. The research should examine the extent to which this impacts the types of cases and number of samples per case submitted. Do fee-for-service laboratories lead to more efficient use of forensic resources by police and/or prosecutors? To what extent do fee-for-service policies inhibit police and/or prosecutors' ability to successfully investigate and/or prosecute cases?
- Studies that look at the costs of various forensic analytical procedures applied to physical evidence and issues related to the cost-effectiveness of forensic evidence in criminal investigations. Additionally, investigators may inquire whether limited resources are leading to a preference for DNA-based evidence due to the increased scientific certainty of these results.

The issue of sexual assault kit backlogs has been a hot topic in the media and in the legislature. Partly in response to the large number of unanalyzed rape kits being discovered in some police department evidence rooms, some jurisdictions have moved to policies that require 100 percent of all sexual assault kits to be analyzed. The types of research NIJ would like to see regarding sexual assault kit backlogs include:

- Research on the role forensic evidence plays in investigations and prosecutions of stranger and non-stranger sexual assault cases.

- Evaluations of policies requiring 100 percent of all sexual assault kits to be analyzed. This refers to prospective policies, not policies pertaining to large backlogs found in evidence rooms. Such evaluations should examine issues related to implementation of the policy and a range of outcomes including the Combined DNA Index System (CODIS) hits, victim cooperation, and suspects identification and arrest, to name a few.

In regard to the role and impact of forensic evidence at the level of adjudication, NIJ would like to see research on one or more of the following questions:

- What is the role of the officers of the court (i.e., prosecutors, defense attorneys, and judges) in shaping forensic testing policies?
- What is the overall impact of forensic evidence and forensic reports on: (1) the prosecutor's decisions to take cases to trial versus offering plea agreements; (2) the negotiation of pleas and offering charge/sentence bargains; and (3) defense strategies regarding the admissibility of evidence?
- What are the impacts of "discovery" policies in terms of how variation, or lack of variation, in discovery legislation and requirements across jurisdictions affects the use of forensic evidence in courts?

In addition, the data from the aforementioned study is archived at the National Archive of Criminal Justice Data and can be incorporated into any proposed research. However, please be advised that applications proposing solely secondary data analysis should be submitted under NIJ's planned "Data Resources Program 2011" solicitation and will not be considered for funding under this solicitation.

Amount and length of awards: NIJ anticipates that up to a total of $1 million may become available for up to 2 awards made through this solicitation. **All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.** NIJ funding for an individual research project rarely exceeds $500,000, though total funding for projects requiring multiple years to complete has exceeded $1 million in some cases.

Applicants should be aware that the total period for an award ordinarily will not exceed 3 years.

Evaluation research: Within applications proposing evaluation research, funding priority will be given to experimental research designs that use random selection and assignment of participants to experimental and control conditions. When randomized designs are not feasible, priority will be given to quasi-experimental designs that include contemporary procedures such as Propensity Score Matching or Regression Discontinuity Design to address selection bias in evaluating outcomes and impacts.

Evaluations that also include measurements of program fidelity and implementation as part of a thorough process assessment are desirable. Measurements of program fidelity should be included as part of an assessment of program processes and operations to ensure that policies, programs, and technologies are implemented as designed. As one aspect of a comprehensive evaluation, assessments of program processes should include objective measurements and qualitative observations of programs as they are actually implemented and of services that are

delivered. These may include assessment of such aspects as adherence to program content and protocol, quantity and duration, quality of delivery, and participant responsiveness.

Proposed evaluation research designs with multiple units of analysis and multiple measurements will also be given priority. Design aspects that contribute to the validity of results are necessary to effectively address issues of generalizability and representativeness of findings.

Finally, applications that include cost/benefit analysis will be given priority. NIJ views cost/benefit analysis as an effective way to communicate and disseminate findings from evaluation research.

Please note: All applicants under this solicitation must comply with Department of Justice regulations on confidentiality and human subjects' protection. See "Other Requirements for OJP Applications" at www.ojp.usdoj.gov/funding/other_requirements.htm.

What will not be funded:

1. Provision of training or direct service.
2. Proposals primarily to purchase equipment, materials, or supplies. (The budget may include these items if they are necessary to conduct applied research, development, demonstration, evaluation, or analysis.)
3. Work that will be funded under another specific solicitation.
4. Proposals that do not contain a research component or do not respond to the specific goals of this solicitation.

Budget Information

Limitation on Use of Award Funds for Employee Compensation; Waiver: With respect to any award of more than $250,000 made under this solicitation, Federal funds may not be used to pay total cash compensation (salary plus bonuses) to any employee of the award recipient at a rate that exceeds 110% of the maximum annual salary payable to a member of the Federal Government's Senior Executive Service (SES) at an agency with a Certified SES Performance Appraisal System for that year. (The 2010 salary table for SES employees is available at www.opm.gov/oca/10tables/indexSES.asp.) Note: A recipient may compensate an employee at a higher rate, provided the amount in excess of this compensation limitation is paid with non-Federal funds. (Any such additional compensation will not be considered matching funds where match requirements apply.)

The limitation on compensation rates allowable under an award may be waived on an individual basis at the discretion of the Director of the National Institute of Justice. An applicant that wishes to request a waiver must include a detailed justification in the budget narrative of its application. Unless the applicant submits a waiver request and justification with the application, the applicant should anticipate that OJP will request the applicant to adjust and resubmit its budget.

The justification should include: the particular qualifications and expertise of the individual, the uniqueness of the service being provided, the individual's specific knowledge of the program or project being undertaken with award funds, and a statement explaining that the individual's

salary is commensurate with the regular and customary rate for an individual with his/her qualifications and expertise, and for the work that is to be done.

Match requirement: See “Cofunding” paragraph under “What an Application Should Include” (below).

Performance Measures

To assist in fulfilling the Department’s responsibilities under the Government Performance and Results Act (GPRA), Public Law 103-62, applicants that receive funding under this solicitation must provide data that measure the results of their work. Any award recipient will be required, post award, to provide the data requested in the “Data Grantee Provides” column so that OJP can calculate values for the “Performance Measures” column. Performance measures for this solicitation are as follows:

Objective	Performance Measure(s)	Data Grantee Provides
Develop and analyze information and data having clear implications for criminal justice policy and practice in the United States.	1. Relevance to the needs of the field as measured by whether the grantee’s substantive scope did not deviate from the funded proposal or any subsequent agency modifications to the scope. 2. Quality of the research as assessed by peer reviewers. 3. Quality of management as measured by whether significant interim project milestones were achieved, final deadlines were met, and costs remained within approved limits. 4. If applicable, number of NIJ final grant reports, NIJ research documents, and grantee research documents published.	1. A final report providing a comprehensive overview of the project and a detailed description of the project design, data, and methods; a full presentation of scientific findings; and a thorough discussion of the implications of the project findings for criminal justice practice and policy in the United States. 2. Quarterly financial reports, semi-annual progress reports, and a final progress report. 3. If applicable, each data set that was collected, acquired, or modified in conjunction with the project. 4. If applicable, citation to report(s)/document(s).

Submission of performance measures data is not required for the application. Instead, applicants should discuss in their applications their proposed methods for collecting data for performance measures. Please refer to the section “What an Application Should Include” (below) for additional information.

Note on project evaluations: Applicants that propose to use funds awarded through this solicitation to conduct project evaluations should be aware that certain project evaluations (such as systematic investigations designed to develop or contribute to generalizable knowledge) may constitute “research.” However, project evaluations that are intended only to generate internal improvements to a program or service, or are conducted only to meet OJP’s performance

measure data reporting requirements, likely do not constitute "research." Research is subject to applicable DOJ human subjects protections. Applicants should provide sufficient information for OJP to determine whether the particular project they propose would either intentionally or unintentionally collect and/or use information in such a way that it meets the DOJ regulatory definition of research.

Research, for the purposes of OJP-funded programs, is defined as, "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge." 28 C.F.R. § 46.102(d). For additional information on determining whether a proposed activity would constitute research, see the decision tree to assist applicants on the "Research and the Protection of Human Subjects" section of the OJP Web site (www.ojp.usdoj.gov/funding/other_requirements.htm).

Notice of New Post-Award Reporting Requirements

Applicants should anticipate that all recipients (other than individuals) of awards of $25,000 or more under this solicitation, consistent with the Federal Funding Accountability and Transparency Act of 2006 (FFATA), will be required to report award information on any first-tier subawards totaling $25,000 or more, and, in certain cases, to report information on the names and total compensation of the five most highly compensated executives of the recipient and first-tier subrecipients. Each applicant entity must ensure that it has the necessary processes and systems in place to comply with the reporting requirements should it receive funding.

It is expected that reports regarding subawards will be made through the FFATA Subaward Reporting System (FSRS), found at https://www.fsrs.gov. Additional guidance on reporting will be provided in the near future by OJP and/or the Office of Management and Budget (OMB).

Please note also that applicants should anticipate that no subaward of an award made under this solicitation may be made to a subrecipient (other than an individual) unless the potential subrecipient acquires and provides a Data Universal Numbering System (DUNS) number.

How to Apply

Applications will be submitted through Grants.gov. Grants.gov is a "one-stop storefront" that provides a unified process for all customers of Federal awards to find funding opportunities and apply for funding. Complete instructions on how to register and submit an application can be found at www.Grants.gov. If the applicant experiences technical difficulties at any point during this process, please call the Grants.gov Customer Support Hotline at **800–518–4726**, 24 hours a day, 7 days a week, except Federal holidays. Registering with Grants.gov is a one-time process; however, **processing delays may occur, and it can take up to several weeks** for first-time registrants to receive confirmation and a user password. OJP highly recommends that applicants start the registration process as early as possible to prevent delays in submitting an application package by the specified application deadline.

All applicants are required to complete the following steps:

1. **Acquire a DUNS number.** A DUNS number is required for Grants.gov registration. In general, the Office of Management and Budget requires that all applicants (other than individuals) for Federal funds include a DUNS (Data Universal Numbering System)

number in their applications for a new award or renewal of an existing award. A DUNS number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of entities receiving Federal funds. The identifier is used for tracking purposes and to validate address and point of contact information for Federal assistance applicants, recipients, and subrecipients. The DUNS number will be used throughout the grant life cycle. Obtaining a DUNS number is a free, one-time activity. Obtain a DUNS number by calling Dun and Bradstreet at 866–705–5711 or by applying online at www.dnb.com. Individuals are exempt from this requirement.

2. **Acquire or renew registration with the Central Contractor Registration (CCR) database.** OJP requires that all applicants (other than individuals) for Federal financial assistance maintain current registrations in the Central Contractor Registration (CCR) database. An applicant must be registered in the CCR to successfully register in Grants.gov. The CCR database is the repository for standard information about Federal financial assistance applicants, recipients, and subrecipients. Organizations that have previously submitted applications via Grants.gov are already registered with CCR, as it is a requirement for Grants.gov registration. Please note, however, that applicants must **update or renew their CCR registration annually** to maintain an active status. Information about CCR registration procedures can be accessed at www.ccr.gov.

3. **Acquire an Authorized Organization Representative (AOR) and a Grants.gov username and password.** Complete the AOR profile on Grants.gov and create a username and password. The applicant organization's DUNS Number must be used to complete this step. For more information about the registration process, go to www.grants.gov/applicants/get_registered.jsp.

4. **Acquire confirmation for the AOR from the E-Business Point of Contact (E-Biz POC).** The E-Biz POC at the applicant organization must log into Grants.gov to confirm the applicant organization's AOR. Please note that there can be more than one AOR for the organization.

5. **Search for the funding opportunity on Grants.gov.** Please use the following identifying information when searching for the funding opportunity on Grants.gov. The Catalog of Federal Domestic Assistance (CFDA) number for this solicitation is 16.560, titled "National Institute of Justice Research, Evaluation, and Development Project Grants," and the funding opportunity number is NIJ–2011–2822.

6. **Submit an application consistent with this solicitation by following the directions in Grants.gov.** Within 24–48 hours after submitting the electronic application, the applicant should receive an e-mail validation message from Grants.gov. The validation message will state whether the application has been received and validated, or rejected, with an explanation. **Important:** Applicants are urged to submit applications **at least 72 hours prior** to the due date of the application to allow time to receive the validation message and to correct any problems that may have caused a rejection notification.

Note: Grants.gov will forward the application to OJP's Grants Management System (GMS). GMS does not accept executable file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: ".com," ".bat," ".exe," ".vbs," ".cfg," ".dat," ".db," ".dbf," ".dll," ".ini," ".log," ".ora," ".sys," and ".zip."

Experiencing Unforeseen Grants.gov Technical Issues

If an applicant experiences unforeseen Grants.gov technical issues beyond the applicant's control that prevent submission of its application by the deadline, the applicant must contact NIJ staff **within 24 hours after the deadline** and request approval to submit its application. At that time, NIJ staff will instruct the applicant to submit specific information detailing the technical difficulties. The applicant must e-mail: a description of the technical difficulties, a timeline of submission efforts, the complete grant application, the applicant DUNS number, and Grants.gov Help Desk tracking number(s) received. After the program office reviews all of the information submitted, and contacts the Grants.gov Help Desk to validate the technical issues reported, OJP will contact the applicant to either approve or deny the request to submit a late application. If the technical issues reported cannot be validated, the application will be rejected as untimely.

To ensure a fair competition for limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) failure to begin the registration process in sufficient time, (2) failure to follow Grants.gov instructions on how to register and apply as posted on its Web site, (3) failure to follow all of the instructions in the OJP solicitation, and (4) technical issues experienced with the applicant's computer or information technology (IT) environment.

Notifications regarding known technical problems with Grants.gov, if any, are posted at the top of the OJP funding Web page, www.ojp.usdoj.gov/funding/solicitations.htm.

What an Application Should Include

This section describes what an application should include and sets out a number of elements. Applicants should anticipate that failure to submit an application that contains all of the specified elements may negatively affect the review of the application; and, should a decision be made to make an award, it may result in the inclusion of special conditions that preclude access to or use of award funds pending satisfaction of the conditions.

Moreover, applicants should anticipate that some application elements are so critical that applications unresponsive to the scope of the solicitation, or that do not include a program narrative, budget detail worksheet including a budget narrative, tribal resolution (if applicable), and resumes/curriculum vitae of key personnel will neither proceed to peer review nor receive further consideration.

OJP strongly recommends use of appropriately descriptive file names (e.g., "Program Narrative," "Budget Detail Worksheet and Budget Narrative," "Timelines," "Memoranda of Understanding," "Resumes") for all attachments. OJP recommends that resumes be included in a single file.

1. **Information to complete the Application for Federal Assistance (SF–424)**
   The SF–424 is a standard form required for use as a cover sheet for submission of pre-applications, applications, and related information. Grants.gov and GMS take information from the applicant's profile to populate the fields on this form. When selecting "type of applicant," if the applicant is a for-profit entity, please select "For-Profit Organization" or "Small Business" (as applicable).

2. **Program Narrative**
The program narrative section of the application should not exceed 30 double-spaced pages in 12-point font with 1-inch margins. Abstract, table of contents, charts, figures, appendices, and government forms do not count toward the 30-page limit for the narrative section.

If the program narrative fails to comply with these length-related restrictions, noncompliance may be considered in peer review and in final award decisions.

Program Narrative Guidelines:

a. **Title Page** (not counted against the 30-page program narrative limit).
The title page should include the title of the project, submission date, funding opportunity number, and the applicant's name and complete contact information (i.e., name, address, telephone number, and e-mail address).

b. **Project Abstract** (not counted against the 30-page program narrative limit).
The 400 to 600-word abstract should state the problem under investigation (including research goals and objectives) and the anticipated relevance of the project to criminal justice public policy, practice, or theory. It should describe the proposed method and/or research design, including data to be used in addressing research questions, data collection procedures and instrumentation, access to data, and other methods or procedures of the proposed study. It should also describe procedures for data analysis and all expected products, including interim and final reports, instrumentation, and devices. If applicable, it should describe the subjects who will be involved in the proposed project, including the number of participants; participants' age, gender, and race/ethnicity; and other pertinent characteristics, such as methods used to gain access to subjects.

c. **Resubmit Response** (if applicable) (not counted against the 30-page program narrative limit). If an applicant is resubmitting a proposal that was presented previously to NIJ, but not funded, the applicant should indicate this. A statement should be provided, no more than two pages, addressing: (1) the title, submission date, and NIJ-assigned application number of the previous proposal, and (2) a brief summary of revisions to the proposal. This document should be inserted after the abstract.

d. **Table of Contents and Figures** (not counted against the 30-page program narrative limit).

e. **Main body.** The main body of the program narrative should describe the project in depth. The following sections should be included as part of the program narrative:
    - Statement of the Problem.
    - Project/Program Design and Implementation.
    - Capabilities/Competencies.
    - Impact/Outcomes and Evaluation.
    - Plan for Collecting the Data Required for This Solicitation's Performance Measures. **Note:** Submission of performance measures

data is not required for the application. Performance measures are included as an alert that successful applicants will be required to submit specific data to NIJ as part of their reporting requirements. For the application, the applicant should indicate an understanding of these requirements and discuss how the applicant will gather the required data, should the applicant receive funding.

- Dissemination Strategy.

Note: Within the above sections, the narrative should address:

- Purpose, goals, and objectives.
- Review of relevant literature.
- Detailed description of research design and methods to include: research questions, hypotheses, description of sample, analysis plan, etc.
- Implications for criminal justice policy and practice in the United States.
- Management plan and organization.

f. **Appendices** (not counted against the 30-page program narrative limit) include:

- Bibliography/references.
- Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study.
- Curriculum vitae, resumes or biographical sketches of key personnel.
- Project timeline and research calendar with expected milestones.
- Research independence and integrity (see “Selection Criteria,” below).
- Human Subjects Protection Paperwork including Institutional Review Board (IRB) documentation and forms (see www.ojp.gov/nij/funding/humansubjects/human-subjects.htm).
- Privacy Certificate (for further guidance go to www.ojp.gov/nij/funding/humansubjects/privacy-certificate-guidance.htm).
- List of previous and current NIJ awards to applicant organization and investigator(s).
- Letters of cooperation/support or administrative agreements from organizations collaborating in the project, such as law enforcement and correctional agencies (if applicable).
- List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable).
- Other materials specified by the solicitation.
- Data Archiving Strategy (see descriptive paragraph below).

Data Archiving Strategy: NIJ requires that each data set resulting from funded research be submitted as a grant product or deliverable for archiving with the National Archive of Criminal Justice Data. (Data sets are to be submitted 90 days before the end of the project period.) Applicants for NIJ research grants are strongly encouraged to include a brief (one- or two-page) data archiving strategy. For purposes of research replication and extension, the inclusion of only the final data set often prevents other researchers from replicating or extending the study

because there are no original data, intermediate data, or documentation detailing how the data changed throughout the project. This data archiving strategy therefore should briefly describe the—

- Anticipated manipulations of original, intermediate, and final data sets (as applicable).
- Methods of documentation of such manipulations.
- Preparation of original, intermediate, and final data sets for archive submission.

The data archiving strategy should be submitted as an appendix to the application and will not count toward the 30-page limit. Please label this appendix "Data Archiving Strategy."

3. **Budget Detail Worksheet and Budget Narrative**

   a. Budget Detail Worksheet
   A sample Budget Detail Worksheet can be found at www.ojp.gov/funding/forms/budget_detail.pdf. If the budget is submitted in a different format, the budget categories listed in the sample budget worksheet should be included.

   For questions pertaining to budget and examples of allowable and unallowable costs, please see the OJP Financial Guide at www.ojp.usdoj.gov/financialguide/index.htm.

   b. Budget Narrative

   The Budget Narrative should thoroughly and clearly describe every category of expense listed in the Budget Detail Worksheet. The narrative should be mathematically sound and correspond with the information and figures provided in the Budget Detail Worksheet. The narrative should explain how all costs were estimated and calculated and how they are relevant to the completion of the proposed project. The narrative may include tables for clarification purposes but need not be in a spreadsheet format. As with the Budget Detail Worksheet, the Budget Narrative should be broken down by year.

   Cofunding: A grant made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-Federal support for the project. The application should identify generally any such contributions that the applicant expects to make, and the proposed budget should indicate in detail which items, if any, will be supported with non-Federal contributions.

4. **Indirect Cost Rate Agreement** (if applicable)
   Indirect costs are allowed only if the applicant has a federally approved indirect cost rate. (This requirement does not apply to units of local government.) A copy of the rate approval should be attached. If the applicant does not have an approved rate, one can be requested by contacting the applicant's cognizant Federal agency, which will review all documentation and approve a rate for the applicant organization or, if the applicant's accounting system permits, costs may be allocated in the direct cost categories. If DOJ

is the cognizant Federal agency, obtain information needed to submit an indirect cost rate proposal at www.ojp.usdoj.gov/financialguide/part3/part3chap17.htm.

5. **Tribal Authorizing Resolution** (if applicable)
   If an application is being submitted by either (1) a tribe or tribal organization or (2) a third party proposing to provide direct services or assistance to residents on tribal lands, then a current authorizing resolution of the governing body of the tribal entity or other enactment of the tribal council or comparable governing body authorizing the inclusion of the tribe or tribal organization and its membership must be included with the application. In those instances when an organization or consortium of tribes proposes to apply for a grant on behalf of a tribe or multiple specific tribes, then the application must include a resolution from all tribes that will be included as a part of the services/assistance provided under the grant. A consortium of tribes for which existing consortium bylaws allow action without support from all tribes in the consortium (i.e., without authorizing resolution or other enactment of each tribal governing body) may submit a copy of its consortium bylaws with the application in order to satisfy this requirement.

6. **Other Standard Forms**
   Additional forms that may be required in connection with an award are available on OJP's funding page at www.ojp.usdoj.gov/funding/forms.htm. For successful applicants, receipt of funds may be contingent upon submission of all necessary forms. Please note in particular the following forms.

   a. Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters; and Drug-Free Workplace Requirements (required to be submitted in GMS prior to the receipt of any award funds)

   b. Disclosure of Lobbying Activities (required for any applicant that expends any funds for lobbying activities; this form must be downloaded, completed, and then uploaded)

   c. Accounting System and Financial Capability Questionnaire (required for any applicant other than an individual that is a non-governmental entity and that has not received any award from OJP within the past 3 years; this form must be downloaded, completed, and then uploaded)

   d. Standard Assurances (required to be submitted in GMS prior to the receipt of any award funds)

Selection Criteria

Statement of the Problem (Understanding of the problem and its importance)—15%

Project/Program Design and Implementation (Quality and technical merit)—30%

1. Awareness of the state of current research.
2. Soundness of methods and analytic and technical approach.
3. Feasibility of proposed project and awareness of pitfalls.
4. Innovation and creativity (when appropriate).

Capabilities/Competencies (Capabilities, demonstrated productivity, and experience of applicants)—20%

1. Qualifications and experience of proposed staff.
2. Demonstrated ability of proposed staff and organization to manage the effort.
3. Adequacy of the plan to manage the project, including how various tasks are subdivided and resources are used.
4. Successful past performance on NIJ grants and contracts (when applicable).

Budget—15%

1. Total cost of the project relative to the perceived benefit.
2. Appropriateness of the budget relative to the level of effort.
3. Use of existing resources to conserve costs.

Impact/Outcomes and Evaluation (Relevance to policy and practice)—15%

1. Potential for significant advances in scientific or technical understanding of the problem.
2. Potential for significant advances in the field.
3. Relevance for improving the policy and practice of criminal justice and related agencies in the United States and improving public safety, security, and quality of life.
4. Affordability and cost-effectiveness of proposed products, when applicable (e.g., purchase price and maintenance costs for a new technology or cost of training to use the technology).

Relevance of the project for policy and practice in the United States

Higher quality applications clearly explain the practical implications of the project. They connect technical expertise with criminal justice policy and practice. To ensure that the project has strong relevance for policy and practice, some researchers and technologists collaborate with practitioners and policymakers. The application may include letters showing support from practitioners, but they carry less weight than clear evidence of the applicant's understanding of how policymakers and practitioners can best use and benefit from the proposed work. While a partnership may affect State or local activities, it should also have broader implications for other communities nationwide.

Dissemination Strategy—5%

1. Well-defined plan for the grant recipient to disseminate results to appropriate audiences, including researchers, practitioners, and policymakers.
2. Suggestions for print and electronic products that NIJ should consider developing for practitioners and policymakers.
3. If applicable, a clear strategy leading to the adoption into practice of any equipment or software.

Research Independence and Integrity

Regardless of a proposal's rating under the criteria outlined above, in order to receive funds, the applicant's proposal must demonstrate research independence, including appropriate safeguards to ensure research objectivity and integrity.

For purposes of this solicitation, research independence and integrity pertains only to ensuring that the design, conduct, or reporting of research funded by NIJ grants, cooperative agreements, or contracts will not be biased by any financial interest on the part of the investigators responsible for the research or on the part of the applicant.

In the appendix dealing with research independence and integrity, the applicant must explain the process and procedures that the applicant has put in place to identify and manage potential financial conflicts of interest on the part of its staff, consultants, and/or subrecipients. It must also identify any potential organizational financial conflicts of interest on the part of the applicant with regard to the proposed research. If the applicant believes that there are no potential organizational financial conflicts of interest, the applicant must provide a brief narrative explanation of why it believes that to be the case.

Where potential organizational financial conflicts of interest exist, in the appendix the applicant must identify the safeguards the applicant has put in place to address those conflicts of interest.

Considerations in evaluating research independence and integrity will include, but may not be limited to, the adequacy of the applicant's efforts to identify factors that could affect the objectivity/integrity of the proposed staff and/or the organization in carrying out the research, development, or evaluation activity; and the adequacy of the applicant's existing or proposed remedies to control any such factors.

Review Process

OJP is committed to ensuring a fair and open process for awarding grants. NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, and achievable, as well as consistent with the solicitation.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. NIJ may use either internal peer reviewers, external peer reviewers, or a combination to review the applications under this solicitation. An external peer reviewer is an expert in the field of the subject matter of a given solicitation who is NOT a current U.S. Department of Justice employee. An internal reviewer is a current U.S. Department of Justice employee who is well-versed or has expertise in the subject matter of this solicitation. Eligible applications will be evaluated, scored, and rated by a peer review panel. Peer reviewers' ratings and any resulting recommendations are advisory only. In addition to peer review ratings, considerations for award recommendations and decisions may include, but are not limited to, underserved populations, geographic diversity, strategic priorities, past performance, and available funding.

The Office of the Chief Financial Officer (OCFO), in consultation with NIJ, conducts a financial review of applications for potential discretionary awards to evaluate the fiscal integrity and financial capability of applicants; examines proposed costs to determine if the budget detail worksheet and budget narrative accurately explain project costs; and determines whether costs are reasonable, necessary, and allowable under applicable Federal cost principles and agency regulations.

All final award decisions will be made by the Director of the National Institute of Justice, who also may give consideration to factors including, but not limited to, underserved populations,

geographic diversity, strategic priorities, past performance, and available funding when making awards.

Additional Requirements

Applicants selected for awards must agree to comply with additional legal requirements upon acceptance of an award. OJP strongly encourages applicants to review the information pertaining to these additional requirements prior to submitting an application. Additional information for each requirement can be found at www.ojp.usdoj.gov/funding/other_requirements.htm.

- Civil Rights Compliance
- Faith-Based and Other Community Organizations
- Confidentiality
- Research and the Protection of Human Subjects
- Anti-Lobbying Act
- Financial and Government Audit Requirements
- National Environmental Policy Act (NEPA)
- DOJ Information Technology Standards (if applicable)
- Single Point of Contact Review
- Non-Supplanting of State or Local Funds
- Criminal Penalty for False Statements
- Compliance with Office of Justice Programs Financial Guide
- Suspension or Termination of Funding
- Nonprofit Organizations
- For-profit Organizations
- Government Performance and Results Act (GPRA)
- Rights in Intellectual Property
- Federal Funding Accountability and Transparency Act (FFATA) of 2006

- Awards in Excess of $5,000,000 – Federal Taxes Certification Requirement
- Active CCR Registration

If a proposal is funded, the award recipient will be required to submit several reports and other materials, including:

Final substantive report: The final report should be a comprehensive overview of the project and should include a detailed description of the project design, data, and methods; a full presentation of scientific findings, placed in the context of existing literature; a thorough discussion of the implications of the project findings for criminal justice practice and policy in the United States; etc. It must contain an abstract of no more than 600 words and an executive summary of 2,500 to 4,000 words.

A draft of the final report, abstract, and executive summary must be submitted 90 days before the end date of the grant. The draft final report will be peer reviewed upon submission. The reviews will be forwarded to the principal investigator with suggestions for revisions. The author must then submit the revised final report, abstract, and executive summary by the end date of the grant. The abstract, executive summary, and final report must be submitted in electronic format.

Interim reports: Grantees must submit quarterly financial reports, semi-annual progress reports, a final progress report, and, if applicable, an annual audit report in accordance with Office of Management and Budget Circular A–133. Future awards and fund drawdowns may be withheld if reports are delinquent.

Data sets: NIJ requires submission of all data sets (original, intermediate, and final) produced or collected for the funded project, and any artifact associated with the project data. Included with the final sets of data should be the plan outlined in the Data Archiving Strategy section of the proposal.

Application Checklist

Social Science Research on Forensic Science

This application checklist has been created to assist in developing an application.

Eligibility Requirement:
_____ Tribal Authorizing Resolution (if applicable) (see page 14)

What an Application Should Include:
_____ Application for Federal Assistance (SF–424) (see page 10)
_____ Program Narrative (see page 11)
_____ Appendices to the Program Narrative (see page 12)
- _____ Bibliography/references
- _____ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study
- _____ Curriculum vitae, resumes or biographical sketches of key personnel
- _____ Project timeline and research calendar with expected milestones
- _____ Research independence and integrity
- _____ Human Subjects Protection Paperwork
- _____ Privacy Certificate
- _____ List of previous and current NIJ awards to applicant organization and investigators
- _____ Letters of cooperation/support or administrative agreements from organizations collaborating in the project (if applicable)
- _____ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable)
- _____ Data Archiving Strategy

_____ Budget Detail Worksheet (see page 13)
_____ Budget Narrative (see page 13)
_____ Indirect Cost Rate Agreement (if applicable) (see page 13)
_____ Program Narrative/Abstract Format (see page 11)
- _____ Double-spaced
- _____ 12-point standard font
- _____ 1” standard margins
- _____ Narrative is 30 pages or less

_____ Other Standard Forms as applicable (see page 14), including:
- _____ Disclosure of Lobbying Activities (if applicable)
- _____ Accounting System and Financial Capability Questionnaire (if applicable)

Attachment 32: FY 2011 Social Science Research on Forensic Science Grant Awards

FY11 Recipient Name	Award Number	Award Amount
RAND Corporation	2011-DN-BX-0004	$496,006
McEwen and Associates, LLC	2011-DN-BX-0007	$199,341
Michigan State University	2011-DN-BX-0006	$129,376
University of New Haven	2011-DN-BX-0003	$174,668
	TOTAL FUNDING	**$999,391**

Attachment 33: FY 2011 Social Science Research on Forensic Science Program Abstracts

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FY11 Recipient Name: RAND Corporation
Award Number: 2011-DN-BX-0004
Award Amount: $496,006
Abstract: Existing research suggests that the full potential of forensic science to solve crimes efficiently and accurately has not been met. Large backlogs of untested evidence, uncollected forensic evidence, and the fact that available forensic evidence plays no role in most cases suggest considerable room for improvement in the criminal justice system's production and use of forensic science.

This uniquely qualified team, consisting of a former forensic scientist, a former criminal lawyer, and two criminologists propose to undertake four overlapping studies to improve our understanding of the way that forensic scientific evidence is created and used in the criminal justice system and help it realize its potential.

First, in eight selected jurisdictions the researchers will interview police, prosecutors, and crime lab scientists to understand how forensic science is created and used and the obstacles to improving its use. Second, the researchers will take a sample of recent cases in those jurisdictions and track them from investigation to adjudication to understand how forensic evidence affects outcomes in these jurisdictions. This will build on Peterson (2010)'s work and allow them to address a range of research questions about the creation and effect of forensic evidence in a wide range of jurisdictions. It will also allow them to measure the gap, if any, between stakeholders' perceptions and the actual effect of forensic evidence.

Third, the researchers will analyze the data collected in the BJS censuses of crime labs in the United States in order to determine what effects, if any, payment system and organizational structure have on laboratory productivity and public safety impact. Does the fee-for-service payment system exhibit any impact on clearance rate, positive or negative? Does a crime laboratory's organizational affiliation have any bearing on productivity or case clearance rate?

Finally, the researchers will conduct a national survey of prosecutors and defense counsel with experimental manipulations to understand how forensic evidence affects the perceived strength of the case during plea negotiations and trial.

These overlapping studies will improve our understanding of how forensic scientific evidence is produced and used from investigation to conviction in a range of crimes and jurisdictions with different policies and institutional structures. Such a knowledge base is a prerequisite to identifying evidence-based best practices in the organization of crime labs, the prioritization of testing, and the production and use of forensic scientific

evidence. Ultimately, these best practices will help the law enforcement community use the considerable untapped potential of forensic scientific evidence to solve crimes quickly, accurately, and efficiently.

FY11 Recipient Name: McEwen and Associates, LLC
Award Number: 2011-DN-BX-0007
Award Amount: $199,341
Abstract: The objective of the proposed project is to determine how homicide investigators use evidence during the course of their investigations. It directly addresses a topic identified in the solicitation on identifying ways in which both unanalyzed and analyzed evidence contribute to investigations. The Cleveland, Ohio, Police Department has agreed to cooperate in this study by providing access to investigative reports and forensic analysis reports, as well as access to homicide investigators to discuss their assigned cases. Data will be collected on approximately 300 homicides that occurred between 2009 and 2011 in the city.

The available reports will be reviewed to obtain specific information on all evidence collected during an investigation by type (DNA evidence, latent prints, firearms, trace, etc.). The information will start to provide answers on how items benefited the investigation even prior to any forensic analysis: victim identification, witness identification, leads on suspects, motives, events prior to the incident, and others. The researchers will also document the items that investigators requested for analysis along with forensic results.

Because the information in reports is limited, interviews with investigators will be conducted to complete the picture. The researchers will ask investigators why they selected specific items to submit for analysis. Reasons could include determination of whether a DNA profile or latent prints from an item of evidence matches a suspect, whether a recovered firearm was used in the homicide, whether trace evidence can be found on an item, and others. Investigators will also be asked how they used results from forensic analysis: identified/excluded a suspect, linked the suspect to the crime scene, provided support for an arrest, confirmed their theory of the case, and others.

The analysis of the information obtained will provide considerable insight into the use of evidence in homicide investigations. The researchers are especially interested in comparing open and closed cases to determine differences between types of evidence collected, analysis requests, forensic results, and contributions to the investigations. In addition to simple tabulations of the data, both bivariate and multivariate analysis will be

performed. The final report for the project will cover all aspects of the study from data collection through final analysis.

Results from the study will have practical value to law enforcement agencies by identifying ways in which evidence and forensic analysis can improve homicide investigations. The results may also be applicable to other types of crimes, especially aggravated assaults, robberies, auto thefts, and burglaries. For the research community, the results will have additional interest in showing how the uses of evidence vary by type (instrumental/expressive), motives, incident location (inside/outside), and other factors.

FY11 Recipient Name: Michigan State University
Award Number: 2011-DN-BX-0006
Award Amount: $129,376
Abstract: The criminal justice system has placed increasing importance on the role of forensic evidence collection and scientific analysis, particularly for police and prosecutors. Forensic scientists and laboratories must deal with rising demands for evidence processing and analysis, though they face a chronic lack of resources, particularly in training, equipment, personnel, and scientific standards for analyses. These limitations directly hinder the ability of laboratories to hire and train the scientists needed to improve the overall functionality and speed with which evidence is processed. As a consequence, there is a need to identify policies and procedures to rapidly improve the overall productivity of current laboratory personnel, as well as understand the factors that affect their overall work experiences.

A substantial body of research has emerged exploring the ways that working conditions affect employee productivity. These studies indicate that employees who report high levels of work stress tend to have poor work performance, low productivity, and waste time while on the job, as well as experience physical and emotional consequences as a result of their work stress. Additionally, those who experience high levels of stress also report low levels of job satisfaction, which can negatively affect general commitment to their organization and occupation. This research has benefited managers and policy makers by examining the conditions that increase work stress, enabling the creation of policies and procedures to decrease problematic behaviors among employees.

To date, however, the occupational reactions of the larger forensic science community have not been studied. As a consequence there is minimal understanding of the sources of stress and their effect on the productivity of both individuals and whole laboratories. The proposed investigation will complete four objectives to directly benefit

forensic science laboratory directors and managers, as well as the forensic scientist practitioner community, policy makers, and the criminal justice system as a whole. First, the researchers will examine the prevalence and levels of work stressors and job satisfaction among forensic scientists in private and public agencies at the local, state, and federal level in the United States, using a sample of both sworn and unsworn scientists in all standard forensic science disciplines. Second, the researchers will examine the influence of managerial, prosecutorial, and police requests and demands on the overall productivity, decision-making processes, and tasks of scientists. Third, this study will explore and document the effect of environmental and social factors, such as role conflicts, as well as laboratory staffing structures-the presence of sworn and unsworn positions, operating in a public or state-run lab, the types of analyses conducted, and working hours, for example—on the work experiences and decisions of forensic scientists. Finally, the researchers will examine the use of negative or harmful coping strategies by forensic scientists as a result of their work experiences that may directly affect employee productivity.

The findings of this study can directly benefit the forensic science practitioner community by identifying the variety of work experiences reported across the spectrum of forensic disciplines, as well as variations in laboratory procedures, to demonstrate differences within and across units in a given agency. Additionally, this study can provide policy recommendations for laboratory directors and management to increase staff efficiency and productivity, and improve relationships between laboratories and the criminal justice system in general.

FY11 Recipient Name: University of New Haven
Award Number: 2011-DN-BX-0003
Award Amount: $174,668
Abstract: In September of 2010 the NIJ published The Role and Impact of Forensic Evidence in the Criminal Justice System, a report chronicling a study conducted by Peterson, Sommers, Baskin, and Johnson (2010). This proposed research is centrally focused on eight of the ten research recommendations made in the Peterson, et al (2010) report and will be conducted in two phases. Phase one will analyze a random sample of approximately 2,500 case files from 2006 through 2009 that contain forensic analyses from the Connecticut State Forensic Science Laboratory, along with corresponding police and prosecutorial case files. The goal of the proposed research is to further our understanding of how the presence of forensic evidence relates to case clearance and conviction. As with Peterson, et al. (2010), this research has four research objectives: 1) estimate the percentage of cases in which crime scene evidence is collected; 2) discover what kinds of forensic evidence are being collected; 3) track

such evidence through the criminal justice system; and 4) identify which forms of forensic evidence are most efficacious given the crime investigated. The research instrument to be used in the coding of these case files is a slightly modified version of the instrument used by Peterson, et al (2010). This instrument records up to 40 variables in three separate categories: forensic, criminal offense, and crime disposition. The proposed study will also introduce two variables not recorded in the previous study: did any available witness name a suspect or provide a description to police, and did the suspect make a statement.

Phase two will consist of qualitative interviews regarding case files randomly selected from the sample population listed above, with approximately 270 investigative and prosecutorial personnel. These interviews will further advance our understanding of how forensic evidence affects the use of investigative and prosecutorial discretion. These interviews will be centered on four themes: the exact nature of assistance provided by physical evidence in the identification of the offender, the use of forensic evidence in the interview and interrogation process of witnesses and offenders, the utility of forensic evidence in plea negotiations, and the effect of forensic evidence on sentencing.

The implications of replicating the results found by Peterson, et al (2010), with the above stated improvements, would be to give further credence to the recommendations made in that report . It would also serve as a policy guide for prioritization of forensic evidence to reduce backlog, provide data to assist with interrogations, and to provide guidance for investigative and prosecutorial discretion within the criminal justice system. Upon completion of the project a final report will be generated detailing the findings and policy implications of the study. Further, appropriate publications in peer reviewed criminal justice and forensic science journals will be pursued. Also, all data coded and used in both phases of the project will be uploaded to the National Archive of Criminal Justice Data 90 days before the end of the project period.

Attachment 33: FY 2011 Social Science Research on Forensic Science Program Abstracts

Attachment 34: Dissemination, Outreach, and Program Support

Use	Vendor	Amount
NCJ 231682 PO Death Investigations	GPO	$5,462
NCJ225320 Fingerprint Sourcebook	GPO	$34,538
DNA.gov Hosting and Maintenance	DYONYX, Inc.	$210,000
OJP T&M Communications Support Contract	Lockheed Martin	$111,666
Lockheed Martin Communications Support for NIJ	Lockheed Martin	$21,115
NIJ Conference	Circle Solutions	$72,219
NCJRS (Time and Materials)	Lockheed Martin	$300,000
NCJRS (Firm Fixed Price contract with Lockheed Martin)	Lockheed Martin	$150,000
New Communications Contract - 6-month ext	Palladian Partners	$52,000
New Communications Contract - Rebid	Palladian Partners	$298,000
NEPA reviews	Contract not yet awarded	$100,000
Admin Support Contract (Reprogrammed per Congressional Notification)	Aspen of DC	$125,000
OJP Peer Review contract (Reprogrammed per Congressional Notification)	Lockheed Martin	$809,572
OJP Peer Review contract (Reprogrammed per Congressional Notification)	Lockheed Martin	$479,336
NIJ Peer Review Standing Panels contract (Reprogrammed per Congressional Notification)	Contract not yet awarded	$70,394
2009 OST Brochure DOJ-2	GPO	$126

2009 Forensic DNA DOJ-2	GPO	**
Admin Support Contract (Reprogrammed per Congressional Notification)	Aspen of DC	$125,000
Total		**$2,839,428**

** Note - $6,076 in FY 2010 COPS DNA Forensic carry over funds used for this purpose