

**U.S. Department of Justice**  
Office of Justice Programs  
*National Institute of Justice*



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## **Convicted Offender Backlog Reduction Program: Fiscal Year 2009 Awards and Abstracts**

This document lists grants awarded by NIJ in 2009 under the Convicted Offender Backlog Reduction Program. The abstracts are reproduced here exactly as they were submitted by the grantee.

This table is a summary of DNA Convicted Offender Awards issued in FY2009. Following this table are their respective abstracts.

<b>FY09 Recipient Name</b>	<b>Award Number</b>	<b>Award Amount</b>
Alaska Department of Public Safety	2009-DN-BX-K023	\$387,500
Arkansas State Crime Laboratory	2009-DN-BX-K024	\$43,900
Arizona Department of Public Safety	2009-DN-BX-K030	\$1,617,214
California Department of Justice	2009-DN-BX-K019	\$463,348
Georgia Bureau of Investigation	2009-DN-BX-K102	\$365,303
Kansas Bureau of Investigation	2009-DN-BX-K037	\$736,867
Commonwealth of Kentucky	2009-DN-BX-K114	\$657,688
Louisiana State Police	2009-DN-BX-K026	\$1,050,683*
Massachusetts State Police	2009-DN-BX-K018	\$81,252
Mississippi Department of Public Safety	2009-DN-BX-K029	\$1,015,975
North Dakota	2009-DN-BX-K017	\$70,840
Las Vegas Metropolitan Police Department	2009-DN-BX-K025	\$102,025
Washoe County Sheriff's Office	2009-DN-BX-K042	\$196,030
Oregon State Police	2009-DN-BX-K013	\$136,000
Pennsylvania State Police	2009-DN-BX-K015	\$429,887
Instituto de Ciencias Forenses	2009-DN-BX-K213	\$262,500
South Dakota Office of The Attorney General	2009-DN-BX-K028	\$161,700
State of Texas	2009-DN-BX-K021	\$503,885
Utah Department of Public Safety	2009-DN-BX-K022	\$564,000
Virginia Department of Forensic Science	2009-DN-BX-K020	\$171,579
Vermont Department of Public Safety	2009-DN-BX-K016	\$79,896
Wyoming Office of the Attorney General	2009-DN-BX-K103	\$80,000
<b>TOTAL FUNDING</b>		<b>\$9178072</b>

**FY09 Recipient Name:** Alaska Department of Public Safety

**Award Number:** 2009-DN-BX-K023

**Award Amount:** \$387,500

**Abstract:** The State of Alaska's Scientific Crime Detection Laboratory (SCDL), the only accredited crime laboratory in the state (and providing service to the entire state), receives approximately 500 convicted offender and arrestee samples per month for DNA analysis and entry into the Combined DNA Index System (CODIS). In 2008, the laboratory went online with in-house analysis, review and upload of these samples.

The goal of this project is to reduce the Alaska SCDL's backlog of convicted offender and arrestee samples awaiting DNA analysis and entry into CODIS. To achieve this goal, the Alaska SCDL plans to use funds from this award to purchase reagents and consumables used in the laboratory to generate DNA profiles in accordance with the FBI Quality Assurance Standards and NDIS procedures. Eligible profiles will be entered into the Combined DNA Index System (CODIS) and uploaded to the National DNA Index System (NDIS). It is anticipated that this award will allow the Alaska SCDL to eliminate the remaining backlog of convicted offender and arrestee samples and achieve an average turnaround time of less than 30 days for new samples.

**FY09 Recipient Name:** Arkansas State Crime Laboratory

**Award Number:** 2009-DN-BX-K024

**Award Amount:** \$43,900

**Abstract:** The goal of the Arkansas State Crime Laboratory is to utilize the “Convicted Offender and/or Arrestee DNA Backlog Reduction Program FY 2009” to process the additional samples that will be submitted due to Arkansas’ new arrestee legislation as they are received by the laboratory. The Arkansas State Crime Laboratory has the necessary equipment and personnel to process the additional arrestee samples in a timely manner. However, funding for required supplies was not incorporated in the legislation. Therefore, the strategy is to utilize the funds provided in this solicitation for the purchase of supplies required to process the 1820 anticipated arrestee samples (1625 submitted samples, 114 rerun samples, and 81 QC samples). The Arkansas State Crime Laboratory expects that the additional funding will allow us to process the additional arrestee samples as they are received, which will prevent a backlog of arrestee samples from being created.

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**FY09 Recipient Name:** Arizona Department of Public Safety

**Award Number:** 2009-DN-BX-K030

**Award Amount:** \$1,617,214

**Abstract:** *Introduction:* The Arizona Department of Public Safety (AZDPS), by statute, maintains the Convicted Offender DNA Database for the State of Arizona and has been processing convicted offender DNA samples since 1993. Beginning with sex offenders, the DNA database law in Arizona has expanded over the years to include all felons, and in 2008, arrestees of serious crimes. With each expansion of Arizona’s DNA collection statutes, the AZDPS has seen the backlog of samples awaiting analysis grow considerably. The current backlog of DNA samples awaiting analysis is 35,000 and this number is expected to grow to approximately 45,000 by March 31, 2010.

*Project Goals and Objectives:* The Project Objectives are as follows:

- To reduce the backlog of convicted offender and arrestee DNA samples by 45,000 samples awaiting analysis and entry into CODIS.
- To send backlogged DNA database samples to an accredited outsource laboratory.
- To review the DNA profiles generated by the outsource laboratory in a timely fashion.
- To enter into CODIS and upload to NDIS all DNA profiles reviewed and accepted from the out-source laboratory within 90 days of completion of analysis.
- To track all samples tested under this project including the number of DNA samples analyzed, the number of DNA profiles reviewed, and the number of resulting CODIS hits.

*Project Plans:* The AZDPS will establish a contract for analyzing DNA database samples with an accredited fee-for-service laboratory. This laboratory will be selected in accordance with applicable Federal procurement laws and the Arizona State Procurement Rules.

Once an accredited fee-for-service laboratory has been awarded the outsource contract, grant funds will be used to reduce the current backlog of 35,000 DNA database samples as quickly as possible. An additional 10,000 samples will be shipped as they accumulate over the next year.

*Methods for Achieving Goals:* All DNA profiles obtained from these database samples will be entered into CODIS within 90 days of completion of analysis and uploaded to the National DNA Index System (NDIS). In previous year's solicitations, review of outsource data has monopolized AZDPS database analyst's time, preventing them working samples in-house and allowing the backlog to continue to grow. To reverse this trend, AZDPS has recently validated an NDIS approved, expert system, FSS i<sup>3</sup>™, to quickly review and accept the data. As a result, AZDPS will be able to analyze in-house 35,000 additional DNA database samples, over and above, the 45,000 processed with grant funds.

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**FY09 Recipient Name:** California Department of Justice

**Award Number:** 2009-DN-BX-K019

**Award Amount:** \$463,348

**Abstract:** This narrative describes the application for funding from the Convicted Offender and/or Arrestee DNA Sample Backlog Reduction Program by the California Department of Justice Bureau of Forensic Services Jan Bashinski DNA Laboratory. The implementation of the last phase of California's initiative, Proposition 69, passed in 2004 occurred on January 1, 2009. All adult felony arrestees in California are now subject to DNA sampling. This new extension of the offender DNA database program in California is generating a significant increase in DNA sample submissions at our laboratory, estimated at approximately 330,000 samples per year. The current backlog of offender samples is approximately 50,000. Coping with this increased load on the laboratory will require substantial overtime work with existing staff to reduce the backlog.

This application would, if the requested funding award were received, provide reagents and supplies for the semi-automated mass production processing and analysis of 30,000 backlogged offender samples; technical review permitting upload would be accomplished utilizing overtime worked by existing staff.

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**FY09 Recipient Name:** Georgia Bureau of Investigation

**Award Number:** 2009-DN-BX-K102

**Award Amount:** \$365,303

**Abstract:** The Georgia Bureau of Investigation-Division of Forensic Sciences (GBI-DOFS) is responsible for the DNA analysis and data entry from samples collected from convicted felony offenders in Georgia that are incarcerated in a state facility (O.C.G.A. 24-4-60 through 24-4-65) or from offenders who are placed onto probation for certain felony offenses .

Funding provided from the FY2009 Convicted Offender and/or Arrestee DNA Backlog Reduction program will be used to complete DNA analysis using the 13 core STR loci of convicted offenders samples submitted to GBI-DOFS. DNA profiles from the offenders will be entered into CODIS. The proposal requests \$365,303 of federal funding to be used for the purchase of supplies necessary to complete the analysis of approximately 16,650 offender samples currently in backlog or to be received by the lab prior to March 31, 2010. This number of samples accounts for analyses that will be funded from other sources, including previous federal awards. The sample analysis, entry of DNA profiles into CODIS, and CODIS searches will be completed by Sept 30, 2010. The approximate cost per sample is \$18.97. The GBI

Division of Forensic Sciences has sufficient staffing and instrumentation available to complete these analyses during the award period.

**GOALS & OBJECTIVES:**

1. Complete analysis of 13 core STR loci for 16,650 offender samples
  2. Enter DNA profiles into CODIS within 30 days of completion of analysis.
  3. Search CODIS, identify possible 'hits' to unsolved cases and then confirm offender DNA profiles prior to agency notification.
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**FY09 Recipient Name:** Kansas Bureau of Investigation

**Award Number:** 2009-DN-BX-K037

**Award Amount:** \$736,867

**Abstract:**

*Project Goals and Objectives:*

1. Ensure all backlogged offender samples and arrestee samples are profiled and the DNA profile information is entered into CODIS by March 2010.
2. Generate investigative leads from above samples through the use of CODIS (Combined DNA Index System).

*Project Plans:* Kansas currently has approximately 28,612 offender and arrestee samples backlogged. The average number submitted of both arrestee and offender samples is 1600 per month. To meet the project goal, the following is needed:

- a. Funds for necessary supplies
- b. Time to generate and technically review data from the profiles

In order for the backlogged samples to be worked, examiners must obtain a profile, technically review that profile and enter the profile into CODIS. To obtain a profile and upload the following steps are done:

1. Extraction
2. Quantitation
3. Normalization
4. PCR Set-up
5. Amplification
6. Analysis
7. Review
8. Upload

The extraction step, quantitation step, and amplification step require significant monetary outlay for purchasing of consumables. Consumables include chemicals, plates, tips, and reagents. Reagents, such as quantitation chemicals, capillary electrophoresis chemicals or amplification kits can be expensive. The normalization and PCR set up require consumables such as tips. The average cost for analyzing one sample is approximately 24.00.

With appropriate funding, the Kansas Bureau of Investigation DataBank will be able to address the offender and arrestee backlog.

*Project Methods:* The DNA Databank Staff will utilize two robotic automation systems. There two robots, Biomek 2000, are already in place and validated. Automation on the system is

current for the following sample types, liquid blood, and can extract, quantitate, normalize and accomplish PCR set up. Approximately 80 samples can be done with one robot at a time.

The first goal of completely alleviating the backlog will be done by the appropriate use of the robots. Quantitation will be done on the robots, as well, using a PicoGreen methodology. The robots will also then normalize the samples and prepare for PCR set up. The amplification will be a single amplification using Identifiler with detection on the 3130XL genetic analyzers with analysis done with GMID.

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**FY09 Recipient Name:** Commonwealth of Kentucky

**Award Number:** 2009-DN-BX-K114

**Award Amount:** \$657,688

**Abstract:** The Kentucky State Police Forensic Laboratories with the aid of this grant will continue to perform automated high-throughput DNA analysis on all Convicted Offender samples. The goal of this grant is to accelerate the analyses of Convicted Offender samples as the laboratory strives to ultimately eliminate the Convicted Offender backlog. The Convicted Offender DNA program will perform DNA analysis, enter results into the Combined DNA Indexing System (CODIS) and search CODIS in attempts to match offenders to open and cold cases. All analysis and review will be performed in-house.

Previous capacity grants have funded both robotics and instrumentation for this program. Through the funds provided in previous NIJ grants and internal agency resources, equipment and personnel are available to meet the needs of the Convicted Offender program. The program currently has five trained analysts and one technical leader. This request will fund supplies necessary to examine approximately 2,300 samples per month in order to deplete the backlog by 03/31/11. Also requested is 2,400 hours of overtime.

Overtime will be utilized to help decrease turn around time (TAT) for the processing and uploading of these samples within 90 days of analysis completion to the National DNA Indexing System (NDIS).

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**FY09 Recipient Name:** Louisiana State Police

**Award Number:** 2009-DN-BX-K026

**Award Amount:** \$1,050,683

*\*Please note that this shortly after receiving this award, the grantee received an unexpected award of state funds to deal with their backlog of convicted offender samples. To avoid any supplanting they requested that this award be closed and deobligated. Therefore, no funds were awarded to Louisiana State Police under the FY09 Convicted Offender Program.*

**Abstract:** The goal of this project is to eliminate the backlog of convicted offender and/or arrestee databasing samples that are awaiting analysis and upload to the Combined DNA Indexing System (CODIS). The goal will be accomplished by (1) outsourcing analysis to vendor laboratories who can analyze the data in a timely manner and return the profile data via electronic upload and (2) outsourcing the review of profile data via electronic download and upload of a CODIS ready file in a timely manner.

Louisiana State Police Crime Laboratory (LSPCL) will outsource the analysis of 32,355 samples to vendor laboratories. Once analysis is complete, the vendor laboratory will upload the data to the Virtual DNA Analysis System (VDAS) electronically. VDAS is an electronic tracking system for the State of Louisiana.

LSPCL will complete the data review of 6500 DNA profiles that were generated in an older format: Genescan/Genotyper format. The formatting of this data requires tedious and time consuming data review. A goal of this project will be to have this data reviewed in a timely manner, utilizing contracted external data reviewers. Data will be downloaded from VDAS, reviewed and then re-uploaded to the VDAS system as a CODIS ready file. The data will then be uploaded to the CODIS.

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**FY09 Recipient Name:** Massachusetts State Police

**Award Number:** 2009-DN-BX-K018

**Award Amount:** \$81,252

**Abstract:** The Massachusetts State Police Forensic Services Group, MSPFSG, proposes to use requested funds to assist with the in-house DNA testing and review of convicted offender samples for their upload into NDIS. The MSP FSG proposes to: 1) retain two temporary contract technicians to prepare convicted offender blood samples for testing in the DNA data basing Unit; 2) test all convicted offender samples in house and 3) use in house DNA analysts for review of the convicted offender data to determine if it meets all NDIS requirements for upload.

The Massachusetts State Police Forensic Services Group is requesting \$81,252.00 to allow the testing of 2,322 backlogged convicted offender samples in the state. These grant funds will enable the MSPFSG to increase the in-house capacity to allow testing, review and upload to NDIS of convicted offender samples in a timelier manner by the end of the grant period. Timely testing and upload of CODIS samples can result in a reduce crime rate in the Commonwealth by removing repeat offenders from the streets and neighborhoods in the communities where we live.

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**FY09 Recipient Name:** Mississippi Department of Public Safety

**Award Number:** 2009-DN-BX-K029

**Award Amount:** \$1,015,975

**Abstract:** The Mississippi Crime Laboratory System (MCL) operates the State of Mississippi's forensic DNA laboratory. The Mississippi Crime Laboratory System, 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.

In 2006, the Mississippi Database consisted of approximately 3000 sexual offender profiles. Since MCL became involved in the implementation of the Mississippi All Felons DNA Databasing Project in 2007 remarkable progress has been made in expanding the database. The first phase of the project involved collecting samples from all convicted felons who were incarcerated in Mississippi. MCL supplied Buccal Swab Kits and provided sampling instruction to prison staff. In March and April of 2007 the Bioscience Section received almost 23,000 DNA

samples from convicted felons and continues to receive additional samples each month. Profiles have been reviewed and entered into CODIS and NDIS. As of March 24, 2009, the Mississippi Data Base contained 33,542 profiles all of which have been entered into CODIS and NDIS.

The second phase of the project involved the collection of samples from parolees, convicted felons who were not sampled in the first collection. In February of 2009, all felon parolees were sampled adding 18,000 to the backlog of convicted offender samples to be analyzed. None of these samples are under current contracts. After convicted offender samples have been analyzed and reviewed, they will be entered into CODIS and uploaded into NDIS. The Mississippi Data Base will then contain more than 60,000 profiles. MCL is now receiving an average of 700 samples from newly convicted felon each month. Upon the entry of convicted felons into prison, samples for DNA analysis are collected and sent to MCL. If a convicted felon is sentenced to parole, a DNA sample is collected by the parole officer and forwarded to MCL.

The objective of this proposal is to accelerate the analysis of DNA database samples collected by the state from convicted offenders in order to provide timely CODIS-compatible data for State and national DNA databases and to significantly reduce the number of DNA database samples in the backlog. The funding that MCL is requesting from the FY 2009 Convicted Offender and/or Arrestee DNA Backlog Reduction Program is critical to the success of the program.

The process of expanding the Mississippi DNA Database from approximately 3000 profiles to more than 60,000 profiles by March 2010 is creating a backlog of DNA database samples far beyond what Mississippi has the resources to analyze and review. This project proposes to achieve the objective of the program by contracting with an accredited fee-for-service vendor to conduct DNA analyses to product an anticipated 30,030 DNA profiles. While MCL does not have the resources, to perform the reviews of the anticipated 30,030 profiles which will be awaiting data review through March 31, 2010 MCL the BioScience Staff, by working overtime, can review approximately one half of that number (15,014). We are requesting \$30,000 in Overtime Wages and Fringe Benefits to compensate the staff for working overtime to review profiles and are requesting \$75,080 to contract with qualified individuals to conduct data review of the remaining profiles (15,016) so that all profiles can be entered into NDIS in a timely manner. There is an additional request of \$10,000 for the administrative expense of a contract grant manager.

Each DNA analysis performed under this program will be maintained pursuant to all applicable Federal privacy requirements.

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**FY09 Recipient Name:** North Dakota

**Award Number:** 2009-DN-BX-K017

**Award Amount:** \$70,840

**Abstract:**

- A. Agency: North Dakota Office of Attorney General, Crime Laboratory Division  
Jurisdiction: North Dakota
- B. Project Title: FY 09 Convicted Offender and Arrestee Backlog Reduction Program –  
North Dakota

- C. Project Period: 10/01/2009 to 03/31/2011
  - D. Amount Requested: \$114,905.00
  - E. Brief Description of Proposed Project:

The primary goal of the Convicted Offender and Arrestee Backlog Reduction Program is to reduce the backlog of Convicted Offender and Arrestee Samples this will be accomplished by completing two objectives:

Objective 1: The DNA section of the crime laboratory will process at least offender samples with the funding available.

Objective 2: After data is analyzed the profiles will be expeditiously be uploaded to the Combined DNA Index System (CODIS).
  - F. Overall Objective(s): The primary goal of the Convicted Offender and Arrestee Backlog Reduction Program is to reduce the backlog of convicted offender and arrestee samples.
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**FY09 Recipient Name:** Las Vegas Metropolitan Police Department

**Award Number:** 2009-DN-BX-K025

**Award Amount:** \$102,025

**Abstract:** The City of Las Vegas and the surrounding area of Clark County, Nevada have a current population in excess of 1.95 million persons, and in 2008 hosted over 2.9 million visitors per month. The Las Vegas Metropolitan Police Department (LVMPD) is the sole provider of forensic DNA analysis services to not only Las Vegas, but to all of southern Nevada. This service area includes the adjacent Nye, Lincoln and Esmeralda Counties with an additional population of approximately 50,000 individuals. In addition to providing a full range of forensic casework analyses, 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 LVMPD Forensic Laboratory is accredited by the American Society of Crime Laboratory Directors Legacy Program, and the Biology/DNA Detail of the LVMPD undergoes external audits every two years to remain in compliance with standards set forth by the Federal Bureau of Investigations in the *Quality Assurance Standards for Forensic DNA Testing Laboratories* and the *Quality Assurance Standards for DNA Databasing Laboratories*.

The Nevada CODIS database contains all DNA collections mandated and collected according to Nevada Revised Statute (NRS). Effective October 1, 2007, there were two major changes to Nevada state law which have dramatically affected the collection of database samples. The first change requires all felons to submit a biological specimen to the database. This "All Felon" language in NRS 176.0916 increased the annual convicted offender specimen intake by 156% between 2007 (3,221 convicted offender specimens were received) and 2008 (8,225 convicted offender specimens were received). The second change is the requirement to obtain a "biological specimen" for DNA profiling from any person who has been a Registered Sex Offender since 1956, whether they reside in the state of Nevada, or are visiting a Nevada community for longer

than 48 hours. The impact of this change was an additional increase in specimen intake of approximately 20% in 2008 (1,989 sex offender specimens were received).

As the Biology/DNA Detail adjusts to the increased flow of offender samples into the laboratory from the legislative changes implemented October 1, 2007, the Nevada State Assembly and Nevada State Senate are now drafting new legislation geared toward the collection of DNA samples from arrestees. There are several drafts of “arrestee” collections being proposed, ranging from: 1) all arrestees, 2) felony arrestees, and 3) specific classifications of felony arrests. As of this writing it is unknown as to which version of arrestee legislation will be implemented, if any, however the Forensic Laboratory must be prepared to handle the alarmingly increased storage, processing, and CODIS entry demands of arrestee samples should any of these proposals become law in the next few months.

The Database/CODIS Detail has a current backlog of 563 convicted offender and sex registrant specimens. The LVMPD is expected to receive an additional 8,784 specimens between now and March 31, 2010, of which 6,432 will be processed during routine business hours at the Forensic Laboratory. Therefore, the LVMPD is requesting overtime funds in the amount of \$71,695 to process the current backlog through what is expected to grow to 2,915 specimens by March 31, 2010. The Biology/DNA Detail is also requesting \$30,330 for the purchase of supplies related to processing offender specimens (scalpels and DNA IQ Kits).

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**FY09 Recipient Name:** Washoe County Sheriff's Office

**Award Number:** 2009-DN-BX-K042

**Award Amount:** \$196,030

**Abstract:** This project will provide funds for the DNA analysis of offender samples at the Washoe County Sheriff's Office Forensic Science Division. Currently there is a 2,600 sample backlog and the backlog is projected to be 5,600 samples at the end of March 2010. This project will provide resources to permit the use of an accredited fee-for-service laboratory for DNA analysis and in-house data review by the Washoe County Sheriff's Office DNA analysts. The processing of these samples will eliminate the backlog and keep sample analysis current until March 2010.

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**FY09 Recipient Name:** Oregon State Police

**Award Number:** 2009-DN-BX-K013

**Award Amount:** \$136,000

**Abstract:** *PROJECT SCOPE AND OBJECTIVES:* The scope of this proposal is to reduce the number of convicted offender sample backlog through outsourcing and in-house data review. Support of this proposal will contribute to the enhancement of the DNA unit so that the State of Oregon can reduce the amount of backlogged convicted offender samples. Since 2002, convicted offender samples have been processed and analyzed by off-site contract laboratories. Two years ago, our convicted offender DNA sample backlog had increased by almost 26,000 samples. Beginning last year we received State support to process 13,000 samples off-site at a contract lab. In addition, NIJ grant funding was acquired to process an additional 13,000 samples. Our goal was to have our backlog reduced to a manageable level by the start of the new biennium in

July 2009. We are on track to achieve this goal. Our next goal and plan for the 2009-2011 biennium is to complete renovations of our DNA unit so we can process the convicted offender samples in-house. Because of the current economic downturn, the renovation plan has been slowed with an anticipated completion time during the 2011-2013 biennium. Therefore, funding is requested so that we can continue to have our convicted offender samples processed offsite until such time that the renovations are completed. This will help to keep the convicted offender backlog at a minimum while we prepare the DNA unit for processing of these samples in-house. Support of this grant proposal will allow Oregon to meet the following objectives, 1.) outsource convicted offender samples to minimize backlog during next 12 months, 2.) provide supplies and overtime to process failed samples from the vendors and to confirm convicted offender samples that hit the database, and 3.) provide overtime for the review of the vendor data in a timely manner. The current estimate of convicted offender samples to be processed in the next 12 months is ~3,400.

*PROJECT DESIGN AND METHODOLOGY:* To meet the stated objectives and achieve the scope of this proposal will require funding for outsourcing, overtime and purchase of supplies. 1) Currently, the Forensic Services Division DNA unit receives on average 800 convicted offender samples per month. We anticipate having approximately 1,200 samples in backlog as of July 1, 2009 and receiving an additional 7200 samples through March 31, 2010. Of these samples, 5000 will be worked in-house. That will leave ~3,400 samples that will need to be outsourced. 2) In addition, we will purchase supplies (e.g., PCR Identifiler kits, pipette tips, gloves, capillary arrays, tubes, etc.) for the in-house processing of samples which the vendor was unable to obtain a complete profile and for the processing of those samples that need to be confirmed before the CODIS hit can be reported. 3) Lastly, we will use overtime to process these samples and for the review of data from the vendor(s).

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**FY09 Recipient Name:** Pennsylvania State Police

**Award Number:** 2009-DN-BX-K015

**Award Amount:** \$429,887

**Abstract:**

**PROJECT GOALS AND OBJECTIVES:** 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 45 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.

**PROJECT DESIGN:** The Pennsylvania State Police DNA Laboratory will utilize the overtime provided by the grant to technically review samples already analyzed but needing a technical review prior to upload to CODIS and for the analysis and technical review of the anticipated incoming convicted offender samples. All of the qualified forensic scientists will participate in the overtime review of the data. The samples will be received, inventoried and analyzed during regular hours utilizing automation techniques and high throughput instrumentation. With the overtime, the genetic profiles can be technically reviewed and uploaded to CODIS within 45

days of receipt. The CODIS Administrator will be responsible for the upload to the CODIS national database. Samples are received and inventoried by the chemistry technicians. Information on each sample for the purpose of tracking the sample is entered into a database by the chemistry technicians. During the receiving process and prior to permanent storage, a portion of the sample is punched into a 96 well plate using BSD automated punching systems. The plates are placed onto a Perkin Elmer Multiprobe II liquid handling system for extraction, isolation and pre-PCR setup. The samples are then amplified using PowerPlex 16 and the ABI 9700 Thermal Cyclers. The amplified product is then placed onto an ABI 3130XL Genetic Analyzer. The profiles from the offender samples along with their respective controls and quality assurance samples from each 96 well plate constitute a file. Each scientist participating in the overtime will be assigned these files for the technical review. The supervisors will perform technical reviews and administrative reviews ensuring data input is correct and applicable to state law. The DNA technical leader is also the manager of the DNA laboratories and will serve as the administrator and contact person for the grant. The management technician is responsible for keeping the accounting records for the grant, overtime records, agency requisitions and purchase orders. The CODIS administrator uploads the samples to the national database and records the analysis filename and CODIS entry date in the DNA offender tracking system.

The remainder of the funding request will be used for the supplies for the analysis of the convicted offender samples.

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**FY09 Recipient Name:** Instituto de Ciencias Forenses

**Award Number:** 2009-DN-BX-K213

**Award Amount:** \$262,500

**Abstract:** The proposed goal of this effort is to eliminate the current and projected (March 31<sup>st</sup>, 2010) CO DNA-sample backlog, as well as to review the concomitant CODIS-compatible genetic profiles. CO backlog elimination will be aggressively addressed through the analysis of 7,500 samples via the fee-for-service mechanism. The projected (i.e., 7,500) backlog was determined by adding the actual (i.e., 3,956 up to April 2009) and the projected to March 31, 2010 (i.e., 3,544 = 322 / month x 11 months). The projected estimate was made by dividing the number of CO cases received last year (i.e., 3864) and dividing by 12 months, thus obtaining the average 322/month]. Front end activities to be carried out by overtime personnel will include the following: 1) identification, 2) handling, 3) inventorying and 4) registering the demographic information of each sample into the Laboratory Management and Information System (LIMS). The samples will then be appropriately labeled, packaged and sent to the chosen fee-for-service laboratory. State funds will be used for consulting services of an individual who will contact, evaluate, provide assistance with vendor selection, and ensure that genetic profiles are received on a timely fashion. Once the genetic profiles are received, these will be reviewed in-house with the assistance of a validated expert system, in conformance with the NDIS acceptance standards, and subsequently uploaded into the NDIS Database within the 90-day time window period.

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**FY09 Recipient Name:** South Dakota Office of The Attorney General

**Award Number:** 2009-DN-BX-K028

**Award Amount:** \$161,700

**Abstract:** The project objective is to eliminate the number of DNA database samples waiting for analysis by sending the samples to an accredited fee-for-service (vendor) laboratory. Currently we have no samples awaiting analysis and not under contract. We anticipate receiving approximately 4400 samples between May 1, 2009 and March 31, 2010. Approximately 220 QC samples would be needed for a total of 4620 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. Based on that previous sample reporting rate, the contract could be completed within 60 days of the final (April 2010) sample shipment.

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**FY09 Recipient Name:** State of Texas

**Award Number:** 2009-DN-BX-K021

**Award Amount:** \$503,885

**Abstract:** The Texas State CODIS Program: The CODIS program in Texas expanded on 9/1/05 by making the all-felons provision of the State's statute retroactive to all adults in custody and to all juveniles in custody for an offense constituting a felony. This expansion in the number of samples received by the laboratory each month created a substantial backlog and was only paired with a modest budget increase which has turned out to be insufficient to fully-fund the program. Since its inception, the Texas DPS CODIS laboratory has received over 490,000 biological samples from offenders across the state.

The goal of this grant request is to help fund the analysis of the current backlog offender samples for entry into CODIS. We are seeking to reduce the current turn-around time, from sample submission to CODIS entry, from six months to two months. In the last year, the laboratory replaced one of its AB 3130XL Genetic Analyzers with an AB 3730 Genetic Analyzer in order to increase throughput and will add a second during the next year. The lab has validated a Tecan EVO 200 to speed up the DNA extraction process, and is adding additional Qiagen BioSprint 96's to make each phase of the DNA extraction process equally efficient.

The receipt of the funding requested through this grant will enable the Texas DPS CODIS Laboratory to obtain the consumables needed for sample analysis and the funds to pay for overtime as necessary to meet the goals of reducing the sample backlog and lowering the turn-around time for CODIS entry of offender DNA profiles.

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**FY09 Recipient Name:** Utah Department of Public Safety

**Award Number:** 2009-DN-BX-K022

**Award Amount:** \$564,000

**Abstract:** The Bureau of Forensic Services (BFS) is requesting \$564,000.00 in 2009 Convicted Offender and/or Arrestee DNA Backlog Reduction Program grant funds in behalf of the

Biology/DNA Section of the laboratory. The funds will cover the current and anticipated backlog of convicted offender samples, which are not covered under any existing grants funded by NIJ. BFS is seeking to outsource the analysis of approximately 18,800 convicted offender samples to a high throughput vendor laboratory, at an estimated fee of \$30.00 per sample.

BFS is a participating laboratory in the National DNA Index System (NDIS). Through the Combined DNA Index System (CODIS), BFS has provided valuable investigative and case solving information to twenty-four states in the USA. Cases that have been solved through CODIS have included burglaries, sexual assaults, and 20-year-old unsolved homicides. The Utah Bureau of Forensic Services consists of four forensic laboratories strategically located throughout the state, and employs 30 full-time employees. BFS is designed to assist local, state, and federal law enforcement officers and prosecutors in analyzing evidence taken from crime scenes throughout Utah.

BFS is the only ASCLD-LAB International accredited, government-owned forensic laboratory system in Utah. DNA analysis services have been provided by BFS since 1992 in the Salt Lake City forensic laboratory. All four BFS laboratories were awarded ASCLD-LAB International accreditation during June 2007.

The goals of BFS are to reduce the number of DNA database samples awaiting DNA analysis, increase the number of samples in the Convicted Offender Index in CODIS, and increase the number of crimes solved through CODIS both intrastate and interstate by the end of the grant period, March 31, 2011. The number of samples requested for analysis in the solicitation (18,800) includes the current backlogged samples and the anticipated samples that will be received through March 31, 2010.

Methods (Objectives) to achieve our goals include:

- Outsource convicted offender samples to a vendor that is accredited by a nonprofit professional association that is nationally recognized within the forensic science community, and approved by NIJ
  - Ship approximately 2,000-3,000 samples a month (or an agreeable rate) to the vendor for processing
  - Vendor will analyze the samples and submit data packages containing complete profiles to BFS
  - BFS will review “blind QC” samples for accuracy
  - BFS will then upload samples into the National DNA Index System (NDIS)
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**FY09 Recipient Name:** Virginia Department of Forensic Science

**Award Number:** 2009-DN-BX-K020

**Award Amount:** \$ 171,579

**Abstract:** As established by the *Code of Virginia*, the Virginia Department of Forensic Science is statutorily charged with the responsibility of creating a DNA data bank of all convicted felony sex offender DNA profiles. The statute was modified in 1990 include all felony offenders. In 1996 the law was expanded to include all juveniles fourteen years of age or older at the time of the commission of a felony offense who are subsequently convicted of that offense. In 2003, the

law was expanded to include arrested individuals for violent felonies or burglary of an occupied dwelling. Again, in July 2006 the law was expanded to include individuals who are required to register with the Virginia State Police as a sexual offender as part of their sentencing (including misdemeanants) and to submit to have a sample for DNA.

Since 1989, approximately 422,000 data bank samples have been received. Currently, the Virginia DNA Data Bank receives samples at an approximate rate of 1,750 samples per month. In late 2006, it was determined that samples from approximately 10,000 parolees may not been collected and submitted to DFS for DNA analysis and entry into the Data Bank. The bulk of these samples were submitted to the laboratory July 2007 through December 2007. Using grant funding provided by NIJ in 2007, 80% of this backlog was eliminated. Around this time, an increase was noted in the monthly sample submissions to the Data Bank of about 5-6%. This increase is likely attributed to legislative changes effective July 2007, which caused greater diligence in compliance with Data Bank sample collection by all the agencies tasked with the collection of qualifying individuals' Data Bank samples. Additionally, a reduction in Databank resources occurred when an agency-wide fiscal concern necessitated the elimination of all part-time Data Bank positions in the fall of 2008.

The current backlog stands at 4900, as of February, 2009. The Department currently has the monthly capacity and funding to analyze 1,750 samples in-house. However, the Department lacks the resources in time and supplies to process our backlogged samples. The goal of the Department is to use funding acquired through this grant for in-house analysis of 4500 (plus 200 quality control samples) of the backlogged Data Bank samples.

The plan is to use funding provided through this grant to pay overtime salaries and FICA benefits for five DNA Data Bank analysts, who will analyze Data Bank samples and perform technical review of the data, as well as two full-time staff to perform Data Bank sample analysis support functions. This funding will also be used to pay the hourly wages and FICA benefits for one new part-time support staff to assist Data Bank operations. Additionally, this funding will be used to purchase the chemistries necessary to analyze the backlogged samples and associated controls. To achieve the goal outlined in this proposal, the methods for analyzing the backlogged samples will follow that currently used by the DNA Data Bank analysts in the Data Bank. The samples assignment and analysis will be coordinated and monitored by the DNA Data Bank Supervisor and State CODIS Administrator. The Data Bank samples that are backlogged will be analyzed in batches of 85-90 samples during overtime hours. The samples will be analyzed in-house using the PowerPlex® 16 BIO System, the data will be technically reviewed, and the profile entered into CODIS.

With the grant-funded overtime and the addition of the part-time support staff, the Department will significantly reduce or totally eliminate the current backlog within the 12 month grant period.

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**FY09 Recipient Name:** Vermont Department of Public Safety

**Award Number:** 2009-DN-BX-K016

**Award Amount:** \$79,896

**Abstract:** The Vermont Forensic Laboratory (VFL) has reduced the convicted offender sample backlog with the help of NIJ funding to our In-House program. The anticipated backlog existing or expected by March 31, 2010 will be 2700 convicted offender samples. This number of samples represents the number of samples received from April 1, 2009 and estimated to be received by the end of March, 2010. With NIJ funding for supplies, overtime, and funding for a temporary employee to perform data review, this backlog can be eliminated within the grant period. We have made use of automation in the set up of samples that has allowed processing in the plate format. This grant application asks for supplies for extraction, quantification and DNA typing kits and capillary electrophoresis supplies. Overtime is requested for processing failed samples by casework staff and to ensure timely run on the capillary electrophoresis unit.

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**FY09 Recipient Name:** Wyoming Office of the Attorney General

**Award Number:** 2009-DN-BX-K103

**Award Amount:** \$80,000

**Abstract:** The Wyoming State Crime Laboratory (WSCL) is located in Cheyenne, Wyoming, and is the only full service forensic laboratory in the state which provides examinations in Chemistry, Biology, Firearms/Tool marks, Latent Prints/Questioned Documents and Trace. The fundamental mission of the laboratory is to provide, in a timely manner, a full range of forensic services to all local, state and federal law enforcement agencies throughout the state.

Wyoming State Statutes W.S. 7-19-401 through 7-19-406 calls for the establishment and administration of a Wyoming State DNA Database and for participation in the NDIS. Historically the WSCL has outsourced offender samples to private laboratories using funding from the NIJ. The NIJ is currently also funding staff overtime hours for technical review of the outsourced offender samples.

The Wyoming State Legislature has passed a bill which will fund the construction of a state laboratory building complex in Cheyenne Wyoming. This building complex includes over one thousand square feet of space dedicated to CODIS laboratory and CODIS administrative functions. There is currently no equipment or laboratory space at the WSCL dedicated for CODIS sample profiling. The WSCL has applied for funding through the NIJ DNA Efficiency Improvement Solicitation for CODIS dedicated instrumentation. The WSCL has recently upgraded its *forensic* DNA laboratory with one AB 3130 and one AB 310 instrument. The *project plan* is to use these instruments to process offender samples until dedicated equipment can be obtained. The methodology used will be an automated bead based DNA extraction, followed by PCR amplification using the AB Identifiler kit. The samples will be analyzed on a 3130 CE platform.

The WSCL currently has approximately 600 offender samples awaiting DNA analysis, and anticipates receiving approximately 1400 additional samples by March 31, 2010. *This projects goal and objective is to facilitate the WSCL to analyze and review offender samples in-house using NIJ funding through this solicitation.* We do not anticipate sending any samples to accredited fee-for-service laboratories for analysis.

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