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**ILLINOIS STATE POLICE**  
*Division of Forensic Services*

George Ryan  
*Governor*

March 30, 1999

Sam W. Nolen  
*Director*

Forensic Sciences Program Manager Richard Rau  
Office of Science and Technology  
National Institute of Justice  
633 Indiana Avenue N.W., Room 911  
Washington, DC 20531

Dear Dr. Rau:

Re: Expansion of DNA Analysis Capabilities in the Illinois State Police Forensic Sciences Command (96-MV-VX-0020).

Please find enclosed the final categorical assistance progress report for the grant period ending December 31, 1998. An update on the activities listed in the implementation schedule of the revised Program Narrative is provided.

If you have any questions please contact me at (217) 557-2399. Thank you for your continued assistance with this program.

Sincerely,

A handwritten signature in cursive script that reads "Susan Hart Johns" with a small flourish at the end.

Susan Hart Johns  
R&D Program Administrator

SHJ:l

Enclosures

CC: Deputy Director Teresa Kettelkamp  
(Through Assistant Deputy Director Kathleen Sauter)  
Master Sergeant Barbara Freesen  
Mr. Michael Sheppo  
Ms. Kristen Boster  
Mr. Jeff Knauer  
File



**U.S. DEPARTMENT OF JUSTICE**  
Office of Justice Programs

## CATEGORICAL ASSISTANCE PROGRESS REPORT

The information provided will be used by the grantor agency to monitor grantee cash flow to ensure proper use of Federal funds. No further monies or other benefits may be paid out under this program unless this report is completed and filed as required by existing law and regulations (Uniform Administrative Requirements for Grants and Cooperative Agreements — 28 CFR, Part 66, Common Rule, and OMB Circular A-110).

1. GRANTEE Illinois State Police Forensic Sciences Command		2. AGENCY GRANT NUMBER 96-MV-VX-0020	3. REPORT NO.
4. IMPLEMENTING SUBGRANTEE N/A		5. REPORTING PERIOD (Dates) FROM: 7/1/98 TO: 12/31/98	
6. SHORT TITLE OF PROJECT Expansion of DNA Analysis Capabilities in the ISP-FSC		7. GRANT AMOUNT \$450,000	8. TYPE OF REPORT <input type="checkbox"/> REGULAR <input type="checkbox"/> SPECIAL REQUEST <input checked="" type="checkbox"/> FINAL REPORT
9. NAME AND TITLE OF PROJECT DIRECTOR Susan Hart Johns R&D Program Administrator		10. SIGNATURE OF PROJECT DIRECTOR <i>Susan Hart Johns</i>	11. DATE OF REPORT 3/30/99
12. COMMENCE REPORT HERE (Continue on plain paper) See attached.			
13. CERTIFICATION BY GRANTEE (Official signature)			14. DATE

**Expansion of DNA Analysis Capabilities  
in the Illinois State Police Forensic Sciences Laboratory System  
Final Report  
July - December 1998**

ACTIVITY	LABORATORY	PROGRESS
Develop/Expand DNA Testing	Metro-East	<p>Four analysts at the Metro-East laboratory completed training and are performing casework using RFLP technology.</p> <p>RFLP casework has been implemented at the laboratory using the chemiluminescent technique. There is an open case acceptance policy (all cases are analyzed, with or without suspects). RFLP cases are accepted from all other Illinois State Police laboratories.</p>
	Southern Illinois	<p>Two individuals are certified to use the procedures, extracting and quantitating DNA samples, and are using them on casework material. One analysts is currently conducting this type of casework. The other participated in an STR training class.</p> <p>Two analysts completed an STR training class conducted at the R&amp;D Laboratory in Springfield. The analysts are completing supervised casework.</p> <p>There is an open case acceptance policy (all cases are analyzed, with or without suspects). DNA cases submitted to the laboratory are screened locally and then analyzed by another Illinois State Police laboratory.</p>
	Rockford	<p>Two individuals successfully completed training in extracting and quantitating DNA samples and are now participating in STR training at the FSC-C.</p> <p>There is an open case acceptance policy (all cases are analyzed, with or without suspects). DNA cases submitted to the laboratory are screened locally and then analyzed by another Illinois State Police laboratory.</p>

	Morton	<p>PCR technology (PM/DQ-A1 and D1S80) has been replaced with STR technology.</p> <p>One individual assisted in the validation of STRs at the R&amp;D Laboratory. He is performing STR casework.</p> <p>One individual completed the STR training class conducted at the R&amp;D Laboratory in Springfield. She is completing supervised casework.</p> <p>There is an open case acceptance policy (all cases are analyzed, with or without suspects). DNA cases submitted to the laboratory are screened locally and then analyzed by another Illinois State Police laboratory.</p>
	Springfield (Caseworking Section)	<p>RFLP casework was eliminated in the Springfield Laboratory to allow staff to be trained in STRs.</p> <p>There is an open case acceptance policy (all cases are analyzed, with or without suspects). DNA cases submitted to the laboratory are screened locally and then analyzed by another Illinois State Police laboratory.</p> <p>One individual assisted in the validation of STRs at the R&amp;D Laboratory. She is performing STR casework.</p> <p>Two individuals completed the STR training class conducted at the R&amp;D Laboratory in Springfield. They are completing supervised casework.</p> <p>Four additional analysts are participating in an STR training and validations course being held at the Springfield Laboratory.</p>
	Westchester	<p>Biology services are no longer offered at this laboratory. The FSC-C is providing these services for the Suburban Chicago agencies.</p> <p>There is an open case acceptance policy (all cases are analyzed, with or without suspects). DNA cases submitted to the laboratory are screened locally and then analyzed by another Illinois State Police laboratory.</p>

	<p>Forensic Science Center at Chicago (FSC-C)</p>	<p>RFLP casework continues using chemiluminescent techniques. There is an open case acceptance policy (all cases are analyzed, with or without suspects). DNA cases are accepted from all other Illinois State Police laboratories.</p> <p>PCR technology (PM/DQ-A1 and D1S80) has been replaced with STR technology.</p> <p>A total of nine analysts are fully qualified for STR casework at the FSC-C, including the Forensic Biology Training Coordinator Pam Fish.</p> <p>Five individuals participated in a statewide program under the direction of the R&amp;D Laboratory to validate STRs for casework.</p> <p>Three analysts completed STR training and an additional three analysts are performing supervised casework.</p> <p>There are four additional analysts from FSC-C receiving STR training at the FSC-C.</p>
	<p>R&amp;D</p>	<p>PCR technology (PM/DQ-A1 and D1S80) has been replaced with STR technology.</p> <p>The R&amp;D Laboratory continues to accept only special needs cases.</p> <p>The R&amp;D Laboratory has begun preliminary work on DNA sequencing to research new technologies for use in special needs cases.</p> <p>The three research coordinators at the R&amp;D Laboratory directed STR validations and are qualified for STR casework. They continue to assist with training.</p>
	<p>Joliet</p>	<p>PCR technology (PM/DQ-A1 and D1S80) has been replaced with STR technology.</p> <p>Two PCR analysts completed an STR training class conducted at the FSC-C. They completed their supervised casework and returned to the Joliet Laboratory to establish STRs in that lab.</p> <p>There is an open case acceptance policy (all cases are analyzed, with or without suspects). Cases submitted to the laboratory are analyzed by another Illinois State Police laboratory.</p>

<p>Expand the Database</p>	<p>Springfield</p>	<p>The Springfield database section worked with the FSC-C and does not have a backlog of offender samples awaiting RFLP analysis.</p> <p>All but one database analyst at the Springfield Laboratory has completed STR training.</p> <p>Robotic equipment has been received in the laboratory and is being validated by database staff with the assistance of the R&amp;D laboratory for use in analyzing offender samples using STR technology.</p>
<p>Ensure Quality Standards</p>	<p>QA Program</p>	<p>All Illinois State Police laboratories were re-inspected by ASCLD/LAB in 1997. All remain accredited.</p> <p>All DNA sections at the Illinois State Police are audited annually. The last audit was held in December 1998 and was conducted by the National Forensic Science Technology Center against ASCLD/LAB and DNA Advisory Board Standards. DNA sections at the following laboratories were audited: FSC-C, Joliet, Morton, Springfield, R&amp;D, and Metro-East.</p> <p>All DNA analysts performing casework and analyzing database samples are participating in external proficiency testing twice per year. During their training courses, analysts do not participate in proficiency testing but are competency tested prior to resuming casework and database analysis responsibilities.</p> <p>A troubleshooting team has been established to assist laboratories setting up STR equipment. Procedures have been implemented to certify the laboratory for STRs. The FSC-C and the R&amp;D laboratories have been certified. The Joliet, Morton and Carbondale laboratories are in the process of being certified.</p>
<p>Develop and validate new DNA testing Methods</p>	<p>R&amp;D with the FSC-C</p>	<p>The R&amp;D laboratory along with the FSC-C have completed the Short Tandem Repeat (STR) analysis validation to include all loci necessary for participation in CODIS. The validation of the Profiler plus analysis kit is complete and the kit is fully implemented in casework. The Cofiler analysis kit is in the pilot implementation process.</p> <p>The R&amp;D laboratory is pursuing sequencing and mitochondrial DNA (mtDNA) analysis for use on special needs cases.</p>

Educate courts and law enforcement personnel on the use of forensic DNA testing		The Illinois State Police provided regional training on DNA STR analysis, interpretation and court room testimony to personnel from states attorney's offices and law enforcement agencies. Training was provided to approximately 60 individuals.
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