

**Summary of NIJ
Solving Cold Cases with DNA
Grant Solicitation**

I. Introduction

The National Institute of Justice (NIJ) is the research, development, and evaluation agency of the

U.S. Department of Justice. NIJ provides objective, independent, evidence-based knowledge and tools to enhance the administration of justice and public safety. The Institute solicits proposals to inform its search for the knowledge and tools to guide policy and practice.

With this solicitation, NIJ is seeking proposals to search, evaluate, select, and conduct DNA analysis on violent crime “cold cases” (i.e., old, unsolved cases) that have the potential to be solved through DNA testing. Experience has shown that such cold case review programs can solve a substantial number of homicides and rapes. Recent advances have improved the ability of analysts to successfully use DNA from biological evidence that is old, of poor quality, or limited in quantity. These scientific advances, in addition to the availability of searchable convicted offender databases, has increased the likelihood of solving cases previously thought to be unsolvable.

II. Proposal Topics

The methods used for forensic DNA analysis have evolved markedly since they were first used for this purpose in the late 1980s. Although the early DNA methods provided highly powerful information, their uses were limited to evidence containing relatively large amounts of pristine DNA. In recent years, newer technologies have substantially increased the successful analysis of aged, degraded, limited, or otherwise compromised biological evidence. As a result, crime scene samples thought to be unsuitable for testing several years ago may now yield DNA profiles. Additionally, samples that previously generated inconclusive DNA results may now be amenable to re-analysis using newer methods.

The President’s DNA Initiative was announced by Attorney General John Ashcroft in March of 2003. Advancing Justice Through DNA Technology (available at <http://www.ojp.usdoj.gov/nij/dnainitiative/initiative.html>) includes a comprehensive national strategy to use DNA technology to solve crime and protect the innocent.

The initiative proposes more than \$1 billion in funding over a 5-year period to:

- Eliminate DNA sample backlogs.
- Strengthen crime laboratory capacity at the State, Federal, and local levels.
- Provide post-conviction DNA testing to protect the innocent.
- Use DNA to identify missing persons.
- Train the criminal justice community.
- Stimulate more research and development in all areas of forensic science, further enhancing the ability of State and local laboratories to keep up with the burgeoning DNA analysis workload.

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The remarkable success with cold case programs is due substantially to the existence of State, local, and Federal DNA databases. CODIS (Combined DNA Index System) is a software program that can link DNA profiles from crime scenes to convicted offenders and to other crime scene DNA profiles. CODIS can also aid investigations by searching a database of missing persons, which contains DNA profiles of unidentified remains and DNA profiles of relatives of those who are missing.

As an example of the power of DNA technology for solving cold cases, Kansas City police arrested a man several months ago who, over the course of 16 years, is suspected of taking the lives of 12 women. The youngest of his victims was 15. A modest grant of \$111,000 from the Department of Justice paid for forensic analyst and investigator overtime to review DNA evidence in this and other cases. The grant allowed investigators to solve 22 homicides and 9 rapes through the use of DNA evidence.

III. Solicitation objectives and requirements

Eligibility: State and units of local government are eligible to apply for funding under this solicitation. Awardees may use the funds to support the operation of regional task forces.
Qualifying offenses: Grant funds must be used for evaluation of offenses such as sexual assault, murder, and other serious offenses (such as kidnapping) where DNA evidence is typically found and would have the greatest probative value for investigation and resolution of the crime.

Applicants are encouraged to be creative in the mechanisms they use to identify and prioritize cases. The proposed plan for the review, selection, and prioritization of cases must be clearly stated. There must be a strategy for coordinating with appropriate criminal justice entities that would be affected by these activities, as well as the victim or victim's family. Letters of intent from collaborating agencies strengthen the proposed plan. There must also be a plan of action if case review suggests that subsequent DNA testing is warranted, as well as a demonstration that there will be appropriate followup investigatory processes if a DNA match is obtained.

The following should be considered when developing the strategy for case review and selection:

Cases should be prioritized such that if a DNA match is made, the case can continue toward prosecution and judicial conclusion.

Cases should be evaluated for statute of limitation issues that might affect the ultimate ability to prosecute and resolve a case. Information about statute of limitations review should be included in the proposal.

When a case remains unsolved for a long period of time, evidence may be handled by more people. Furthermore, as cases age, the likelihood increases that evidence may be moved to new or remote storage locations as evidence from newer cases fills police department shelves.

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It cannot be presumed that victims and witnesses, even if they were eager to pursue the case when it occurred, are still interested in pursuing the case. **Cases should be assessed to determine whether witnesses necessary for the prosecution are still available for testimony.** Additionally, the older a case is, the more difficult it may be to locate witnesses.

Evidence from older cases may have been submitted previously but can now be re-tested for DNA with a higher likelihood of success. For example, hair previously submitted for standard microscopic hair analysis may now be amenable to mitochondrial DNA testing.

Some sample types may be more likely than others to result in DNA profiles. For example, a vaginal swab from a rape kit collected more than 48–72 hours after the crime may yield a lower quantity of DNA as compared to a sample collected earlier or a stain on clothing.

Cases that could benefit from a review for potential DNA evidence can be identified from numerous sources. In some instances a police officer or investigator may remember an unsolved case from years ago. Other cases may be identified by coordinated, interdepartmental efforts, victims or witnesses who have heard about the potential of DNA evidence, and laboratories taking inventory of their storage facilities.

Current DNA analysis techniques enable laboratories to develop profiles from biological evidence invisible to the naked eye, such as skin cells left on ligatures or weapons. Valuable DNA evidence might be available that previously went undetected in the original investigation. Laboratory personnel can also provide a valuable perspective on which evidence might yield probative DNA results.

Expected results:

The result of receiving funding under this solicitation should be a demonstrated increase in the number of cold cases analyzed for DNA evidence and being closed.

Success should also be measured by the percentage change in the number of cases and samples yielding DNA profiles initially thought to be unsuitable for testing, and the percentage change in the number of cases and samples previously generating inconclusive DNA results now amenable to re-analysis using new methods.

All eligible DNA analyses conducted under this award are submitted for inclusion in CODIS.

IV. Allowable use of funds

Grant funds may be used for, but are not limited to, the following:

Personnel and necessary consultants and contractors:

Staff overtime and consultant and contractor salaries are allowable under this solicitation.

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Individuals may include (but are not limited to) investigators, retired homicide detectives, students (such as law students), interns, crime lab personnel, coroners, medical examiners, administrative staff, and victim/witness advocates or coordinators.

Travel (for activities such as interviewing victims and witnesses, etc.).

Supplies and equipment (where necessary to complete the objectives stated in the proposal).

DNA testing: Applications may include requests for items related to DNA analysis where appropriate. NIJ encourages cost-effective use of funds by inclusion of a comprehensive pre-screening process. Applicants are encouraged where possible to perform DNA testing that will generate profiles with the potential to be uploaded into CODIS. DNA analysis must be performed by an accredited or certified laboratory.

Each DNA analysis conducted under this award, and each stored DNA sample that results from this award, must be maintained in accordance with the privacy requirements and restrictions on disclosure described in 42 U.S.C. section 14132(b)(3). Also each DNA analysis conducted under this award must be carried out in a forensic science laboratory that complies with Federal quality assurance standards for forensic DNA testing and is either accredited by the American Society of Crime Laboratory Directors-Laboratory Accreditation Board or certified as accredited by the National Forensic Science Technology Center for compliance with Federal standards.