



Cold Cases: Resources for Agencies, Resolution for Families

by Charles Heurich

It is 1974. The body of an 8-year-old girl who has been sexually assaulted has been found in a wooded area next to the park. The girl was last seen alive earlier that morning, leaving her house for school.

Fast forward to 2008. The case file and evidence sit in storage at a local police department. The case — never solved — continues to take a back seat to more recent cases. The family of the little girl waits and wonders if there will ever be resolution.

Every day across the U.S., investigations slow or stop completely, and cases go “cold.” Police agencies often lack the manpower, equipment and funding to support units dedicated to investigating and analyzing these cold cases. Homicide and sexual assault units are backlogged with active cases. Consequently, cold cases rarely get the attention they deserve. (See sidebar on page 21, “What Is a Cold Case?”)

The National Institute of Justice’s (NIJ) Solving Cold Cases with DNA grant program¹ helps states and local governments identify, review, investigate and analyze violent crime

cold cases — homicides and rapes — that have the potential to be solved through DNA analysis. Since NIJ issued its first solicitation for the cold case grant program in July 2004, the Institute has received more than 200 requests for funding, many from agencies trying to get cold case units started. Others have been looking for support to enhance established units — and in some cases, even to keep them in existence.

The goal of NIJ’s cold case grant program is to analyze or reanalyze evidence using modern DNA technology. In 2005, NIJ awarded a total of \$14.2 million to 38 state

and local agencies; in 2007, the Institute awarded more than \$8 million to 21 state and local agencies. Funds have been used for personnel, including overtime; equipment and supplies (both investigative and laboratory); investigative travel; training related to cold case investigation or DNA analysis; and outsourcing samples to private DNA laboratories when necessary.

The program has given agencies the opportunity to put resources toward solving homicides, sexual assaults and other violent offenses that may never have been reviewed or reinvestigated. Crime scene samples from these cases — thought to be unsuitable for testing several years ago — have yielded DNA profiles. And samples that previously generated inconclusive DNA results have been reanalyzed using newer methods.

Although complete data are still being compiled, as this issue of the *NIJ Journal* goes to press, more than 30 cases have been solved with DNA hits in the FBI's Combined DNA Index System (CODIS), which operates local, state and national databases of DNA profiles from convicted offenders, unsolved crime scene evidence, missing persons and arrestees (if state law permits the collection of arrestee samples). In addition, hundreds of probative DNA profiles — profiles that do not match the victim or any known people in the case — have been entered into CODIS, and thousands of cases have been reviewed under the program. Here are just a few stories from the field.

'It's Over'

The Palm Beach County (Fla.) Sheriff's Department, understanding the importance of having detectives dedicated to investigating cold cases, has eight full-time cold case personnel. With funding from NIJ, the unit has identified 225 cold cases to date, 89 of which have the potential to move forward for investigation or analysis because of possible biological evidence.

The department has screened nearly 700 items for biological evidence and more than

WHAT IS A COLD CASE?

The definition of a cold case varies from agency to agency. The National Institute of Justice currently defines a cold case as any case whose probative investigative leads have been exhausted. In essence, this means a case that is only a few months old may be defined as being "cold."

Attention continues to be focused on cold cases — or "historical" cases as they are called in many countries outside the U.S. — due to the popularity of television dramas and the increased involvement and public visibility of family members.

Recent advances in DNA technology also are allowing officials to take a fresh look at these cases. Short tandem repeat analysis² allows officials to test samples that, in the past, were too small to examine and to use statistics to confirm that a DNA profile belongs to one specific person. Using mitochondrial DNA,³ they can also test hairs (as the Palm Beach County Sheriff's Department did in the case of Kizzy Brooms; see main story) and unidentified remains that may accompany a cold case as evidence.

Along with these technological advances, the creation of the Combined DNA Index System (CODIS) has improved the chances of solving cold cases with DNA. Established and managed by the FBI, CODIS allows DNA profiles to be uploaded into a database and searched against other profiles at the local, state and national levels. There are two main indices in CODIS: the forensic index, which houses crime scene or evidence DNA samples, and the convicted offender index, which contains profiles for convicted offenders from all 50 states. CODIS also contains profiles of missing persons and arrestees (if state law permits the collection of arrestee samples). (For more information on CODIS, see <http://www.dna.gov> and <http://www.fbi.gov/hq/lab/html/codis1.htm>.)

1,300 stains. More than 870 of these stains have been analyzed for DNA, and 34 probative DNA profiles have been entered into CODIS. One of these profiles allowed officials to close the case of 5-year-old Kizzy Brooms, who was raped and murdered in West Palm Beach in 1985. Three hairs found on Kizzy's sweatshirt and chest were tested with newer DNA technology in 2007. The profile generated from these hairs was entered into CODIS and matched the DNA profile of a convicted offender, who had been arrested for Kizzy's murder in 1996 but was later set free after complications with evidence. When the investigator told Kizzy's mother, "It's over," she broke down and wept.

Providing 'Time and Energy'

"Having two full-time detectives and one victim advocate [in the department's cold case unit] has given us the time and energy we need to successfully review cold cases and to identify evidence that can be submitted for [DNA] testing," said Lt. Donald Gross of the Fresno (Calif.) Police Department.

The victim advocate plays an important role in Fresno's cold case unit. She offers emotional support for victims and families when they first learn their case is being reopened as well as throughout the investigation and trial. She is available to answer any questions victims and families may have, and can offer them information on financial and medical services.

To date, Fresno's cold case unit has:

- Solved or closed approximately 40 sexual assault cases.
- Written six John Doe warrants (warrants written for a person matching the DNA profile, not for a named individual).
- Four cases pending.
- Obtained two convictions.

As of December 2007, Fresno has 27 cases in CODIS waiting for matches and 51 cases waiting for DNA analysis. In addition, 131 homicides have been reviewed, and 43 either have been sent out or are waiting to be sent out for DNA testing. The unit has had three CODIS hits, one of which led to the arrest of Eddie Nealy for the murder of a 14-year-old girl who was found floating in a canal in 1985.

Successes and Challenges

The Sacramento (Calif.) Police Department is also having success with funding from the NIJ grant program. In 2003, an unknown male offered a woman a ride home, sexually assaulted her and held her captive for hours. Evidence in the case was recently reexamined, and DNA was found. A DNA profile entered into the state DNA databank matched the profile of Timothy Foy, who

was subsequently arrested for the crime and convicted in August 2007. He received 65 years to life.

But like many agencies, the Sacramento Police Department continues to face challenges, particularly on cases in which the murder victim's identity is unknown. Detectives are currently investigating two homicides with unidentified victims. Both have DNA profiles, but there are no matches in any of the databases. Detectives have conducted interviews, searched missing persons reports and worked with the local media to obtain publicity. As potential family members are located, officials will collect DNA for comparison, hoping to one day identify the murder victims.⁴

Resolution for Families

In 1992, Stacy McCall disappeared in Missouri along with two other women, Susie Streeter and Sherill Levitt. Stacy's mother, Janice McCall, is co-founder of One Missing Link, a not-for-profit service organization dedicated to reuniting the missing and their families. Having a missing loved one is "devastating," she said.

Speaking at an NIJ cold case regional training in San Diego (see related story, "Cold Cases: Strategies Explored at NIJ Regional Trainings," on page 24), McCall urged police agencies to recognize the importance of having dedicated cold case units. Borrowing officers from other units does not give cases the attention they need and, in some cases, creates shortages in other investigations, she said.

There is never "closure" for families, McCall explained, there is simply "resolution." Knowing that there is a mechanism to help fund cold case analysis can help provide some relief to families. When asked about her greatest fear, McCall responded, "There are actually two — that we will find Stacy or her remains and that we won't find Stacy or her remains." Stacy, Susie and Sherill have yet to be heard from or found.

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Notes

1. Although the grant program is called Solving Cold Cases with DNA, cold “hits” — the ultimate goal — are not the only measure of success. The identification of probative DNA profiles for entry into the Combined DNA Index System (CODIS) can also be considered a major goal. Once a profile is entered into CODIS, the hit might not come for weeks, months or even years; therefore, getting a profile into CODIS (which probably would not happen without the grant program) is a win for everyone involved.
2. Short tandem repeat (STR) technology is a forensic analysis that evaluates specific regions (loci) found on nuclear DNA. STRs are multiple copies of a short identical sequence arranged in direct succession in particular regions. The variable (polymorphic) nature of the STR regions analyzed for forensic testing intensify the discrimination between DNA profiles. For example, the likelihood that any two individuals (except identical twins) will have the same 13-loci DNA profile can be as high as 1 in 1 billion. For more information, see <http://www.dna.gov>.
3. Mitochondrial DNA (mtDNA) has provided forensic scientists with a valuable tool for determining the source of DNA recovered from damaged, degraded or very small

biological samples. mtDNA is a small circular genome located in the mitochondria, which are located outside of a cell’s nucleus. Most human cells contain hundreds of copies of mtDNA genomes, as opposed to two copies of the DNA located in the nucleus. This increases the likelihood of recovering sufficient DNA from compromised DNA samples, and for this reason, mtDNA can play an important role in missing persons investigations, mass disasters and other forensic investigations involving samples with limited biological material. For more information on mtDNA, see <http://www.dna.gov>.

4. For more information on NIJ's work on helping to identify unidentified human remains, see www.namus.gov.

About the Author

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The National Institute of Justice’s (NIJ’s) new Web site makes it easier for you to find what you are looking for.

The site now offers:

- Hot issues of the day on the home page.
- An “I want to” section with quick links to common tasks.
- Easier ways to find your favorite topics.
- A search function on every page.
- The ability to e-mail a friend and produce printer-friendly copies of pages.

The redesign also features an updated Topics section with links to NIJ’s research portfolios.

Over the next year, NIJ will be conducting “usability tests” for the new Web site to get feedback from our visitors. The first testing session will occur at the NIJ Conference (July 21-23).

We are committed to making our Web site as easy to use as possible. New information and pages are added all the time. Check back often.

<http://www.ojp.usdoj.gov/nij>