

Effectively Utilizing DNA Technology to Solve Crime in Orange County 2009-2010 Annual Report

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I. Introduction

DNA technology has proven to be the greatest and most powerful tool in the fight against crime for the past decade. Advances in DNA testing are helping police investigators solve cold cases where previous DNA analysis was unsuccessful or was not performed. While DNA evidence can identify suspects and convict the guilty, the technology can also be used to exonerate the innocent.

DNA technology is an invaluable tool to ensure accuracy and fairness in the criminal justice system. Orange County law enforcement has successfully used DNA technology to solve violent crime:

In December 2004, a suspect entered the Santa Ana home of an elderly couple pretending to be a prospective buyer of the residence they had for sale. The suspect stabbed the 83-year-old husband and his 73-year-old wife to death using steak knives from their own kitchen. He then ransacked the home and left bloody handprints. Law enforcement analyzed a Pepsi can that the defendant left on the kitchen counter. DNA from the Pepsi can was matched to the defendant's offender DNA sample in the state DNA database, taken from another case. In 2009, the defendant was convicted of special circumstance murder of the couple and is now on death row.

Similarly, DNA database technology has lead to the apprehension of a violent sexual assault perpetrator:

On Dec. 24, 1990, the victim was walking back to her apartment with her dog after going to look at Christmas lights. As she was walking, a man approached and distracted the victim by asking for directions, pretending he was lost. This

man and another suspect dragged the victim to their car and drove away. The victim's purse was later retrieved at the scene of the abduction, but her dog was never found. The suspects pistol-whipped, sexually assaulted and repeatedly threatened to kill the victim. The suspects finally released the naked victim with her pants tied around her eyes. The victim went to a nearby residence and the homeowners called the police. The suspect who had initially approached the victim as she walked her dog provided a state DNA offender sample for another crime in 2008. This offender DNA sample matched DNA evidence collected at the 1990 crime scene and from the victim.

II. Cooperating Department Head Structure

After months of debate and study into the subject, the Orange County Board of Supervisors appointed County Executive Officer Tom Mauk, District Attorney Tony Rackauckas, and Orange County Sheriff-Coroner Sandra Hutchens to serve on a 3-person executive committee that presides over the administrative management of the Orange County Crime Lab (OCCL).

History

On Oct. 27, 2008, the Orange County Board of Supervisors issued the following Board Directive regarding the operation of forensic science services in Orange County:

- Create the Cooperating Department Head Structure to oversee the administrative management of the lab
- Rename Sheriff's Crime Lab to the Orange County Crime Lab (OCCL)
- Hire a DNA Laboratory Director

Have the existing lab proceed with the implementation of a high volume crime
DNA analysis platform. This will greatly increase the capacity to analyze DNA samples.

The Cooperating Department Heads hired DNA Lab Director Elizabeth Thompson in June 2009. They renamed the Orange County Sheriff's Department (OCSD) Forensic Science Services division the OCCL in August 2009. The National Institute of Justice (NIJ) awarded OCCL a \$2 million grant in September 2009 to be used for a high volume property crime DNA analysis line. This program is slated to be fully operational by the end of 2010.

Legal Authority and Transparency

The U.S. Supreme Court and our state appellate courts have long recognized that the investigation and development of the evidence of crime is necessarily done by law enforcement agencies and that the prosecution remains responsible for any mistakes or negligence on the part of subordinate agencies acting on its behalf. The prosecutor, as the end user of the crime lab's services, has the legal responsibility to ensure that forensic testing is being reliably performed and that scientific evidence of a crime is fairly and legally used against an accused.

The Cooperating Department Head Structure eliminates the appearance of a conflict of interest that could result if any one single entity is placed in control of the crime lab. The structure also fosters communication and cooperation among the County's criminal justice partners and brings about a much needed transparency to our law enforcement forensic laboratory.

Summary

The Cooperating Department Head Structure has increased communication and cooperation among the County's law enforcement agencies. Orange County District Attorney (OCDA) and OCCL personnel meet monthly to discuss and resolve the County's forensic DNA issues and problems. Together, members of both organizations provide training to police agency personnel. To ensure that the Crime Lab's accreditation status is maintained, there has appropriately been no interference by the Cooperating Department Heads regarding laboratory scientific or technical matters. There has emerged, however, a much welcomed climate of openness and transparency that has helped to ensure fairness to all parties within the criminal justice system.

Under the administrative guidance of the Cooperating Department Heads, the OCCL expanded testing and technology by implementing additional robotics, adding DNA analysis software upgrades and improving DNA report writing software. Further, the Cooperating Department Heads encouraged the creation and implementation of the DNA case triage system by OCDA and OCCL staff members. The DNA triage system has resulted in a substantial reduction of OCCL's backlog of DNA property crimes in Orange County. The Cooperating Department Heads also facilitated a joint effort by the OCDA and OCCL to prepare and submit a successful NIJ Efficiency Grant application that is providing the funding for the County's high volume DNA property crime analysis platform.

III. High-Volume Crime DNA Analysis Platform

DNA analysis of property crimes enhances public safety by providing law enforcement with a powerful tool to solve and prevent property crime. Solving property crime through forensic DNA analysis will also stop or delay the escalation of criminality from the commission of property offenses to the perpetuation of violent crime.

In a Florida study, 52 percent of database hits against murder and sexual assault cases matched individuals who had prior convictions for burglary.¹ NIJ researchers have concluded that there is a higher recidivism rate among those who commit property crimes than other types of offenses and that these offenders often demonstrate the potential to engage in more serious, violent behavior. Almost 33 percent of violent criminals have criminal histories consistent with the commission of property crimes.² Analyzing DNA evidence from property crimes is a necessity since the greatest danger posed by property crime offenders is their potential to commit more serious and violent crimes.³

Forensic DNA analysis procedures are both labor and time intensive. The forensic community has recognized that the solution for increasing the capacity of crime labs to analyze DNA crime scene samples is to streamline the DNA analysis process by employing automated workflow systems for high-volume crime that include robotic DNA instrumentation. Automated

¹ Zedlewski, Edwin, et al., "DNA Analysis for Minor Crimes: A Major Benefit for Law Enforcement" <u>NIJ Journal</u> Issue no. 253 (January 2006): 4.

² Reaves, Brian A. "Violent Felons in Large Urban Counties." <u>Bureau of Justice Statistics [BJS] Special Report [US Dept of Justice] July 2006: 2.</u>

³ Zedlewski, Edwin, et al., "DNA Analysis for Minor Crimes: A Major Benefit for Law Enforcement" <u>NIJ Journal</u> Issue no. 253 (January 2006): 3.

laboratory high-volume DNA processing platforms increase analyst productivity, reduce human error, and help prevent incidents of contamination.

In the spring of 2009, with the assistance of the OCDA, the OCCL applied for a NIJ DNA Efficiency Grant. The OCCL was notified in September 2009 that Orange County was the recipient of the largest award ever bestowed under the NIJ DNA Efficiency Program. The OCCL received \$2 million to advance a program, later named the High Volume Property Crime DNA Program, consisting of \$1.5 million in federal funds and a matching contribution of \$500,000 from the County's existing Proposition 69 DNA funding. Grant funding will enable the crime lab to implement a High Volume Property Crime DNA Program, which is slated to be fully operational by the end of 2010.

The primary tenet of the High Volume Property Crime DNA Program is to maximize the use of limited forensic DNA analysis resources in the most efficient manner. This goal is being accomplished through the creation of a property crime DNA analysis workforce dedicated exclusively to the analysis of property crimes. Following a team concept, this workforce will process property crime scene samples using a highly automated DNA platform on a rotational schedule. Crime lab forensic scientists have carefully selected an instrumentation platform that takes full advantage of state-of-the-art robotics and automation. The High Volume Property Crime DNA Program teams will be able to screen, analyze and deliver approximately 560 property crime scene DNA sample results each week.

The median turnaround time from submission of DNA analysis requests to completed reports for property crime cases is 125 days. The OCCL expects to reduce this turnaround time to 25 days. Since the implementation of the High Volume Property Crime DNA Program will

allow major case analysts to devote their time exclusively to the processing of violent crime cases, the OCCL projects a 15 percent or more reduction in turnaround time from submission of requests to completed reports for these cases.

The High Volume Property Crime DNA Program will greatly reduce the turnaround time for DNA analysis of property crimes and reduce the existing backlog of cases awaiting DNA analysis. Quicker turnaround time on more property crimes cases yields great savings in a number of areas. Law enforcement resources will be saved because suspects will be identified sooner and crime rates will decrease. Although an increase in the number of prosecutions for property crimes will result, more cases will be resolved prior to jury trial based on the strength of the DNA evidence.

IV. DNA Analysis Triage System

In 2005, the OCCL, OCDA, and OCSD participated in the NIJ "Property Crime Expansion" grant. One of the key lessons learned from this participation was an understanding of the need for police agencies, prosecutors and crime labs to be part of the review or screening process of cases before the evidence is analyzed. During the period of the grant, a deputy district attorney and a police sergeant evaluated cases from a legal and factual perspective. This evaluation included an assessment as to whether the case was able to be prosecuted. A supervising forensic scientist evaluated the evidence collected from a scientific perspective and helped determine whether elimination standards were required.

In late 2006, the OCDA initiated a DNA property crime project in conjunction with the police departments of Orange County's two largest cities, Santa Ana and Anaheim. Utilizing the lessons learned from the NIJ Property Crime Expansion Project, the OCDA designed and

implemented a DNA property crime project with the specific intent to improve the triage process used to review property crime cases prior to DNA analysis.

With the experiences gained from the NIJ project and the OCDA's DNA property crime project, the OCCL and OCDA were uniquely situated to implement a county-wide triage process for property crimes. During the triage process, a number of objectives are accomplished: first, reports are reviewed to decide if a case is prosecutable; second, the evidence collected is evaluated and the samples selected for DNA analysis are prioritized; and third, a determination is made as to whether elimination standards are needed. Any case deficiencies are discussed during the triage process and follow-up work is assigned. If a case is ready for DNA analysis, the evidence, along with sample prioritization information, is then submitted to the lab for analysis. After the case is submitted, communication continues as to the status of the analysis and investigation follow-up requests.

The DNA analysis triage system enables personnel from both entities to evaluate DNA analysis requests submitted to the crime lab. While forensic DNA analysts examine property crime DNA analysis requests from a scientific basis, prosecutors evaluate the same requests from a legal perspective. Feedback is provided to police agency crime scene and investigative personnel. During a triage meeting, deputy district attorneys and forensic scientists can review all DNA analysis requests received each week.

The DNA analysis triage system maximizes communication and wisely allocates the limited DNA resources of the forensic laboratory, law enforcement and the prosecution to effectively address and reduce the crime lab's DNA backlog.

V. Local DNA Database

DNA database technology has proven effective in solving crime and exonerating the innocent. Identifying suspects expeditiously through the use of law enforcement DNA database technology helps bring closure for the victims of crime, prevents future victimization and saves critically limited police investigative resources. DNA database technology provides police agencies with forensic DNA leads that allow investigators to solve crime and coordinate multijurisdictional investigations. Moreover, this technology prevents recidivism by stopping perpetrators before they commit additional crimes.

Specifically, DNA database technology can be used to help solve crimes in three ways. In cases where a person is suspected of committing a crime, a sample of that individual's DNA can be directly compared to evidence from a crime scene to either include or eliminate that person as a possible suspect. In other cases, when the perpetrator is completely unknown, the crime scene suspect profile can be uploaded into law enforcement DNA databases to be compared against the DNA profiles of known persons or offenders for a possible match. Finally, crime scene suspect profiles can be uploaded into law enforcement DNA databases and compared to other crime scene suspect profiles. This third method of solving crime provides investigators with case-to-case links, and thus additional investigative leads.

Timely analysis of crime scene evidence and the upload of suspect DNA profiles into law enforcement DNA databases both solves and prevents criminal activity. In Orange County, a local DNA database hit solved a robbery committed by a criminal street gang member:

In December 2009, the suspects entered the carport garage of a Santa Ana middle-aged couple. The suspects broke a vehicle window to steal the car. When the victims came outside, one suspect pointed a shotgun at them and pulled the

trigger. Fortunately, the shotgun did not fire. The other suspect pointed a handgun at the couple while the first suspect stole the cell phone of the female victim, who was attempting to call police. Both suspects fled and were not immediately apprehended. A local DNA database hit in 2010 identified the person who pointed and tried to fire the shotgun at the victims. He is now awaiting trial.

Maintaining our local DNA database ensures that recidivist criminals provide a DNA sample near the beginning of their criminal careers. Individuals who reoffend will be quickly identified and prevented from committing additional crimes. Inclusion in a law enforcement DNA database will also provide a deterrent effect to an individual who is on notice that his DNA profile is contained in a law enforcement DNA database.

Studies illustrate that offenders linked to crimes through DNA database hits have significant criminal histories. Many offenders have had multiple arrests and/or convictions prior to their profile inclusion in a law enforcement DNA database. Between 2003 and 2007, the New York Police Department conducted DNA typing on high-volume crimes in a program called Biotracks. Of the 161 individuals arrested based on DNA cold hits from that program, 80 percent had been convicted of violent crimes and 54 percent had more than 25 arrests each.⁴

Local OCDA DNA Database Overview

The OCDA began the planning of a local DNA database in 2006. That same year, the Orange County Board of Supervisors approved the purchase of the OCDA DNA Database software system called FSS-iD from the Forensic Science Services ("FSS") of the United Kingdom. The goal of the OCDA Database is to obtain DNA samples from local individuals,

⁴ Safir, Howard "DNA Technology as an Effective Tool in Reducing Crime," Forensic Magazine, November, 2007

some of whom are not eligible for inclusion in the State DNA database. In March 2007, the Orange County Board of Supervisors enacted an ordinance that imposed criminal sanctions to safeguard the privacy of individuals who provide DNA samples for inclusion in the OCDA DNA Database.

The OCDA DNA Database is an integrated system comprised of many components. The database software system includes FSS-iD and advanced programs created by the OCDA Information Technology Unit such as "BILL" (a program that stores and transfers collection information).

The OCDA DNA Database Administrator is an experienced forensic scientist. Initially, the DNA analyses of local OCDA DNA Database samples were conducted by the FSS' nationally and internationally accredited forensic laboratory. Last year, the Orange County Board of Supervisors approved the selection of Bode Technology, an internationally and nationally accredited forensic lab in Virginia, to conduct the DNA testing on the local OCDA DNA Database samples. Bode Technology can complete its testing and analysis within 30 days at an extremely cost effective price, \$24 per sample. Bode Technology is a well respected forensic laboratory that has processed over one million offender DNA profiles for 26 of our nation's state database systems.

All persons who provide DNA samples to the local OCDA Database do so voluntarily. An individual who agrees to provide a DNA sample to the local OCDA DNA Database consents to do so in writing and pays an Orange County Board of Supervisors approved \$75 administrative fee to help defray program costs. The collection of DNA samples for inclusion in

the local OCDA DNA Database can result from a negotiated plea and is an integral component of several OCDA public safety and deterrence programs.

The efficiency of the OCDA's DNA database program stems from the fact that the operation is streamlined. The process begins in the courtroom, where the decision is made to collect a sample. The process continues at the OCDA collection sites, where investigative assistants with specialized training collect a DNA sample, perform quality assurance and prepare the sample to be shipped for processing. The process continues when the genetic data is returned to the OCDA forensic scientist for quality assessment, data review and upload of genetic data.

The OCDA DNA Database has begun comparing suspect DNA profiles from crime scenes with profiles from volunteers who consent to their samples being placed in the database. When the local DNA database is fully operational, a less than 24 to 48-hour turnaround time is anticipated from crime scene profile upload to database hit confirmation and police agency notification. This almost real-time turnaround time response will provide investigators with strong DNA forensic leads during the early critical stages of an investigation.

Individual Sample Collection for the Local DNA Database

The OCDA began collecting local DNA database samples from individuals in April 2007.⁵ Since that time, the OCDA has collected over 27,000 local DNA database individual samples. The local DNA database has five stationary County DNA Collection Sites. In addition, the OCDA is in the process of designing and obtaining a mobile DNA collection vehicle using federal funds received by the OCDA in September 2009. There is a DNA Collection Site at each

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⁵ The OCDA Collection Site personnel also collect DNA samples from qualified persons for inclusion in the state DNA database in addition to the samples that are collected for inclusion in the local DNA database.

of the County's four main criminal courthouses and at the Central Jail. Each DNA Collection Site is staffed with several Sample Collection Investigative Assistants who collect local and state DNA database samples.

Local DNA Database Security

Over the past several years, the OCDA has taken the necessary steps to develop the highly intricate infrastructure that comprises the OCDA DNA database system. This arduous process has included the research, development, design, and implementation of the local DNA database as well as the creation of protocols and procedures for the ongoing operation and expansion of both the DNA database sample collection program and the DNA database itself.

One of the key components of the development process and ongoing database operation is the physical and technical security required for both the DNA samples and all genetic data. To meet these requirements, the OCDA developed and tested IT security procedures and regulations to protect the database. The OCDA also established and provided for specialized training and oversight of the personnel responsible for database operation. These elements are critical to the database's secure and efficient operation.

The OCDA has the legal responsibility to protect the integrity and privacy of DNA samples that are collected and the DNA profiles that ultimately result. We are also responsible for the protection of the related personal information attached to these DNA samples. The OCDA DNA Database system has been carefully developed so that oversight, audit and security features are built into each step of database operations. This includes different levels of access and oversight of the various database components by OCDA personnel assigned to a specialized DNA Unit. The protocols that dictate the operation of the database include a highly detailed

network of security restrictions designed to ensure the integrity of the database and the information it contains. Strict adherence to these regulations and supporting DNA data banking policies and legislation is critical to the legal and secure operation of the database and to protecting the private genetic information contained within the database.

The structure and organization of our local DNA database system is designed to mirror that of the state DNA database system. The state DNA database system is under the care and control of California's Attorney General. The Attorney General oversees the state forensic laboratory system that includes numerous casework forensic laboratories and the lab administrators responsible for the day-to-day operation of the state database. In addition to database forensic scientists, the Attorney General maintains a staff of prosecuting attorneys and state police investigators who assist and guide state DNA database administrators. The OCCL is just one of dozens of casework labs that fall under the state DNA database system.

Every aspect of database operation must be carefully and constantly monitored and reviewed. Like the Attorney General, the District Attorney must maintain an integrated staff of forensic scientists, investigators, investigative assistants and attorneys to securely maintain and operate our local DNA database. The OCDA must ensure that the casework forensic lab that is generating crime scene profiles (OCCL) is properly accredited and correctly performing casework DNA analysis. Likewise, the OCDA must also ensure that the forensic lab that analyzes its individual DNA database samples is properly accredited and can correctly perform individual or offender DNA analysis following accepted scientific procedures.

Like the Attorney General, the District Attorney must oversee all aspects of individual sample collection. The state provides offender sample collection kits, collection rules and regulations to all police agencies, probation departments and parole offices in the state. The

Attorney General must ensure that every person who provides a DNA sample for inclusion into the state DNA database system has been properly identified by local law enforcement agency personnel. Further, the Attorney General must verify that all offender samples collected by local law enforcement agencies qualify for inclusion in the state DNA database system.

The responsibility to securely maintain both physical DNA samples collected from offenders and the genetic profile information that is generated from these samples is of paramount importance for both agencies. Samples that are lost, erroneously collected, mistakenly analyzed or compromised in any manner may jeopardize database security. Although an enormous undertaking, each system must include not only forensic scientists to perform the basic DNA testing, but also investigators to ensure that DNA samples and genetic information are securely maintained and attorneys to legally monitor database operations.

Database Costs and Savings

Any attempt to conduct a cost-benefit analysis of the local DNA database is difficult at best. Deliverables such as kits, analyses and salaries can be calculated over a given time period. However, the bulk of expenses, up until this point, primarily include startup costs for database set-up rather than day-to-day operational costs.

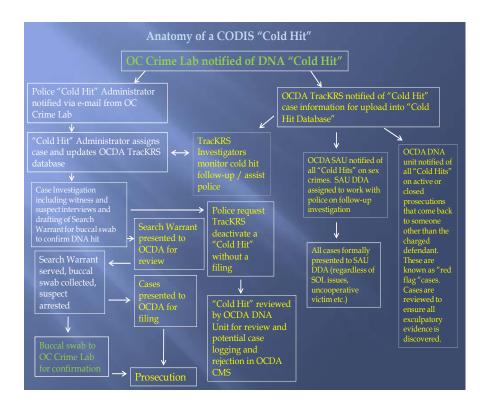
It is difficult to assign a dollar figure to the benefits and savings gained by creating and maintaining a local law enforcement DNA database. How does one assign a monetary value to finding the perpetrator of a murder or exonerating an individual who was wrongly convicted of a crime? Is it possible to determine how much investigative, prosecutorial, defense bar and court resources are saved when a criminal is identified quickly through a local DNA database hit? Is there really a way of assigning a monetary value to incarcerating a violent offender before he hurts or kills another innocent person?

To measure one of the cost savings, we can use empirical data gleaned from preliminary hearing statistics to highlight just one example of the cost benefits of maintaining a local DNA database. When an individual is charged with a felony in Orange County, one of the initial steps of the usual criminal justice process requires the prosecution to prove, to a magistrate during a preliminary hearing, that a crime has been committed and that there is reasonable cause to believe that the defendant is the person who committed the felony offense. As a direct result of local DNA database collection efforts, the number of preliminary hearings conducted last year was reduced by 1,000, saving the County hundreds of thousands of dollars.

VI. Tracking of Orange County's DNA Cold Hits

To effectively utilize limited DNA resources, proper communication must be established and maintained between all law enforcement shareholders. Of concern is the very real possibility that police agencies, notified by the lab of a cold hit, fail to follow-up on an investigative lead. In March 2006, the Oakland Police Department released a statement expressing "deep regret" for failing to follow-up on a DNA cold hit reported to them by the State. The DNA hit implicated a rapist who later victimized another young girl before he was finally contacted by police. The chart below illustrates the steps followed after a DNA hit:

⁶ Williams, L. "Investigators regret DNA evidence mistake." San Francisco Chronicle 16 March 2007: A1.



Together, the Task Force Review Aimed at Catching Killers, Rapists, and Sexual Offenders (TracKRS) and OCCL have set up a network that includes a designated DNA Cold Hit Administrator at each local law enforcement agency. The lab regularly provides TracKRS with all cold hit notifications received from the State. In turn, TracKRS Unit investigators log all cold hits and contact agencies to provide cold hit investigation assistance.

VII. NIJ Solving Cold Cases with DNA Grant Proposal

The OCDA has recently applied for an NIJ DNA grant (\$799,300) to solve up to 100 violent cold cases in Orange County. Orange County law enforcement agencies have numerous violent crime cold cases that have never been solved and suspects that have never been apprehended. Currently, there are over 1,000 unsolved murders, over 2,500 unsolved sexual

assaults, and a vast number of unsolved robberies and aggravated assaults that remain unsolved in Orange County.

These unsolved cases, often termed "cold" due to the lack of investigative leads or evidence, can be extremely frustrating for assigned case investigators. Detectives are keenly aware of their responsibility to victims, their families and the citizens of Orange County to apply the best available resources and technology to their cases, and to ultimately apprehend those individuals responsible for perpetrating violent crime in our communities.

The investigation of unsolved cases is made even more difficult, and thus less likely to be solved, by current budget and staffing reductions by State, County and city law enforcement agencies. As a result, police agencies are struggling to keep up with their current burgeoning caseloads. Even in the best of economic times, the opportunity to investigate cold cases has always been dependent upon the availability of funding to allow detectives to investigate cold cases on an overtime basis. Since overtime pay has been drastically reduced or discontinued at every law enforcement agency in Orange County, cold case investigations have virtually come to a standstill and these cases are unfortunately often neglected.

Any approach to examine or re-examine unsolved cases for potential DNA evidence must be a collaborative team effort from all criminal justice partners. Prosecutors and crime lab personnel are in the best position to assist police investigators in determining the most probative evidence for forensic analysis, to identify and evaluate cold cases, prioritize those cases that might benefit the most from forensic analysis, and determine the legal and investigative significance of potential DNA database matches.

Through the key features of this grant proposal, the OCDA intends to facilitate and assist agencies in solving violent crime. This grant proposal includes the following:

- Funding to OCCL to conduct DNA analysis (\$1,000 per case)
- Program coordination directed by a half-time DNA Unit deputy district attorney (\$117,218 for 18 months) and a half-time paralegal (\$46,052 for 18 months) using a case tracking system designed by OCDA IT
- Funding to police investigators in the form of *overtime compensation* that will allow them to identify and investigate unsolved cases
- A collaborative approach to solve up to 100 violent cold cases 17 local police agencies and the Crime Lab have enthusiastically agreed to participate in this 18month program

If funded, this proposed program will succeed because it provides adequate funding to each of the necessary law enforcement entities: the police agencies, crime lab and prosecutor's office. This includes overtime compensation to police agency investigators to identify, select and investigate violent crimes that might be solved with DNA technology, funding to the crime lab so that technological advances in DNA testing may yield crime scene suspect profiles and reimbursement to the OCDA for one half-time deputy district attorney, and one half-time paralegal to perform program coordination tasks and duties.

VIII. Conclusion

Orange County has made great strides in harnessing the vast potential of DNA technology to solve crime and protect our citizens. The Cooperating Department Head Structure provides administrative oversight that fosters communication and cooperation among the County's criminal justice partners. Together, the County's law enforcement partners are taking steps to ensure that our crime lab utilizes the most robust and proven DNA analysis techniques to examine biological evidence from crime scenes. The crime lab is in the process of employing advanced applications of existing DNA technology to analyze degraded, old and more compromised crime scene samples from cold cases. The local DNA database is on the path to becoming fully operational. A system is in place to follow-up on all of the County's DNA cold hits.

Further challenges lie ahead. The County is currently seeking a crime lab director who will continue the communication and progress that has recently taken place under the Cooperating Heads Structure. Crime scene suspect DNA profiles must be expeditiously provided for inclusion and searching in the local DNA database. A solution, such as a County centralized property storage facility, must be developed to ease overflowing property rooms at most of our local police agencies. Laboratory documentation storage and retrieval procedures must be streamlined so that the OCDA can meet legal requirements to provide trial evidence to the defense in criminal cases in a timely manner.

Even with all of the work that lies ahead, the cooperative efforts of the County's law enforcement partners have placed Orange County squarely at the forefront of effectively utilizing DNA technology to solve crime.