



THE
CRIMESCENE
 NEWSLETTER OF THE LAKE COUNTY CRIME LABORATORY

From Intern to Expert: The Dave Green Story

BY JASON LEA

Dave Green may be the most recognizable face at the Lake County Crime Laboratory, but that wasn't always the case. Nobody recognized the face of Dave Green, the 8th grader, when he first stepped into the Crime Laboratory. No one could have predicted that his visit on that day would be the start of an award-winning career.

While Green wanted to be a police officer, his mom wasn't thrilled with that idea. Therefore, his dad, Ron Green, a long-time bailiff at the Mentor Municipal Court, introduced him to forensic science.

As an 8th grader proudly shadowing his father at the Court on career day, Green went on a trip with his dad to the Lake County Crime Laboratory to serve a subpoena. That visit got Green interested in solving crime in a different way: through science.

When it came time to choose a college, Green visited Ohio University. There he learned about OU's forensic chemistry program and decided to make forensics his career path. (CONTINUED ON PAGE 3)



Dave Green

When a Cold Case Runs Hot

BY ROBERT SBERNA

The criminal justice system has always placed a high value on eyewitness testimony. For violent crimes and sexual offenses in particular, first-hand accounts of victims and witnesses can be a powerful tool.

But what happens when crime victims are unable or unwilling to provide investigators with an accurate description of their attacker?

The Painesville Police Department faced that challenge on July 13, 2002 when 29-year-old Victoria was raped and beaten behind a North State Street bar.

Officer Matthew Collins took Victoria's report shortly after the assault. However, she offered only a few details about her attacker, whom (CONTINUED ON PAGE 5)



IT WAS THEN, AFTER COUNTLESS HOURS OF LAB WORK, THAT I ACCIDENTALLY STUMBLED UPON THE CULPRIT!

By John F. Malta

Frequently Asked Questions

This Column
Answers
Questions
Commonly
Asked of our
Scientists



ANSWERED BY DR. KAREN ZAVARELLA
EXPERT IN DNA ANALYSIS

Q: CCH shows my suspect is in CODIS. Why do I need to get another standard from my suspect?

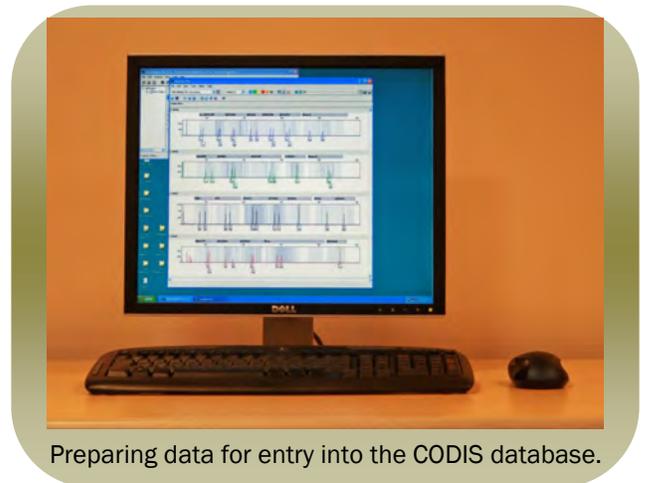
A: The Combined DNA Index System (CODIS) is a software database maintained by the FBI which houses DNA profiles to aid in criminal investigations where DNA is present. DNA profiles from both convicted offenders and crime scene evidence are stored in CODIS. The database consists of three tiers of administration including the local, state, and national databases. The Local DNA Index System contains profiles from participating local laboratories. In our case, the local database contains all eligible profiles generated by the Lake County Crime Laboratory. The second tier of CODIS is the State DNA Index System. Each state has its own database, which contains uploads of arrestee profiles, DNA profiles from various local laboratories, and the state forensic laboratories. The highest tier of CODIS is the National DNA Index System which contains uploads from all of the lower tiers.

The Lake County Crime Laboratory will analyze a forensic evidence case sample and upload the DNA profile into CODIS, even when a suspect's standard is not available, to see if it produces a "hit." A CODIS "hit" identifies an individual and serves as probable cause to get a warrant to obtain a known sample (standard) from the suspect for subsequent use in the criminal investigation. The Lake County Crime Laboratory cannot issue a case report matching evidence to a CODIS result without a standard from the suspect. A CODIS "hit" matches sample data generated by another laboratory. The scientists at the Lake County Crime Laboratory cannot testify to data that they did not generate. The CODIS "hit" is not admissible into a court of law as it would be considered "hearsay." Swabs collected at the

time of arrest are not processed by the Lake County Crime Laboratory, thus, an additional swab from the suspect is necessary so that the Crime Laboratory can use that swab to compare with any DNA profiles obtained from evidence.

For those reasons, a standard is always necessary to confirm a CODIS "hit." If a standard is supplied to the Lake County Crime Laboratory at the same time evidence is submitted, a case can be "closed" much more quickly, and the agencies do not need to wait for a CODIS confirmation.

Federal law prohibits the CODIS database from containing any identifying information regarding the suspect, such as name, date of birth, or social security number. A profile uploaded into the CODIS database is simply identified with the laboratory's identification number, the sample's case number, and the sample's item number (the latter two are generated by the individual laboratories). When there is a "hit", the Lake County Crime Laboratory contacts the laboratory in



Preparing data for entry into the CODIS database.

which the "hit" matches and that laboratory then supplies the identifying information. Therefore, CODIS cannot be searched by the name or social security number of a suspect.

Simply put, there are two basic concepts to remember with CODIS and the "hits" generated through it: 1) A cheek swab standard is required even if the suspect is known to be in CODIS because the profile is simply an investigative lead which cannot be used in a court of law; 2) CODIS contains absolutely no personal identifying information about the individuals whose profiles are in the database and, therefore, cannot be searched by name or social security number of a suspect.

For questions, please contact Dr. Karen Zavarella at (440) 350-2793 or kzavarella@lakecountyoiohio.gov. 📧

HIGHLIGHTS

- Past President, Midwestern Association of Forensic Scientists
- Served 10 years on the Technical Working Group for Explosives and Fire Debris (TWGFEX)
- Served 12 years on the Scientific Working Group for Trace Materials (SWGMAT)
- Served on the Planning Committee of the National Institute of Justice for three International Trace Evidence Symposiums

Contact Info:

(440) 350-2793

dgreen@lakecountyohio.gov

From Intern to Expert: The Dave Green Story

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In 1987, Green returned to the Crime Laboratory as an intern. He was afforded the opportunity to do things during his two summers as an intern that interns are no longer permitted to do, such as going to crime scenes and assisting in processing evidence. “An intern can’t have that type of involvement now. Times have changed, and our accreditation standards prohibit interns from handling evidence. But that really solidified for me the fact that this was exactly what I wanted to do,” Green explained.

Green was hired at the Crime Laboratory in 1989, where he has served as a trace evidence examiner, drug chemist, and crime scene examiner. In the last 25 years, Green has testified over 100 times in state and federal courts and has analyzed evidence in countless cases.

In January of 1990, just six months on the job, Green was called out to a crime scene in Kirtland. Little did he know when he was called out there to assist then Lt. Dan Dunlap and then Sgt. Ron Walters, that he was becoming a part of Lake County’s most infamous case. Green was there for three long, cold days assisting in exhuming a family of five from a deep grave. “The Kirtland case was the first high profile case I had ever been involved with. My wife, then fiancée, was watching the news back at OU and saw me on national TV, she couldn’t believe it.”

The case that Green is most proud of investigating did not even happen in Lake County. In 1999, the United States Congress chose Green and Dr. Gerry Murray (of the Forensic Science Agency of Northern Ireland) to assist Senator John Danforth in the investigation into the government’s role in the Branch Davidian episode in Waco, Texas. “Being selected by the Office of Special Counsel as the explosive expert for Waco was an honor because I did not apply for the position. They approached me and asked if I could assist.”

The task was to help determine if the government used high-explosive materials during law enforcement’s approach to secure the complex. Making the task more difficult was the fact that the evidence had been exposed to the elements for almost seven years.

Undaunted by the age and exposure of the evidence, Green helped complete the scientific analysis and formulate conclusions based upon the findings. “After ten months of combing through evidence and laboratory analysis, we determined that the government did not use high-explosive material during the attempt to secure the complex,” Green said.

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One thing that separates what Green offers to law enforcement in Lake County from other crime laboratories is the comparison of hair. “The microscopic comparison of hairs is very time consuming, and the conclusion is not exclusionary to one person,” Green said. “So many labs across the country have abandoned the practice in lieu of DNA. However, we have great success in conducting microscopic comparison, finding the strongest candidates of hair to send out to the FBI for mitochondrial DNA testing, which provides a greater evidentiary value than hair comparison alone.”

Green is a member of several professional organizations, including the American Academy of Forensic Sciences, the American Society of Trace Evidence Examiners, and the Association of Official Analytical Chemists. Green is held in high-esteem by his peers. He received the Outstanding Scientist Award in 2012 from the Midwestern Association of Forensic Scientists for his work in trace evidence.

Green is also one of three analysts from the Crime Laboratory who is a certified technical assessor for the American Society of Crime Laboratory Directors/Laboratory Accreditation Board-International, the gold-

“The inspection of the laboratory in Malaysia involved several hurdles, such as language and cultural barriers. The Malaysians were very welcoming and appreciative of our assistance. We had to be sensitive to their Muslim customs during the inspection, such as



Malaysian scientists sharing an Ohio tradition by attempting to spell O-H-I-O at Green's request.



In 2012, Green was awarded the prestigious Outstanding Scientist Award by the **Midwestern Association of Forensic Scientists**, a professional organization of over 1000 scientists.

standard of laboratory accreditation organizations. He has conducted assessments at federal, state, and local labs in the United States, Canada, and Malaysia.

respecting the fact that I could not interview the female scientists alone, and recognizing the Muslim prayer time,” Green said.

“One of my favorite memories of that trip is asking four of the female scientists to form an ‘O-H-I-O’ for a picture that we took. No matter how I explained it, they never understood. Thankfully, they still obliged!”

Green earned the nickname “Front Page Dave” due to the fact that he has appeared on the front page of *The News-Herald* on numerous occasions. Perhaps his most famous photo shoot was when he appeared, shirtless and wrapped in crime-scene tape, as “Mr. January” in the 2006 charity safety forces calendar to raise money for the Western Reserve Junior Service League.

Although Green is proud of his professional achievements, his most cherished role is as husband and father. He has two daughters, both of whom have toured the Crime Laboratory with him, just like Green did with his father. But he’s not sure they are going into the family business. “My older daughter isn’t into the ‘icky’ part of the job, but my younger daughter thinks it’s cool,” Green said. 🙌

When a Cold Case Runs Hot

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she described as a slim black male named J.D. She told Collins that he was about 5-foot-6 and was wearing blue jeans and a dark shirt. She had never met J.D. before that night.

Victoria was transported to Lake East Hospital, where a nurse examiner performed a rape kit, collecting hairs, fibers, blood, and semen that may have been left behind by her attacker.

Painesville Police Officers talked to patrons at the bar, but no one seemed to know a man named J.D. or anyone who matched his description. With only a scant description of the suspect and no information about his whereabouts, investigators knew that DNA and other evidence from Victoria's rape kit could hold the key to identifying and capturing J.D.

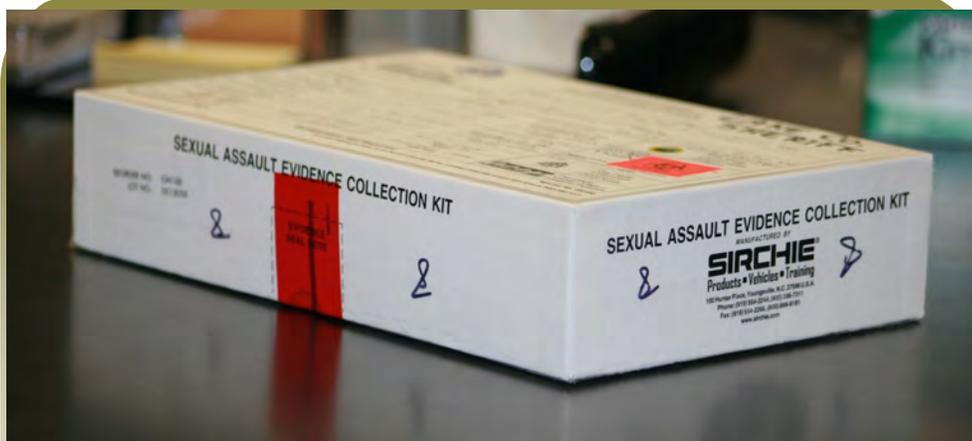
The scientific experts at the Lake County Crime Laboratory had quickly isolated and processed DNA evidence from the rape kit and had a DNA profile. Now they needed a match for the profile.

THE CRIME

Throughout much of her adult life, Victoria had struggled with substance abuse problems. She'd had periods of sobriety, but would inevitably relapse. Just before midnight on July 12, 2002, she experienced a strong craving for crack cocaine. She drank several beers with her neighbors and then walked to the bar on North State Street to purchase drugs.

Victoria approached a man who was standing outside the bar. He introduced himself as J.D. and agreed to sell her a small chip of crack for five dollars. She started to walk away with her purchase, but J.D. yelled for her to come back. Thinking that he was inviting her to smoke crack, Victoria walked with him along a dead end street to the nearby railroad tracks.

When they came to a patch of high weeds beside the tracks, J.D. told Victoria to remove her clothes. She was then pushed into the weeds and sexually assaulted. Victoria attempted to resist, but J.D. punched her twice, causing a deep laceration to her chin. After the attack, J.D. piled her bra and panties near the railroad tracks and set them on fire, apparently in an attempt to destroy evidence.



The biological evidence collected in a rape kit (like the one pictured) provided investigators with the only link needed to connect Williams to the crime.

Victoria put on her shorts and her shirt and returned home. Her neighbors, observing her facial injuries and learning that she'd been raped, called for an ambulance.

THE INVESTIGATION

Over the next two months, Painesville Police Detective John Levicki questioned Victoria repeatedly for details about J.D. and the attack. Despite his eagerness to get a suspected rapist off the streets, Victoria was unable to recall further information. Det. Levicki showed her dozens of photos of individuals who matched the description of her attacker. Again and again, Victoria was unsuccessful in picking him from the photo arrays.

After each session of looking at photo lineups, Victoria would tell the detective that she "didn't want to put the wrong guy in jail." Det. Levicki wondered if the stress of the attack had clouded her memory. Or perhaps, like many victims of violent attacks, Victoria was afraid of retribution by J.D.

While police worked Victoria's case, Dr. Stephen LaBonne, DNA Technical Manager for the Lake County Crime Laboratory, searched for usable DNA from the biological material collected during her rape exam. On a vaginal swab, Dr. LaBonne found semen containing a complete male DNA profile.

Initially, the DNA didn't match any of the profiles stored in the national DNA database known as CODIS. Police and the Lake County Crime Laboratory continued to work the case, (CONTINUED ON PAGE 6)

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but without conclusive identification of J.D. from Victoria or a sample of his DNA, they were at a roadblock.

THE BREAKTHROUGH

On October 25, 2004, more than two years after Victoria was attacked, the Crime Laboratory received a “hit” in CODIS on the DNA from the rape kit.

Linda Erdei, the Laboratory Director, contacted Det. Levicki to inform him that the DNA matched a profile in CODIS that belonged to Thohunga Jamal Williams, a Painesville resident who was then incarcerated on an unrelated offense.

Det. Levicki was familiar with Williams, a 26-year-old career criminal with a history of violent offenses. In fact, his current prison stint was the result of an investigation by Det. Levicki. On the street, Williams was known by various nicknames, including “Dirty Jamal,” “D.J.” and “J.D.”

Det. Levicki obtained a search warrant authorizing him to swab the inside of Williams’s mouth. The DNA extracted from his cheek cells would be compared to the DNA profile from the rape kit. When Det. Levicki met with Williams in prison, he read him his Miranda rights and then informed him that he was suspected of attacking Victoria.

Williams denied the rape as well as any knowledge of the incident or the victim. He also claimed that he had never told anyone at the North State Street bar that his nickname was J.D.

The Lake County Crime Laboratory, however, analyzed the DNA from the cheek swab and compared it to



Dr. LaBonne prepares biological evidence from a rape kit for DNA analysis.

the DNA from the rape kit. The match was confirmed. The DNA evidence proved with scientific certainty that Williams was Victoria’s attacker.

Based on the DNA evidence, Williams was indicted on several charges related to Victoria’s assault. At his jury trial, Williams presented an alibi witness—a woman who claimed that Williams was with her at the time of the incident. Victoria also testified at the trial but could not identify Williams as the man who raped her.

On September 1, 2005, the jury found Williams guilty of rape, kidnapping, sexual battery, and tampering with evidence. He was classified as a sexual predator and is serving a 15-year sentence at the Southern Ohio Correctional Facility.

When Det. Levicki told Victoria in October 2004 that DNA had incriminated Williams as her attacker, she expressed relief. She then cried, telling Det. Levicki that she was frustrated that she wasn’t able to help more in identify him.

The power of DNA evidence and the diligence of Painesville police and the Crime Laboratory provided the crucial breakthrough in Victoria’s case. 🐾



After being found guilty of rape and other offenses, Williams was sentenced to serve a 15-year prison term.

Why Ys? The Laboratory's Newest Technology

In December of 2013, the Lake County Crime Laboratory began offering a new DNA service known as Y-STR DNA analysis. This new test may obtain useful results in many sexual assault cases that would not previously have yielded DNA results of evidentiary value.

Y-STRs, like the "regular" STRs (called autosomal STRs) which have been in use at the laboratory since

the male can be identified by the use of Y-STR testing. Male "touch" DNA mixed with female DNA from a victim's body or clothing is also much more likely to be detectable using Y-STR testing.

One important factor with Y-STR analysis is that the statistics are not nearly as discriminating as with autosomal STR analysis. Typically, with autosomal STRs, the chance that a male unrelated to the suspect could have left the same DNA profile is 1 in 1 trillion. However, with Y-STR data, the chances are much higher, generally in the 1 in several thousand range. Additionally, because the Y chromosome is passed on to all males in a family, Y-STR analysis cannot distinguish between a father, his father, his sons, and his brothers.

While agencies are welcome to specifically request Y-STR DNA testing, all sexual assault cases (and any other cases in which a small quantity of male DNA may be mixed with a much larger quantity of female DNA) which do

not yield DNA results using standard methods will automatically be considered for Y-STR DNA testing, on a case-by-case basis. The Crime Laboratory looks forward to providing our law enforcement agencies and prosecutors with valuable information from many cases that would not previously have yielded DNA results. 📌



The 310 Genetic Analyzer pictured here analyzes the few Y-chromosomes that were found in the figurative ocean of X-chromosomes.

2001, are small pieces of DNA repeated over and over, with different individuals having varying numbers of repeats. The difference is that Y-STRs are only located on the male Y-chromosome.

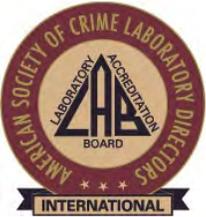
Because Y-STRs are only present in males, Y-STR testing is "blind" to the presence of female DNA, no matter how large the amount. Thus, Y-STR testing can cleanly detect very small amounts of male DNA even in the presence of an excess of female DNA. Samples of this kind arise frequently in sexual assault cases, most commonly when a male assailant has oral contact with the body of the female victim. In the past, for example, it has been especially difficult to detect DNA from male saliva deposited on vaginal swabs or underwear as a result of oral-genital contact with a female victim; in this scenario, it is much more likely that





LAKE COUNTY CRIME LABORATORY

235 Fairgrounds Road • Painesville, OH 44077
(440) 350-2793 • fax (440) 350-2731



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(440) 350-2793

or

CrimeLabNews@lakecountyohio.gov

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Calling for Phones

The Lake County Crime Laboratory is requesting donations of seized, forfeited, or recovered mobile devices to build a reference collection. The phones are needed for repairing damaged evidence and as a test platform for the “chip-off” method, which is used prior to working on actual evidence. Any mobile device with or without the charger or battery will be accepted.

Donations can be delivered directly to the Crime Laboratory anytime your agency is there. Please call Jamie Walsh at 440-350-2793 with any questions. ➤