BY ROBERT SBERNA

Among the various crime laboratory occupations, the forensic scientists tend to attract the public’s interest and admiration. They are highly trained professionals whose work has become familiar to millions of TV viewers through shows such as CSI, Criminal Minds, and NCIS. While forensic scientists may be the rock stars of crime laboratories, any laboratory depends heavily on its support staff to keep its operations running smoothly.

At the Lake County Crime Laboratory, Connie Hagey, Stephanie Fulton and Vickey Kellhofer perform the critical support functions that enable the laboratory’s scientists to carry out their tasks efficiently and accurately. This issue of Crimescene highlights these three staff members and their (CONTINUED ON PAGE 3)

Lennox: Caught in the Driver’s Seat

BY ROBERT SBERNA

In an auto crash involving multiple occupants, police are sometimes uncertain who was driving. Either because the occupants were ejected and fatally injured or, in some cases, because alcohol was a factor and everyone denies being the driver. In these situations, police rely on forensic science to help determine who was in the driver’s seat.

On April 18, 2009, Eastlake Police turned to the Lake County Crime Laboratory for assistance in investigating a crash that took the life of a young woman. Shortly before 2 a.m., police were called to Roberts Road, where a 2000 Chevy Malibu had struck a telephone pole at high speed, splitting the vehicle in half. They found Andrew Lennox, 23, on the sidewalk (CONTINUED ON PAGE 5)
Q: What are the latest drug trends seen in Lake County?
A: Heroin use is a nationwide epidemic whose epicenter is the Midwest, specifically Ohio. It is thought that the creation of this epidemic stems from opioid prescription abuse. If a person becomes addicted to opioid painkillers and then runs out of their prescription or cannot afford the drugs anymore, often times they will turn to a cheaper alternative, heroin, to obtain their high. Opioid users generally develop a tolerance to the drug over time so they may seek more of what they are abusing or resort to trying something stronger. This is the origin of one of our newest trending drugs, Fentanyl.

Fentanyl is a synthetic opioid that is reported to be 50 to 80 times more potent than Morphine. This drug was originally provided as a potent analgesic to hospital patients and terminally ill individuals experiencing extreme pain. Administration of Fentanyl was accomplished using tablets, injections or by use of a transdermal patch. Over the last two years, however, illicit Fentanyl has made an appearance in Lake County in combination with heroin and as a stand-alone drug. The non-medicinal form of Fentanyl presents itself as a powder or syringe residue and is manufactured clandestinely. In many instances, the user may have no idea that Fentanyl is present in the powder, thinking the drug is solely heroin, which increases the potential for a fatal overdose. The first Fentanyl submissions to the Lake County Crime Laboratory began in late 2013, with only a handful of cases reported that year. In 2014, the total number of Fentanyl cases reported was 11. By the end of 2015 that number had spiked to 112. A review of the first half of 2016 reveals the number of Fentanyl cases has doubled from the 2015 total. This continues to be an alarming trend.

Analog drugs fall into another category of trending drugs. Analogs are substances that are structurally similar in their molecular make-up to drugs that are already scheduled substances. Acetyl Fentanyl, an analog of Fentanyl, is currently being seen in casework at our Laboratory. This is a synthetic substance, made clandestinely, with a reported potency 30 to 50 times greater than Morphine. In 2015, 21 cases were reported with Acetyl Fentanyl present, where it was almost exclusively detected along with heroin. The number of Acetyl Fentanyl cases reported during the first half of 2016 have decreased as compared to 2015 statistics. An additional analog recently identified in a Lake County Coroner’s case is U-47700. This synthetic opioid began to appear in the US during the summer of 2015 and is responsible for the death of dozens of individuals across the country. To date our Laboratory has already seen 15 cases.

The laboratory is also experiencing an increase in Hashish and Marihuana food products. Hashish, or Hash, is the resin from Marihuana that has been extracted from the plant material and concentrated. The concentrated resin contains Tetrahydrocannabinol (THC), the psychoactive ingredient in Marihuana, in concentrations as high as 90%. The laboratory has processed Hash submissions in many forms including a solid round disk, a sticky (CONTINUED ON PAGE 8)
EVIDENCE FACTS:

So far this year, the laboratory has seen the following increases over last year at this time:

- 34% in submissions for testing.
- 43% in the number of evidence items submitted.
- 70% in DNA submissions.
- 160% in CODIS hits.

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Hagey, Fulton and Kellhofer: The Frontline

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day-to-day duties. Hagey, Fulton and Kellhofer all serve as evidence custodians. In this role, they are crucial links in the chain of custody process, ensuring that all items of evidence are correctly packaged, documented, and stored throughout the lifecycle of a case.

The chain of custody is a chronological record of the whereabouts of evidence at every point—from its initial collection, to analysis by forensic scientists, to presentation in court, and then its final disposition. An unbroken chain of custody is proof that evidence has not been tampered with and is the same evidence that was found at the scene of a crime or collected afterwards.

“When law enforcement officers bring evidence to us, we verify that the evidence envelopes and packages are sealed and all of the forms are filled out accurately and completely,” said Fulton.

She noted that information management software is used to document the evidence as it is transferred among various people, including police, forensic scientists, outside laboratories, and attorneys. “Everything is recorded and scanned electronically, using bar codes and pin numbers,” she explained.

When the evidence is not in the possession of an authorized person or entity, it is locked up in the Crime Laboratory’s evidence cage, which is located in a secured room that is monitored by surveillance cameras. “You need to enter a passcode to get in the room and then another passcode to enter the cage,” Fulton said.

“The security of the evidence and the documented chain of custody are of the utmost importance when a case goes to court,” said Linda Erdei, director of the Lake County Crime Laboratory. “The integrity of the chain of custody is vital to the criminal justice system.”

During a legal proceeding, even the smallest mistake can get evidence thrown out of court. If an unauthorized person has contact with the evidence, or if it is mislabeled or transferred improperly, then it could be deemed inadmissible.

Another important duty of an evidence custodian is distributing test reports to various entities and responding promptly to requests from law enforcement agencies and the Lake County Prosecutor’s Office.

“When I receive a completed forensic report, I check to see if it is a priority request that needs to be faxed or emailed immediately,” Kellhofer said. “For example, a prosecutor might be waiting for forensic results that will be used in preparation for a trial or a grand jury presentation.”

While the workdays at the Crime Laboratory may not be as exciting or dramatic as those on TV’s forensic shows, Kellhofer said she has experienced a few suspenseful moments. “I’ve had incidents where defendants phoned us and identified themselves as police officers in order to get information about their cases,” she said. “I was suspicious so I had the callers give me their numbers and I called them back. We have to be very careful not to give out information to a defendant or their conspirators.”

As part of her job, Hagey sometimes has to (CONTINUED ON PAGE 4)
inform visitors about Crime Laboratory protocol. “Unlike the laboratories on TV shows, we don’t allow police officers, investigators and crime suspects to enter the building and walk back to the laboratory area with evidence,” she said. “Evidence is submitted at the front desk. And we only accept evidence from law enforcement agencies. Sometimes we get walk-ins or calls from people who want a forensic report that pertains to their case or a family member’s case. But we can only give out reports to the submitting agency, so we have to refer these individuals to the appropriate law enforcement agency.”

There have also been times when members of the public have brought in items that they wanted the Crime Laboratory to examine.

“A woman once came in with a safe that was moved from her old house to her new home by a moving company,” recalled Kellhofer. “She thought that the movers had broken into the safe and wanted it fingerprinted. We also had a woman tell us that she believed that she had been poisoned by a family member. She wanted the Crime Laboratory to analyze the contents of the supposedly poisoned item. In each of these cases, the individuals were directed to their local police department.”

Victims of crimes will also occasionally visit the Crime Laboratory to inquire about their property. For example, the scientists may be examining a stolen license plate that was used in a crime or a homeowner’s window screens that were damaged in a burglary. In such cases, the evidence custodians try to put a rush on the testing so that the results can be sent to police and the evidence promptly returned to its owners.

There are times when a surprise visitor can provide a welcome break in the workday, noted Hagey. “Recently, the Kirtland Police Department was submitting evidence and brought along their new police dog, JD, to visit us,” she said. “It was the highlight to our day.”

The Crime Laboratory’s proximity to Buckeye Elementary School in Painesville Township also spurs some neighborly interactions. Once a year, as part of the national “Walk to School” day, students, parents and staff members from Buckeye utilize the Crime Laboratory’s parking lot as a starting point. “Recently, as a thank you to us, several school representatives dropped off pizza for the Crime Laboratory staff,” Hagey said.

With the Crime Laboratory experiencing a surge in evidence submissions—this past June, for example, touch DNA requests were up 52 percent over the previous June’s—the efforts of Hagey, Fulton and Kellhofer are increasingly important.

“We have a lot more submissions across-the-board,” said Erdei. “The support staff performs indispensable work that allows our scientists to focus on their growing caseload.”

Not only are Hagey, Fulton and Kellhofer the front office “faces” of the Crime Laboratory, but they serve the important function of monitoring the flow of evidence and making certain that all appropriate forensic tests are scheduled.

“They can look at a particular case and tell if it needs DNA analysis, fingerprints, hair and fiber, or other testing,” said Erdei. “Depending on the situation, they can ask the scientists whether additional testing is required. In this regard, it’s crucial that we have such knowledgeable evidence custodians because they provide a vital system of checks and balances for the Crime Laboratory.”

Hagey, who serves as administrative assistant, has a wide range of duties that include assisting Erdei with report filing, bill payments and management of federal and state grants. With responsibility for the administrative operations of the Crime Laboratory, Hagey supervises the legal secretaries and assists with the intake and return of evidence. She also orients new employees and reviews case files to ensure they are entered properly into the information management system.

Hagey’s workdays are often fast-paced and rarely routine. “I like the fact that no two days are the same,” she said. “I can have a plan at the beginning of the day to complete certain tasks, but when evidence comes in, it can get busy and I get called to assist. I enjoy that sort of flexibility and diversity.”

A graduate of Bowling Green State University with a bachelor’s degree in (CONTINUED ON PAGE 7)
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between the two halves of the car. His girlfriend, Heather, 22, was lying in the street.

Eastlake Fire Department paramedics determined that Heather, who had sustained severe head injuries, was dead at the scene. Lennox, a Willoughby resident, was seriously injured but able to communicate with police.

According to Eastlake Police reports, Lennox appeared confused and wasn’t aware that Heather had been in the car. He repeatedly asked first responders if anyone was in the vehicle with him and where Heather was. Police and paramedics didn’t tell him that she was dead. Lennox told police that he and Heather had been returning home from seeing a band at a Cleveland concert club, and that he had downed “3 or 4” shots and “2 or 3” beers at the club. He said he had been driving, and believed that he had dropped off Heather, an Eastlake resident, earlier before the crash. Lennox was transported to Lake West Hospital and then life-flighted to Cleveland MetroHealth Hospital.

Later that afternoon, after his discharge from MetroHealth, Lennox was arrested and charged with aggravated vehicular homicide. The next day, however, Lennox told Eastlake Police that he had been “confused” the day before and he now believed that Heather was “probably driving” when the accident occurred. Although police had reason to believe that Lennox was behind the wheel, the Crime Laboratory would provide the definitive proof.

In the days following the crash, Crime Laboratory Director Linda Erdei and scientists Dave Green and Stephen LaBonne worked with Eastlake Police to gather evidence from the Chevy Malibu.

After photographing the interior of the car, the scientists collected the deployed driver and passenger airbags, pieces of the windshield, the passenger’s headliner, and blood from the steering wheel.

Tasked with ascertaining the seating positions of the occupants, LaBonne, a DNA analyst, explained that airbags are often a good source of blood samples. “But we always search the entire car for blood and any kind of biological evidence that can yield DNA,” he said. “If we can’t find blood, we’ll thoroughly swab for touch DNA. Our objective is to use the evidence to try and put each occupant in their place in the car.”

In addition to bodily fluids and touch DNA, the scientists looked for fingerprints and any other evidence that was present in the vehicle. Dave Green, a criminalist, used adhesive tape to lift hair, fibers and other trace evidence from the car’s interior. As a criminalist, Green’s job is to identify and analyze physical evidence collected at crime scenes.

Doug Rohde, the Crime Laboratory’s supervisor of chemistry and toxicology, tested a blood draw from Lennox for alcohol concentration and the presence of drugs. Rohde determined that Lennox’s blood alcohol concentration (BAC) was .082 percent, just above Ohio’s legal limit of .08. In addition, Lennox tested positive for cannabinoids, the active agent in marihuana.

Analysis of the blood samples found in the car showed that Lennox’s DNA was present on the driver’s airbag, steering wheel, and the driver’s side windshield. A swab of blood from the front passenger headliner was a match for Heather’s DNA. In addition, the scientists used a comparison microscope to determine that hair fragments found on the passenger headliner matched hair shafts from Heather’s hairbrush, which was supplied to the Eastlake Police by her family members.

Eastlake Police and Introtech, a private crash reconstruction firm, analyzed the collision and determined that the Malibu was traveling an estimated 68 mph in a 25 mph zone when it struck the telephone pole on the front passenger side of the vehicle. The front section of the car separated from the rear section and came to rest on its top in a (CONTINUED ON PAGE 7)
resident’s front yard, while the rear section remained wrapped around the telephone pole.

Police also found that Lennox, who had a lengthy history of driving offenses including several driving under suspensions, had been arguing with Heather shortly before the crash. Heather’s father told investigators that she had left him a voicemail crying from the concert club because Lennox had left her there. Minutes later, Lennox had returned to pick her up. Concerned, Heather’s father phoned her while she and Lennox were driving home. During his conversation with Heather, he told police that he could hear Lennox loudly, angrily, berating her. Heather had recently told friends that Lennox, with whom she had a stormy, on-again, off-again relationship, had become increasingly angry because she was spending so much time with her father.

Investigators learned that Heather’s father had lost contact with her when she was 18 months old and had reestablished contact with her just eight months before the fatal crash. Heather was agoraphobic, according to her father, and was just beginning to venture out in public with his assistance. Because she was anxious about her night out at the concert club, which was a venue she’d never been to before, father and daughter took a drive past the club a day earlier. On the night of the concert, Heather texted him to let him know that she and Lennox had arrived at the club. “Just have fun,” her father reassured her. “I’ll try,” Heather texted back.

In June 2010, Lake County Common Pleas Judge Joe Gibson found Lennox guilty of aggravated vehicular homicide and OVI. He was sentenced to four years in prison and a lifetime suspension of his driver's license.

At his sentencing, Lennox apologized for causing the death of Heather. “That was my future wife. Those were my future kids,” he told the courtroom. “Every single night I cry myself to sleep. I would give my life to have her back.”

Erdei called the case “very sad,” and said that “although it may have initially appeared obvious that Lennox was driving the car, the scientists had to be very thorough when gathering evidence.

“It’s always extremely important to keep an open mind,” she said. “Things may not be what they seem, and we need to always look for whatever truth the evidence is depicting.”

She added that DNA analysis is often a key factor in determining who is driving a car, but sometimes the most probative evidence can be found just by looking at items in the car or at (CONTINUED ON NEXT PAGE)
the crash scene. For example, one of Heather’s shoes was lodged in the passenger’s side of the car.

Despite the proliferation of TV shows that feature the sophistication of forensic science, there are people who still think they can fool the police.

“Some individuals seem to think they can outsmart everyone,” Erdei said. “Some movies and TV shows depict ‘how to beat the system’ and then these individuals think that they can actually succeed at doing this. It is very difficult to manipulate evidence without leaving some telltale signs that things were moved, changed or removed. The fact that items were moved can point to the person who committed the crime.”

Hagey, Fulton and Kellhofer: The Frontline

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business administration, Hagey worked at the Willoughby Municipal Court and the Lake County Prosecutor’s Office before joining the Crime Laboratory in 2006.

She has spent most of her career in administration, a role that she finds rewarding. “I’m not in the public eye, but more in the background helping to make the justice system run smoothly,” she said. “For me, it’s important to work as a team and to make the Crime Laboratory the best it can be for the citizens of Lake County.”

Hagey lives in Mentor with her husband and three children. “My family is extremely important to me,” she said. “When I’m not following my children in their activities and sports, I like to play volleyball and run. I also like spending time at the beach and riding ATVs.”

Fulton, who joined the Crime Laboratory in 2008, is a self-described “people person.” She enjoys interacting with the law enforcement officers who utilize the Crime Laboratory. Explaining that she serves as a go-between among the officers and the scientists, she said, “When the officers call for assistance, I make sure they are directed to the appropriate person.”

Despite Fulton’s easygoing personality, she acknowledges that she is very thorough about her work. “The officers like to joke that I’m the ‘mean one’ because I’m so strict about proper custody procedures. We all have a good rapport.”

The Crime Laboratory front desk even has a candy jar for the police officers who deliver evidence. Because some officers have specific candy preferences, such as chocolates or Jolly Ranchers, the varying contents of the jar has led to ongoing banter.

Along with her evidence duties, Fulton provides secretarial assistance to the Crime Laboratory and the Lake County Prosecutor’s Office. In addition, she is a member of the Crimescene newsletter committee and also maintains the Crime Laboratory’s Facebook page.

Fulton lives with her husband and their newborn son in Painesville’s Historic District. The couple enjoys photography, live music, and spending time with family and friends.

Kellhofer, a four-year Crime Laboratory employee, has had a lengthy career in the criminal justice system. Prior to joining the Crime Laboratory, she served four years as a technical secretary in the Felony Division of the Lake County Prosecutor’s Office. Before that, she worked as a legal secretary in the Ashtabula County Prosecutor’s Office.

“At the Crime Laboratory, I find it rewarding to be part of a team that aids in the prosecution of criminals and helps bring closure to victims of crimes,” said Kellhofer. “I have such respect for the work of the forensic scientists. I find it fascinating that the evidence can speak for itself.”

A resident of Austinburg Township, Kellhofer has been married to her childhood sweetheart for 42 years. Her hobbies include rollerblading, snow skiing and reading, particularly science fiction and mystery novels.
Frequently Asked Questions
Continued from Page 2

A newer category of food products submitted for analysis are known as “Medibles”, short for medical edibles. Medibles were originally created as food products for patients going through chemotherapy in order to stimulate their appetite. They have gained favor in recent months by those who use Marihuana recreationally as a way to achieve a high from THC without having to smoke the plant material. The Medibles and any other suitable food product can be infused with Marihuana or Hashish or their oils. Examples of food items that have been analyzed by the laboratory during 2015 and 2016 include hard and gummy candies, chocolates, banana bread, cookies, brownies and butter.

The staff of our Laboratory’s Drug Chemistry Section regularly participates in continuing education seminars and are in constant communication with forensic laboratories in Ohio and local police agencies in order to anticipate and prepare for upcoming trends in drug submissions.

For questions, please contact Doug Rohde, Supervisor of Chemistry and Toxicology, or Bill Koubek, Forensic Analyst, at 440-350-2793.

The CRIMESCENE
A quarterly publication of the Office of the Lake County Prosecuting Attorney, www.LakeCountyProsecutor.org. For questions, comments, or to receive an electronic copy of this newsletter, please contact us at:

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