INTERNATIONAL SYMPOSIUM ON HUMAN IDENTIFICATION

November 2024

The ISHI Report

News from the World of DNA Forensics

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The ISHI Report

Letter from the Editor

As November draws to a close, we reflect on the milestone that was ISHI's 35th anniversary. This year's International Symposium on Human Identification showcased the extraordinary progress forensic DNA technology has made over the decades, while also emphasizing the challenges that lie ahead. From advancements in Rapid DNA and forensic investigative genetic genealogy (FIGG) to the human stories behind forensic breakthroughs, ISHI 35 was a testament to the resilience, creativity, and dedication of the forensic community.

In this issue of *The ISHI Report*, we bring you stories that embody the spirit of innovation and collaboration celebrated at ISHI 35. These articles reflect the dynamic conversations and transformative work happening across forensic science.

Mark Pooley and Dr. Michael Coble offered a powerful exploration of how forensic DNA technology and community engagement are transforming the Missing and Murdered Indigenous Peoples (MMIP) crisis in their presentation in San Antonio earlier this year. Their work underscores the importance of trust and cultural sensitivity in achieving justice for underserved communities. Through their initiative, they are not just solving cases—they are rebuilding trust and bringing resolution to families who have waited decades for answers.

Julie Sikorsky from the Palm Beach County Sheriff's Office shares her team's experience navigating the complexities of a rare chimeric DNA case. Her insights reveal the importance of adaptability and critical thinking when encountering challenges that push the boundaries of forensic science. This case study serves as a reminder of the evolving nature of DNA analysis and the need for innovative approaches.

In disaster scenarios, time is critical, and the Rapid DNA Mass Disaster Emergency Response Toolkit aims to ensure forensic teams are prepared. Developed by the Forensic Technology Center of Excellence and Marshall University, this toolkit provides resources to streamline emergency response efforts, from infrastructure to sustainable documentation. It's a groundbreaking resource that will undoubtedly enhance disaster victim identification workflows and preparedness across forensic laboratories.

The next generation of forensic scientists was well-represented at ISHI 35. This issue features reflections from our Student Ambassadors, who share their transformative experiences at the symposium. From presenting research on innovative forensic methodologies to connecting with global experts, these young scientists highlight the importance of collaboration and curiosity in shaping the future of forensic science.

Finally, as we look ahead to ISHI 36, we invite you to explore West Palm Beach, Florida. This vibrant city offers a blend of cultural richness, natural beauty, and innovation, making it the perfect destination for our next gathering. Whether you're strolling along Clematis Street, exploring the Norton Museum of Art, or kayaking in Grassy Waters Preserve, West Palm Beach promises to inspire and recharge.

ISHI's 35th anniversary reminded us why we gather each year: to learn, connect, and inspire one another. Whether you're a seasoned forensic professional or an emerging scientist, these stories aim to spark curiosity and provide actionable insights for your work.

Thank you for being part of the ISHI community and for your continued commitment to advancing forensic science. We look forward to welcoming you to West Palm Beach in 2025 for another exciting chapter in this journey.

Warmly,

The Editorial Board

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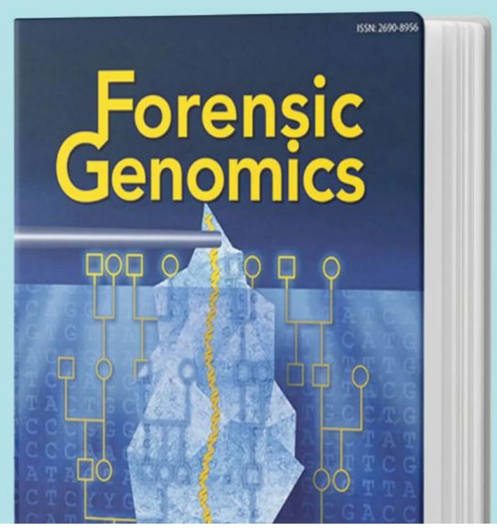

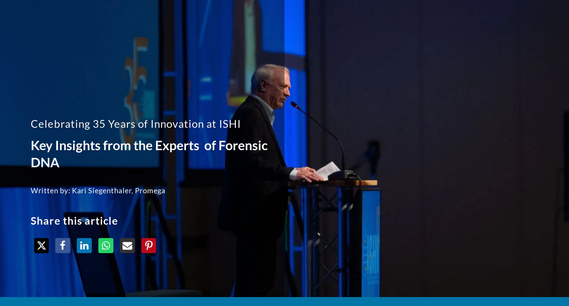

Celebrating 35 Years of Innovation at ISHI

Key Insights from the Experts of Forensic DNA

Written by: Kari Siegenthaler, Promega

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"As we celebrate the 35th anniversary of ISHI, it's clear that forensic DNA technology has evolved from a novel concept to an indispensable tool in the pursuit of justice," Bill Linton of Promega said during his opening remarks. This year's International Symposium on Human Identification (ISHI) marked a milestone, reflecting on decades of advancements while showcasing the cutting-edge developments currently shaping the future of forensic science.

35 Years of Progress

The 35th anniversary of ISHI was not just a celebration of past accomplishments, but a forward-looking exploration of the most pressing and transformative trends in DNA forensics.

Over five days, forensic scientists, law enforcement professionals, legal experts, and aspiring students came together to share knowledge. Keynote sessions were the heart of the event, each offering a unique perspective on how forensic science continues to evolve in response to both historical cases (*being solved decades later!*) and emerging challenges.

The event was filled with specialized workshops and discussions that explored themes like investigative genetic genealogy (IGG), Rapid DNA, and the impact of artificial intelligence on forensic workflows, all while acknowledging the foundational role ISHI has played in bringing the community together over the past 35 years.

Keynote Highlights: A Glimpse into the Future of Forensics

Dr. Anna Barbaro: Inspiring a New Generation of Forensic Scientists

Kicking off the keynotes, Dr. Anna Barbaro, of the Worldwide Association of Women Forensic Experts, delivered a powerful message on the changing face of forensic science. She connected the rising wave of interest in true crime with a surge in women entering the field of forensic DNA. Her session set the tone for the event, highlighting the human impact behind scientific progress.

Turi King: Unraveling DNA Family Secrets

In one of the most captivating presentations, Dr. Turi King shared stories from the popular TV show ***DNA Family Secrets***, showcasing the real-world emotional and scientific complexities of using DNA to uncover long-buried family mysteries. King's presentation took attendees through the journey of applying advanced DNA analysis to solve deeply personal cases of lost identity and ancestry. Emotions were palpable in the room as she shared how forensic technology is not only about solving crimes but also about restoring identities that history has erased.

Patty Wetterling and Joy Baker: The Jacob Wetterling Story

Patty Wetterling and Joy Baker's deeply emotional session recounted the decades-long search for answers in the abduction of Patty's son, Jacob. The case, which remained unsolved for 27 years, was ultimately resolved using advancements in DNA technology. Their presentation served as a reminder of the enduring impact of forensic science on victims and families – bringing them justice and closure.

Ashley Flowers: From True Crime Podcasting to Pioneering Justice

Ashley Flowers, the founder of **audiochuck** and host of the **Crime Junkie Podcast**, discussed her journey from content creator to advocate. She spoke about the role true crime media has played in generating public interest in unsolved cases and how that, in turn, has driven advancements in forensic DNA technology through the raising of funds to reopen cold cases.

Emerging Trends from Key Sessions

Rapid DNA and Disaster Victim Identification

Rapid DNA technology was a focal point throughout the conference, particularly in its application for disaster victim identification and law enforcement. In his presentation, Douglas Hares of the FBI spoke about the progress in accrediting Rapid DNA and its implications for forensic timelines. With increased use in mass casualty events and crime scenes, Rapid DNA is set to dramatically speed up the process of victim identification, providing quick closure to families.

AI and Forensic DNA Analysis

Dr. Meng-Han Lin presented on how AI is transforming DNA analysis in forensic labs, making the process more efficient and accurate. As technology evolves, AI tools are expected to handle more complex DNA data sets, paving the way for faster and more reliable forensic results.

Investigative Genetic Genealogy (IGG)

The advancements in IGG were prominently featured, with Ray Wickenheiser and Claire Glynn providing a roadmap for setting up forensic IGG programs. Their presentation focused on the balance between investigative power and privacy, a key concern as this technology becomes more widely adopted in both cold case investigations and exoneration efforts.

Unveiling New Technology: David Mokry's Presentation on Reducing DNA Analysis Stutter

David Mokry from Promega introduced an innovative enzyme designed to significantly reduce stutter artifacts in forensic DNA analysis—a longstanding challenge in STR profiling. Mokry explained that this breakthrough stemmed from Promega's work in protein engineering, focusing on overcoming the noise in DNA data caused by amplification artifacts. He noted, *"Our reduced stutter problem is essentially eliminated with this new enzyme, reduced by 10-fold"* allowing for cleaner, more accurate data from mixed DNA samples.

This novel enzyme is set to be featured in Promega's upcoming 8-color chemistry kits, kicking off with 27GY in 2025, and is expected to be a gamechanger for forensic workflows. Traditionally, stutter has caused challenges in distinguishing between alleles, complicating case analysis, especially in samples containing multiple contributors. Mokry emphasized the importance of this development in improving reliability, saying, *"It took a little bit of innovation as we went through 1,000+ enzyme designs to create something truly revolutionary."*

This advancement represents a significant leap forward in forensic DNA technology, allowing for faster and more precise case resolutions. According to the Promega press release, this reduced stutter polymerase will reduce the need for repeated analysis and improve clarity in criminal investigations.

Networking and Community: Reflecting on 35 Years of Collaboration

Beyond the keynote sessions and exciting technological developments, ISHI's 35th anniversary also celebrated the close-knit forensic science community. Attendees from around the globe gathered not just to learn, but to network and celebrate together. The Welcome Reception, Young Scientists' Showcase, and various networking events encouraged new relationships and collaborations that will undoubtedly shape the future of forensic science. This global network of experts advancing the field hand-in-hand has been a hallmark of ISHI for 35 years and keeps participants returning year after year.

Looking Ahead: The Future of Forensic Science

As ISHI looks to the future, it's clear that years to come will be shaped by rapid technological advancements and an ongoing commitment to justice. From AI-enhanced DNA analysis to the ethical considerations of genetic genealogy, this group continues to push the boundaries of what is possible. The discussions at ISHI 35 reinforced the idea that forensic DNA technology is not static – it is evolving.

Closing with a sense of optimism for what lies ahead and a recognition of how far the field has come, ISHI 35 was a great success. Forensic DNA is not just a tool for solving crimes—it's a means of bringing hope and resolution to countless families and communities worldwide.

The Chimera Effect

Navigating the Complexities of DNA Interpretation in a Case of Genetic Chimerism

Written by: Tara Luther, Promega with Deandra DaCosta, Palm Beach Sheriff's Office

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Forensic DNA analysis has long been regarded as one of the most powerful tools in criminal investigations. However, the field continues to evolve as new biological complexities emerge, pushing the boundaries of what we know. One such obstacle is genetic chimerism, a rare but significant phenomenon that can complicate even the most routine DNA analyses. At the 35th International Symposium on Human Identification, Julie Sikorsky, the Forensic Biology Manager at the Palm Beach County Sheriff's Office, presented how her lab delivered reliable results in a particularly complex case that illustrated how genetic chimerism can present unforeseen challenges in forensic science.

A Seemingly Routine Investigation

In February 2023 a father, alarmed by a distressing phone call, used the *Find My iPhone* app to locate his 21-year-old daughter. When he arrived at the scene she reported that she had been sexually assaulted by her ex-boyfriend and law enforcement was contacted. Sikorsky's lab received evidence from a Sexual Assault Kit (SAK) collected from the victim and a Physical Evidence Recovery Kit (PERK) collected from the suspect.

"When the samples first came into our lab, the case seemed like it would follow a typical workflow," Sikorsky explained during her presentation. "We began by testing for male DNA using Y-screening, and everything seemed straightforward."

However, what initially appeared to be a routine case soon took a complicated turn. The reference sample from the victim—a buccal swab typically used to generate a single-source DNA profile—returned an unexpected result. Instead of a straightforward profile, it came back as a robust two-person mixture.

The Confounding Results

"The moment we saw that mixture, we knew we had a challenge on our hands," Sikorsky told the ISHI audience. A reference sample is meant to provide a single-source DNA profile from the victim, used as a known sample for comparison with the crime scene evidence. But in this case, the victim's reference sample returned with two contributors, in a ratio of about 1:3, with the second contributor being highly prominent. Of note, only three loci in the sample showed more than two alleles.

"Our immediate thought was contamination," she explained. "We paused all interpretation and requested a second reference sample from the victim."

When the second sample also returned the same two-person mixture, the team ruled out contamination: "We knew something else had to be going on," she said. With contamination no longer an option, the question became: why was the victim's reference profile mixed?

A Critical Medical Revelation

Faced with this unusual result, Sikorsky and her team began considering other possibilities. "At that point, we started to think there might be a medical explanation. The analyst asked the detective to check into the victim's medical history, and the answer came back quickly," she shared at ISHI.

The victim had undergone a bone marrow transplant, with her biological sister as the donor. This information immediately changed the trajectory of the investigation. "That was the key to everything," Sikorsky explained. "The victim was a genetic chimera."

Julie Sikorsky presents at ISHI 35 San Antonio, Texas.

What Is Genetic Chimerism?

In Greek mythology, the Chimera was a creature made of several animals—a lion's head, a goat's body, and a serpent's tail—symbolizing a being made up of disparate parts. In genetics, chimerism refers to an individual with two or more distinct DNA profiles within their body.

Chimerism most often occurs in humans following medical procedures like bone marrow transplants. When someone undergoes a bone marrow transplant their DNA profile may change over time. The recipient's DNA profile can also vary between different cell types throughout the body, with some cells presenting as the recipient's DNA type, the donor's DNA type, or even a mixture of the two. In this case the victim's buccal swab was not a single-source sample, but a mixture of her own DNA and her sister's donor DNA.

The Forensic Challenge

For Sikorsky's team, chimerism presented a new and complex challenge. "We had to rethink our entire approach," she said. "The buccal swab was supposed to be the victim's single source reference sample, but because she was a chimera, it turned into a two-person mixture."

This complicated the statistical analysis. Forensic DNA software like STRmix™ requires a single-source reference profile to generate likelihood ratios (LRs). A mixed reference profile would confound the software, making it impossible to determine the statistical significance of the evidentiary profiles.

"Our first thought was to ignore the loci that had multiple alleles and treat the reference sample as single-source," Sikorsky said. "But that wasn't a viable solution. Ignoring data and not accounting for imbalance at other loci could lead to incomplete or inaccurate conclusions."

Deductive Profiling: A New Approach

After consulting with experts and forensic forums, Sikorsky's team decided to employ a more innovative approach. "We had to deduce a single-source profile for the victim," she explained. "We treated the mixed reference sample as an unknown and used replicate analysis, conditioning the profiles on the donor's DNA."

By subtracting the donor's contribution, the team was able to isolate what they believed to be the victim's original DNA profile. "This gave us a profile we could work with," Sikorsky said. "It wasn't perfect, but it was scientifically rigorous enough to use for statistical analysis with the crime scene samples."

The victim had undergone a bone marrow transplant, with her biological sister as the donor. This information immediately changed the trajectory of the investigation. "That was the key to everything," Sikorsky explained. "The victim was a genetic chimera."

Analyzing the Evidence

With the deduced victim profile in hand, the team proceeded to compare it with the crime scene DNA evidence. Their task was to determine whether the deduced profile, the donor profile, and/or the suspect's profile could be excluded or was visually included in each sample.

"We were careful to scrutinize each piece of evidence," Sikorsky recalled during her ISHI talk.

- **Perianal/Anal Swab:** The DNA analysis showed three contributors, likely from the suspect, the deduced victim profile, and the donor.
- **Vaginal Swab:** Similarly, the vaginal swab also revealed three contributors, with the deduced victim profile being more prominent than the donor's profile.
- **Neck Swab:** In this sample there were two contributors to the DNA mixture, however, the deduced victim profile was excluded entirely, with the donor's and the suspect's DNA profile being the only detectable DNA.
- **Penile Swab (from the suspect):** When compared to the original mixed DNA standard from the victim, the victim could not be visually excluded from the DNA profile obtained from the suspect's penile swabs. However, when the analyst later compared the deduced victim profile and the donor profile they were both excluded due to the possibility of drop-out. This in turn presented challenges in generating a likelihood ratio for the original visual inclusion.

Overcoming Amplification Challenges

As Sikorsky explained during her ISHI presentation, her team faced additional challenges when amplifying the DNA. "We dealt with allelic dropout, where some alleles fail to amplify," she said. "We attempted to re-amplify the penile swab at a higher target concentration to get more allele calls, but ironically this led to more dropout at certain loci."

Despite these challenges, Sikorsky's team was able to gather enough information to move forward. "It was a delicate balance between gaining more data and managing dropout, but in the end, we were confident in our results," she said.

Transparent Reporting

Sikorsky emphasized the importance of transparency in the final report. "When you have a case this complex, it's critical that every step is thoroughly documented," she told the ISHI audience.

The report included details about the two-person mixture in the victim's reference sample, the chimeric nature of her DNA, and the method used to deduce the victim's pre-transplant DNA profile. ISO-compliant disclaimers were also added, explaining that the case interpretation relied on the medical history provided by the detective.

"The donor's identity was protected throughout the report," Sikorsky noted. "She wasn't involved in the crime, so we referred to her only as the 'donor profile.'"

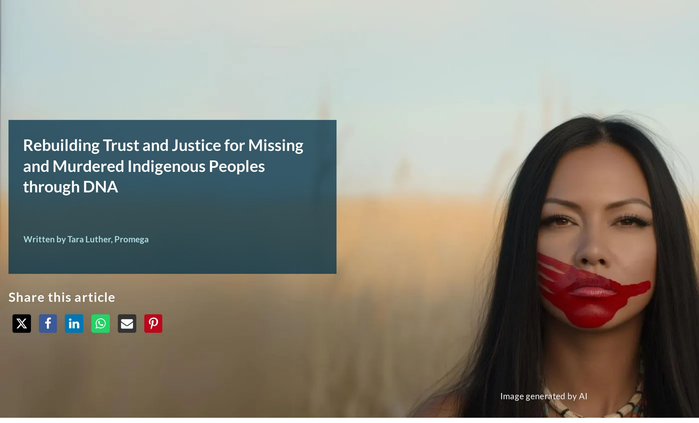
A Complex Case with Significant Implications

For Sikorsky and her team, this case underscored the complexities that can arise in forensic DNA analysis. "Chimerism isn't something we encounter every day, but it's a real phenomenon we have to be prepared for," she said.

As bone marrow transplants and other medical procedures become more common, forensic analysts will need to be ready to handle these challenges. "We had to adapt our approach," Sikorsky concluded in her ISHI presentation. "This case pushed us to think critically and creatively, and in the end, we were able to provide reliable results. That's what forensic science is all about—delivering answers, even in the face of complexity."

Rebuilding Trust and Justice for Missing and Murdered Indigenous Peoples through DNA

Written by Tara Luther, Promega



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At the heart of the ongoing Missing and Murdered Indigenous People (MMIP) crisis in the U.S. lies a severe imbalance: while Indigenous communities suffer disproportionately high rates of violence and disappearances, they historically lack access to resources, including advanced forensic technologies, to address these issues. Presenters Mark Pooley and Dr. Michael Coble at the 35th International Symposium on Human Identification (ISHI) took the stage with an unyielding purpose—to share the strides they're making in MMIP identification and offer a model for transformative change.

"To address a crisis like this, two things are essential: resources and trust," Pooley asserts, speaking from his experience as a retired law enforcement officer and a member of the Navajo and Hopi tribes. Together with Dr. Coble, a forensic DNA expert, they are pushing forward an initiative that brings forensic DNA identification to Indigenous communities while emphasizing a profound need to build trust at every stage.

A Silent Epidemic Brought to Light

MMIP data paints a stark picture: Indigenous women are murdered at a rate nearly four times higher than non-Hispanic White women, and over 5,700 Indigenous women were reported missing in 2016 alone—yet only 116 were recorded in the federal NamUs system. Underreporting is rampant, and this crisis has largely gone unaddressed due to gaps in data collection and investigative resources.

"This is personal work for me," Pooley explains. "I see families spend years waiting for answers that just never come. Through this project, we hope to give them the resolution they deserve."

The Bureau of Justice Assistance (BJA) awarded the Center for Human Identification a grant to address these challenges by funding DNA testing specifically for Indigenous cases. However, Pooley and Coble quickly recognized that a technical solution alone won't suffice—bridging the gap between science and community will require careful, culturally respectful engagement.

Mark Pooley presents at ISHI 35 in San Antonio

Building Bridges: Science Meets Tradition

The journey to making this initiative a success wasn't easy. As Pooley shares, trust is fragile in Indigenous communities, especially regarding DNA testing, which is sometimes seen as an intrusion by non-Native institutions. Many Indigenous cultures regard DNA as sacred and individual to each person, and there are countless tribes across the U.S. with distinct customs, beliefs, and languages. "A one-size-fits-all approach just doesn't work," says Pooley. "Each approach must be tailored to the unique beliefs and needs of each tribe, and that requires time, trust, and open dialogue."

To illustrate this, Pooley recounts a recent interaction with a Navajo elder, a mother of a missing son. He describes her as traditional, speaking only Navajo, and initially unwilling to provide a DNA sample. Her daughters had contacted Pooley, expressing their own willingness to give DNA samples if it could help locate their brother, but they were certain their mother would say no. Pooley remembers urging them, "Just ask her, and if she says no, we'll respect that."

They called Pooley back only minutes later with their mother's surprising agreement to donate her DNA sample. Her response had been, "I will do anything to find my son." Pooley pauses, visibly moved, and adds, "There's power in that, in a mother's desire to know. It breaks down barriers." Not long after, DNA results confirmed her son's identity among unidentified remains, and the family was finally able to bring him home after years of waiting.

"It's those moments that make this work," Pooley reflects. "We think we know people's beliefs or what they're willing to do, but you learn again and again that when it comes to finding loved ones, there are no barriers strong enough to hold that back."

Challenges in Forensic Identification: From Technical Barriers to Funding

The MMIP initiative faces persistent challenges, especially with cases involving degraded or aged DNA samples. Many cases remain unsolved simply because of the limited availability of viable DNA, often worsened by exposure to harsh climates. Coble and Pooley's team leverages state-of-the-art techniques to retrieve DNA from remains that have defied conventional methods, but each sample represents a meticulous process of trial and error.

While scientific advancements allow them to achieve breakthrough results, both leaders acknowledge that sustainable funding is critical. "Programs like these hinge on support from federal grants," Coble says. "Without sustained funding, the work cannot continue, which would be a tragic setback for families still waiting."

To extend their reach, they are also working closely with law enforcement and medical examiners who may have unidentified human remains of potential Native American descent. "There is no cost for law enforcement to engage with us," Coble notes. "We cover the DNA processing and CODIS entry. Our goal is to ensure that no case is left behind due to budget constraints."

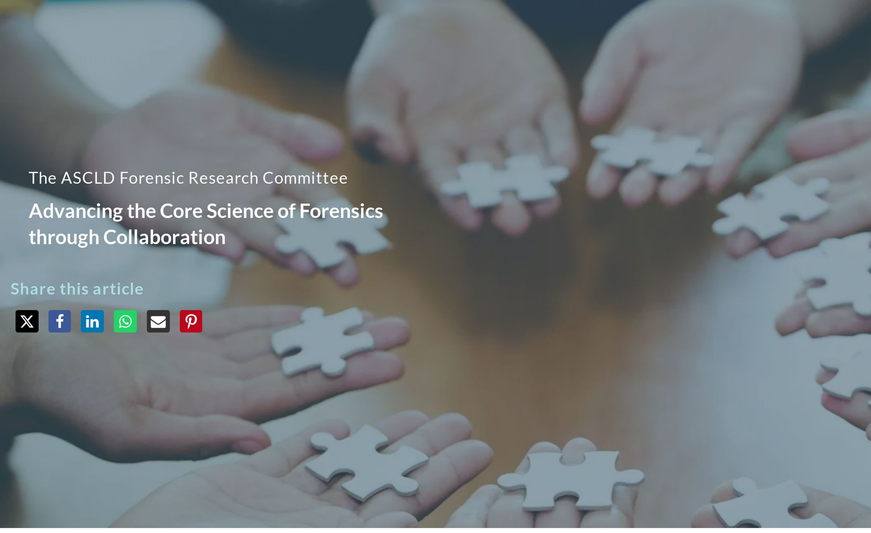
Creating Lasting Change in the Forensic Landscape

With positive results accumulating, the program's long-term impact could be monumental, not just for Indigenous communities, but for the forensic field as a whole. Pooley is hopeful that their MMIP model will inspire similar programs for other underserved communities facing comparable challenges. "Our ultimate hope is that other communities—the Black community, Hispanic community, and beyond—will see what's possible and pursue similar models," Pooley shares.

Both men agree that the MMIP initiative represents a fundamental shift in the role of forensics within marginalized communities. "Every identification is one more person brought home, one more family with answers, and one more step toward justice," Coble remarks.

At ISHI, their message resonated with fellow scientists, underscoring the potential of forensic science to serve as a bridge between modern technology and cultural respect. "We're proving that forensics isn't just about solving crimes," says Pooley, "it's about restoring communities and healing wounds that have been left open for far too long."

For law enforcement agencies or medical examiners interested in collaborating on a case, Pooley and Coble encourage them to reach out via the Center for Human Identification's website. While their primary focus has been in Arizona, New Mexico, and Oklahoma, they are eager to expand their work to additional tribes and communities throughout the United States. In Pooley's words, "It's a calling, not a job. And we're just getting started."



The ASCLD Forensic Research Committee

Advancing the Core Science of Forensics through Collaboration

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The goal of the American Society of Crime Laboratory Directors (ASCLD) Forensic Research Committee (FRC) is to advance the core science of forensics by closing technology gaps and enabling future forensic technologies through various strategic goals: a) identifying the research, development, technology, and evaluation (RDT&E) needs and priorities for the forensic community, b) advancing forensic science research, c) cultivating collaborative research partnerships, d) promoting information sharing throughout the forensic science community, e) supporting the development of future forensic science capabilities, and f) advising the ASCLD Board of Directors on RDT&E related issues, projects, and processes. The FRC provides a number of online tools, designed to promote greater collaboration in forensic science, to help achieve these goals.

Scan the QR code to view the online tools mentioned.

Looking to begin a collaborative partnership?

Research in forensic science is critical in advancing the field, and the best results arise from joint efforts between academic forensic labs, crime labs and industry. The Laboratories and Educators Alliance Program (LEAP) is a joint effort between the American Society of Crime Lab Directors (ASCLD) and the Council of Forensic Science Educators (COFSE) that identifies forensic science needs and provides a platform for crime laboratories, researchers, and industry partners to seek partnerships and projects that align with their mutual research capabilities. LEAP enables partnership opportunities through subject matter expert information exchanges, support for research, testing, evaluation & validations, statistical support and consulting, curriculum assistance and seminar series speaking opportunities, sharing and use of advanced instrumentation, joint presentations and publications, and internship opportunities.

At the time of this publication, there were over 150 LEAP collaborating partners from crime labs, academia and industry. The partnerships span ten countries - USA, Canada, Mexico, Australia, Brazil, Italy, Spain, Belize, Armenia, and Saudi Arabia. You can explore LEAP partners by discipline and geography in a newly launched interactive map on the webpage. A second interactive map (page 2) allows you to view internships by category, geography and provides contact information from the offering organization.

Looking to support, or do you need help with a research project?

The FRC Collaboration Hub is a "one-stop-shop" for researchers to solicit participation in specific projects and for practitioners to contribute their knowledge and experience to support research projects. Through the FRC Collaboration Hub, forensic science practitioners can quickly and easily identify research projects related to their field of expertise and connect with researchers to contribute to the success of the research while also advancing their field. Researchers looking for practitioner support as a subject matter expert, collaborator, beta-tester, a participant in a study, etc. can submit project information to the Hub. Practitioners looking to contribute to research projects or who are interested in providing forensic support can review the directory and select projects. Practitioners gain additional professional development opportunities while supporting and engaging in research projects, while academic researchers can broaden their outreach and gain access to a large network of forensic science laboratories and practitioners. The online Hub is searchable by title, organization, principal investigator, discipline or instrumentation.

Scan the QR code to be taken to the FRC Collaboration Hub.

Looking for or wish to contribute an evaluation or validation?

The FRC Evaluation/Validation Repository promotes transparency, information sharing, and synergy between forensic science laboratories, researchers, and other stakeholders within the criminal justice system. The Evaluation/Validation Repository is a centralized location for evaluation and validation plans, methods, results, reports and data to be stored. It provides accessibility for forensic science laboratories and stakeholders to coordinate, collaborate, and build upon existing efforts to break down operational silos and strengthen forensic science practices as an entire community. The Hub aims to maximize laboratory resources by reducing duplication of validation efforts. This is supported by the May 2024 Heads Up Communication in which ANAB addressed validation sharing across labs: "When another agency has performed a validation and shares the validation information, other agencies can use the validation data to verify the method at their agency". The user-friendly Evaluation/Validation Repository allows users to submit data or to search for data from other labs. By working together, the community can better characterize the performance and increase the robustness of studies assessing the validity and reliability of technologies or analytical methods used in practice.

Looking to learn more about emerging topics in forensic science research?

The FRC Lightning Talks series highlights new and emerging research in all areas of forensic science. Each thirty-minute episode features two or three short talks given by practitioners, researchers or students, followed by a short Q&A session. The "lightning" speed of the talks allow interested, but busy, listeners to gain valuable knowledge in emerging areas of forensic science research in a brief series of talks given by leading experts. The talks are presented live, and later made publicly available as YouTube videos.

Scan the QR code to be taken to the FRC Lightening Talks Webpage.

Scan the QR code to be taken to the FRC Lightening Talks YouTube Channel.

Looking to learn about ASCLD's Research Priorities?

In May of 2017, at the American Society of Crime Laboratory Director's Meeting in Dallas Texas, the Forensic Research Committee (FRC) gathered to discuss forensic science research opportunities. From this discussion, the FRC created a list of high-impact research opportunities which was submitted to and prioritized by the ASCLD Board of Directors. This list serves as a guiding light to researchers who are interested in conducting forensic science research and helps identify key areas where impactful research would support the forensic science community and enhance laboratory operations. You can find the updated 2022-2024 list at: https://www.ascld.org/forensic-research-committee/ascld-research-priorities/. A new list of research priorities is currently under development by the FRC and ASCLD and will be made public in the near future.

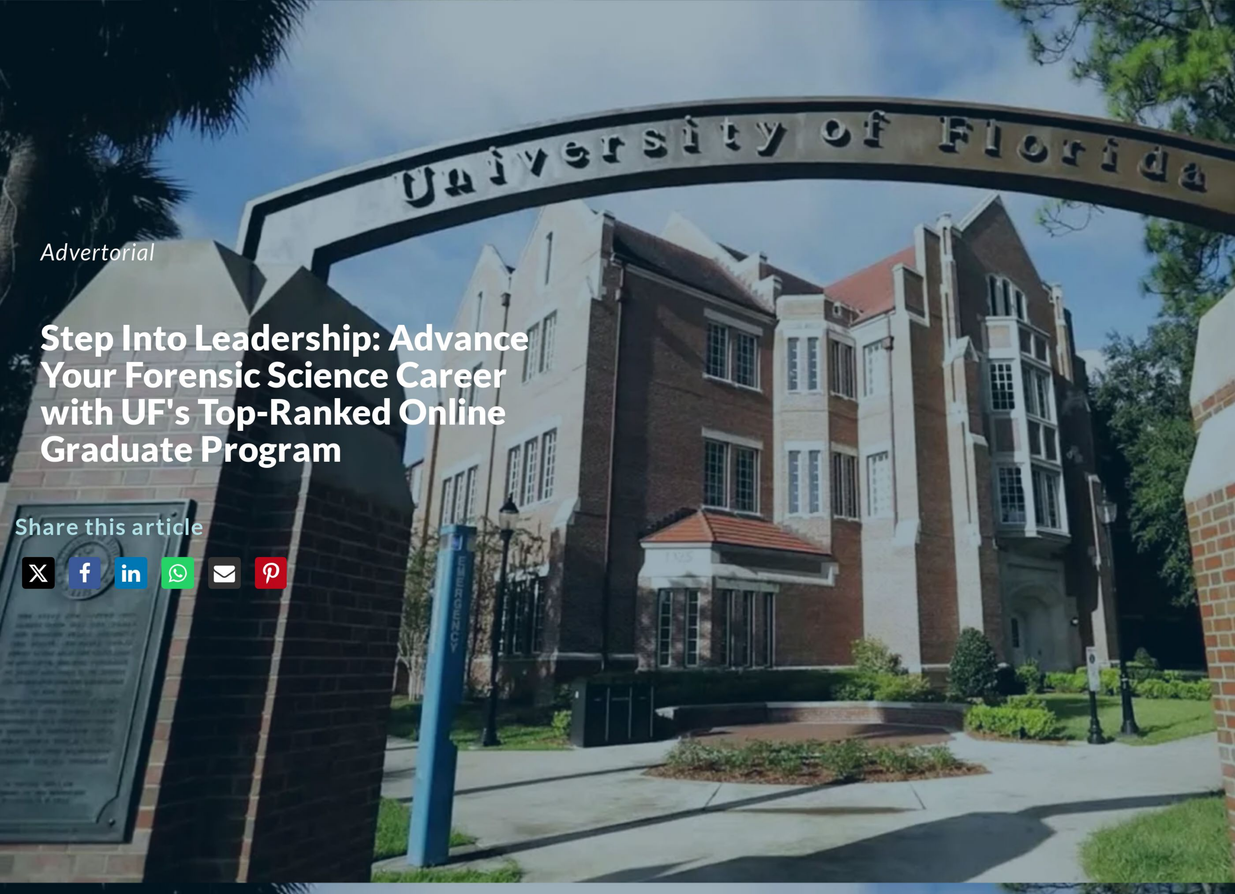
Scan the QR code to view the list of ASCLD research priorities.

Looking for recognition for your collaborative work?

The FRC offers three awards annually, each presented during the annual ASCLD Symposium. The FRC Innovation Award recognizes innovative research studies that have been submitted to the FRC Collaboration Hub within the last two years that have or will result in new technologies, protocols, or tools that impact the forensic science laboratory. The LEAP Partnership Award recognizes an outstanding partnership between collaborating LEAP partners (Crime Laboratories, Academia, and Industry Partners) within the last two years. The Outstanding Evaluation/Validation Award recognizes an outstanding evaluation/validation study that has been submitted to the FRC Evaluation/Validation Repository within the last two years.

Scan the QR code to be taken to the LEAP Partner sign-up form.

The ASCLD FRC seeks to advance the core science of forensics by providing these open-access tools to the forensic science community at no cost. The goal is to facilitate greater collaboration between academic and operational forensic scientists and promote transparency in research, evaluation and validation. ***Research and Innovation are Essential to Advancing Forensic Science.***



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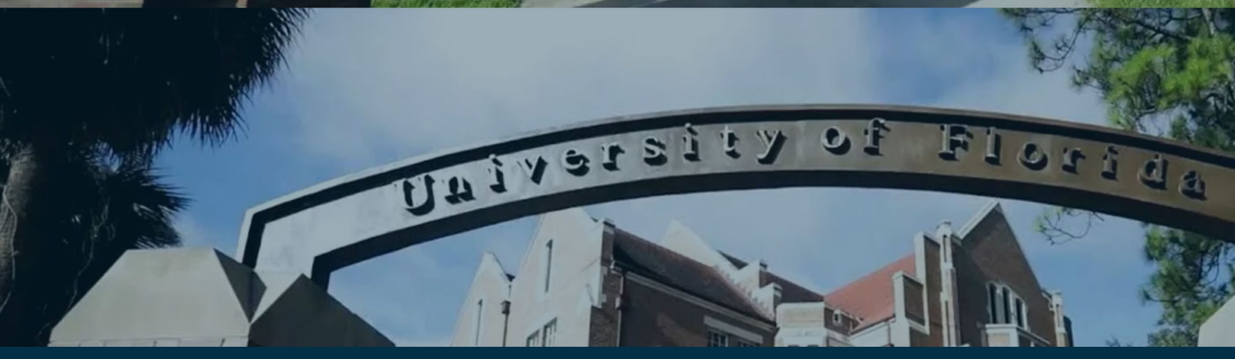

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"When I finished my program, I was fully eligible to become a technical leader and by a stroke of fate my technical leader at the time was offered a director position in the laboratory. I applied for and got promoted to his position. It was life-changing for me to have that opportunity."

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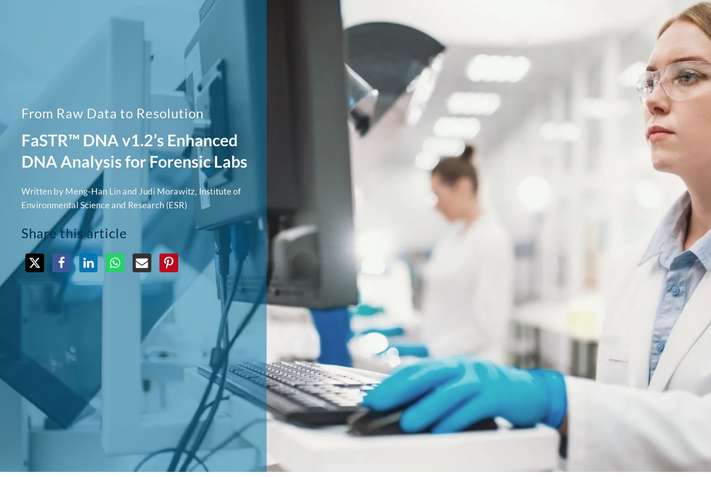

From Raw Data to Resolution

FaSTR™ DNA v1.2's Enhanced DNA Analysis for Forensic Labs

Written by Meng-Han Lin and Judi Morawitz, Institute of Environmental Science and Research (ESR)

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Four years ago, the team that created STRmix™ – probabilistic genotyping software that helped to revolutionize forensic science by enabling analysts to resolve mixed DNA profiles previously thought to be too complex to interpret – introduced FaSTR™ DNA analysis software.

With the ability to rapidly analyze raw DNA data and assign and estimate of the number of contributors (NoC), FaSTR™ DNA allows forensic laboratories to deliver an end-to-end analysis, interpretation, and intelligence solution when used in combination with STRmix™ and another STRmix team software, DBLR™, which is an investigative application designed for kinship analysis and rapidly calculating millions of likelihood ratios (LR).

FaSTR™ DNA works by applying a set of fully configurable rules to streamline the analysis of Short Tandem Repeat (STR) DNA profiles. In some instances, DNA analysis is more complex, and automated heuristics (analysis rules) alone may not be able to resolve all profiles. Where the intervention of a DNA analyst is required, FaSTR™ DNA readily provides all details related to possible ambiguity of a peak (i.e. stutter type, stutter ratio, composite stutter, pull-up potential, N/shoulder peak, peak morphology, stochastic homozygous threshold, heterozygote imbalance) and signals a requirement for the DNA analyst to intervene. All changes made by the analyst are highlighted and recorded.

The STRmix team has recently launched a new version of FaSTR™ DNA. Like its predecessor, FaSTR™ DNA v1.2, builds on existing capabilities and adds several major new features.

To see a brief overview of FaSTR™ DNA v1.2, visit https://vimeo.com/1007497807/85d479cea3?share=copy.

Driven by extensive engagement with the end-user community, the new version introduces several significant improvements to the analysis functionality, including the ability to detect known artifacts, an improved interface for pull-up investigation, options to view the electropherogram with either scan points or base pairs on the x-axis, and individual dye channel zoom capability. FaSTR™ DNA v1.2 also has the ability to model stutters by LUS or allele average using a stutter exception file to further align with the stutter files used within STRmix™. The project sample list is now organized into two tiers which allows viewing by sample type and/or sample status. In all analysis interfaces, a new search bar has been added which provides the ability to find samples by file name.

The most impactful improvement, though, is the addition of a new Review Module, which enables users to conduct the entire technical review workflow (with the epg profile and peak details in simultaneous view) to compare projects and complete all necessary conflict resolution actions within the software. Conflicts detected are any differences in peak label, the nature of peak classification, peak removal, ILS alignment, ladder allocation, and the assigned number of contributors.

The Review Module workflow compares two projects that were saved using the same analysis run set up or two identical runs, to accommodate a range of analysis workflows. These may include either:

- a two-reader workflow
- a single reader workflow
- variations of integrating the artificial neural network as a reader.

The electropherogram from each project is displayed in the Review Module. Three panes of the same dye channel are visible to identify the conflict peaks, the peak calls in each of the projects for review comparison, and the final review decisions (see figure below).

In addition, a new conflicts tab in the peaks table displays similar information. For each conflict peak, the calls and comments made in each project are displayed. To resolve a conflict, the review analyst actions a peak call, which is taken as the review call and the final state of the peak.

Alternatively, the reviewer may enter comments against conflict peaks for a different analyst to implement the analysis action. The peak data from the final review project can be exported as normal. The reviewed project can also be exported directly to STRmix™ for interpretation.

The summary report generated for the review project contains a summary of all peak conflict and resolutions and identifies the review analyst. While this represents a simple use case of the review module, alternative workflow options can also be accommodated.

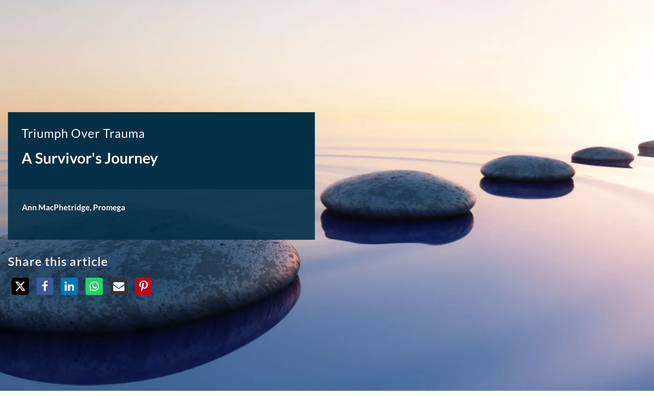
In addition to these improvements, FaSTR™ DNA v1.2 brings many other new features including:

- Addition of a live display of total allelic peak RFU at each locus;
- Ability to search by sample name within the analysis sample list;
- Linking of sample status to the status of the associated ladder;
- Retention of samples failed at ILS in a project and ability to view raw data in Analysis Review;
- Ability to add more than one sample with the same name;
- Ability to customize detailed labels;
- Addition of a quality check to confirm the presence of quality markers in all samples (in applicable kits);
- Ability to save and view the NoC decision tree path and covariate information when a decision tree is used;
- Ability to view a method from within the analysis screen;
- Ability to save projects with different identifiers;
- Control over printing height for sample reports;
- Redesigned analysis sample list to facilitate the more streamlined use of FaSTR™ DNA with sample type and status;
- Ability to exclude samples from sample-to-sample and sample-to-database comparison checks;
- Display of the last saved project (.fpj) filename in the Analysis Review window;
- Ability to add a header and footer watermark to PDF reports;
- Addition of run outputs with information about the estimation of the number of contributors using the decision tree;
- Addition of a new help menu to show shortcut information within the software;
- Option to print electropherograms in scan points;
- Addition of a User Comments column to Export and Reporting windows;
- Ability to print electropherogram reports using custom dye colors; and
- Improvements in the Analysis Summary report.

For more information on FaSTR™ DNA v1.2, visit https://www.strmix.com/fastr.

Meng-Han Lin is a Senior Scientist at the Institute of Environmental Science and Research (ESR) and has been employed in the STRmix™ team since 2016. A molecular biologist by background, his role is primarily responsible for the development, validation, and support of FaSTR™ DNA analysis software.

Judi Morawitz was previously a reporting scientist in the Forensic Biology team at the Institute of Environmental Science and Research (ESR). On her return to ESR in 2016, she has taken on the role of leading the development of STRmix software within the STRmix team. She has been actively involved in the design and development of the FaSTR™ DNA software having seen an opportunity to improve on existing analysis workflows.



Triumph Over Trauma

A Survivor's Journey

Ann MacPhetridge, Promega

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The Golden State Killer, Joseph James DeAngelo, was a notorious serial rapist and murderer who terrorized California in the 1970s and 1980s. His crimes included burglaries, rapes, and murders, often targeting couples and families. DeAngelo would break into homes, tie up his victims, and subject them to psychological torture before committing his heinous acts. His arrest in 2018 was a result of forensic investigative genetic genealogy, and the passion and dedication from detectives who had worked so tirelessly to identify him.

1976 News Reports of a Serial Rapist in Sacramento

East Area Rapist or (EAR) and (EAR/ONS)

Later, he would come to be recognized by many different monikers:

1. The Vidalia Ransaker
2. The Diamond Knot Killer
3. The Original Night Stalker (prior to Richard Ramirez in 1984)
4. Later, he would simply be referred to as "The Golden State Killer" after a book written by the late Michelle McNamara titled, "I'll Be Gone In The Dark: One Woman's Obsessive Search for the Golden State Killer".

In a heartfelt and candid interview, Jane Sandler, a survivor of the Golden State Killer, shared her harrowing experience and the remarkable journey of healing and empowerment that followed.

Jane agreed to meet me in a hotel lobby after giving a presentation to the Massachusetts State Police Laboratory. With her gray hair and short height, I'm immediately struck by the resemblance to my mother who is the same age as Jane, has a similar haircut and build. She smiles as she greets me, and immediately thanks me and Promega for enabling her to share her story. I smile, telling her how absolutely honored we were to have her present on our behalf and how horrific, yet moving I found her story to be.

Life Before the Assault

Before the assault, Jane led a busy life as a student, mother, and member of the Air Force Reserves. She was unaware of the serial rapist terrorizing the area and had been robbed just weeks before the assault, adding to her fear and trauma she experienced after her attack. As time went on, and she learned more about how GSK evolved in the scope of his attacks, she began to wonder if he was the burglar from the weeks prior to her rape.

The Assault and Its Aftermath

Jane's attack occurred early in the morning, shortly after her husband left for work. A ski-masked man wielding a butcher knife broke into her home, threatening her between clenched teeth. He bound, gagged, and blindfolded both her and her 3-year-old son, and then tied them both up with shoelaces. She said she could hear him ripping up sheets or towels and opening her dresser drawers. At one point, he moved her son away from her, filling her with terror about what he might be doing to her child. After the rape was over, he did move her son back next to her, much to her relief.

The assault had a profound impact on her family, and she did not receive the support she hoped for from her husband. During that time, couples rarely discussed such traumatic events, which only added to her sense of isolation. The lack of support further highlighted the need for therapy for both victims and their families. The Rape Crisis Center provided crucial support to her, helping her realize that her emotions were normal and connecting her with other survivors.

She recalls, "It was because I really thought that all these emotions that I was having made me think that I was going crazy sometimes. And then when I talked to these other women, not just the ones that were raped by D'Angelo...to have them tell me their stories. And I thought, Oh, wow. Oh, wow. I'm okay because I'm not the only one that's feeling this way. So that really helped me".

Struggles and Recovery

Jane struggled with alcoholism, which she eventually overcame through prayer and support from Alcoholics Anonymous. Her faith played a significant role in her recovery, and she emphasizes the importance of seeking help.

For months after the attack, she would often fantasize about tying her attacker to a tree and approaching him with the same butcher knife, threatening to cut and torture him. But over time, and because of her faith, she recognized that she needed to forgive her rapist for her own well-being. Forgiving D'Angelo was a pivotal moment in her healing process, driven by her strong faith and belief in Jesus' teachings.

She explains, " He was still in control of me until I let it go. Right? Still in control. I just carried this backpack of anger and hate and despair, and it was weighing me down. It was weighing me down. And, you know, Jesus forgave us. And we need to forgive others. And I kept thinking about that. What would Jesus do? What would Jesus do? And, I'll never forget what he did, but I had to forgive him because I couldn't live with that heaviness I was carrying for so long".

GSK Arrest

Forty-eight years passed. The notorious rapist and serial killer, known today as the Golden State Killer, raped more than 50 women and murdered twelve people in California. When Jane got the phone call that he had been arrested, she immediately reached out to fellow survivors. They attended most of the court proceedings, except for the arraignment, and were thrilled when he received a life in prison sentence without the possibility of parole. He received 11 consecutive life sentences, an additional life sentence, and an additional eight years for other enhancements.

Advocacy and Support

Jane remains cautious and advocates for victims to share their experiences and seek help, stressing the importance of not letting fear control their lives. She emphasizes the importance of support groups and therapy for survivors and their families, advocating for a holistic approach to recovery.

She, and other survivors of the East Side Rapist/ Golden State Killer, stay in touch, hosting get togethers and gatherings for those survivors who banded together. Many are activists for victims and attend various conferences to help educate law enforcement officers on how to comfort and interview victims with compassion and understanding.

A Message of Hope

Her story is a powerful reminder that even in the darkest times, there is hope and a path to recovery. She encourages other survivors to seek help, share their stories, and turn their pain into power.

Reflecting on her journey, she shares, "I have a very close relationship with God. I truly do. And, to the Holy Spirit, I pray. And I can't tell you how many times I have had miracles performed by Him. And they are truly miracles. And again, I'm not ashamed that I was raped, because a lot of good has come out of that. And I'm not ashamed that I'm a recovering alcoholic because of the people that I've met in my AA groups. And why do I still go to AA? I go every Saturday, and these folks just pour out their hearts. I love them. And I'm there because maybe there's someone there that could hear my story".

Jane's positivity and genuine half glass full approach to life surprises me. I tell her, "You remind me of my mom. She's got the same kind of haircut, the same kind of outgoing personality, the same 'let me help you' frame of mind. You would like my mom. She's pretty amazing. I can't help thinking, you know, about how my mother would have dealt with the situation like yours. And I think it would have been very similar to your story."

I continue, "my mother was in a horrible car accident last May, and she nearly died. And, you know, therapy was very physical, therapy was very hard, etc. but she never gave up. She felt the power of prayer, people praying for her. And she just said, 'You know what? I am here for a reason. God's not done with me yet' and I get the same vibe off of you, Jane."

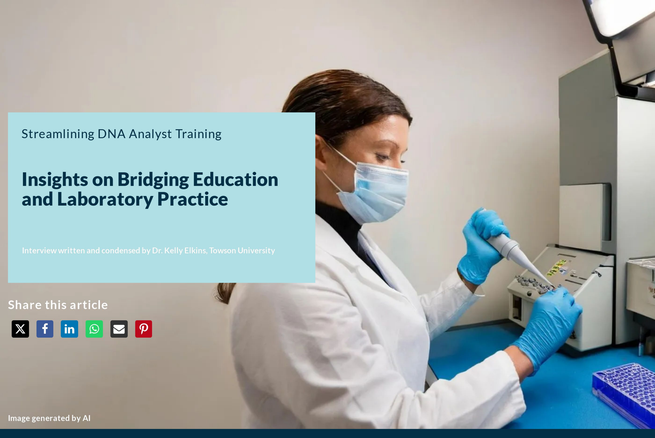
I ask her one final question: "how, after everything that happened to you, have you brought on that sense of normalcy and that sense of power and empowerment that you just exude to everybody and this warmth and so forth? How did you learn to trust people after what happened to you?"

She replies, "Honest to goodness-- I think that's the power of prayer. You know, getting down on your knees is the only way up, sometimes. It really is."

Jane and I finish the interview, we hug and her eyes light up as she grins at me while inviting me to go to CrimeCon with her, "we can be roommates!". Remarkable.

Jane's story is a powerful reminder that even in the darkest times, there is hope and a path to recovery. She encourages other rape survivors to seek help, share their stories, and "turn their pain into power".

To hear more of Jane's story, read her book, Frozen in Fear: A True Story of Surviving the Shadows of Death.



Streamlining DNA Analyst Training

Insights on Bridging Education and Laboratory Practice

Interview written and condensed by Dr. Kelly Elkins, Towson University

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Forensic DNA analysts undergo extensive training to bridge the gap between their academic studies and the practical demands of crime laboratory work. However, with training programs often spanning up to two years, both new hires and forensic laboratories face significant challenges in balancing onboarding with the urgent need for casework. Recognizing this, Dr. Kelly Elkins and her team at Towson University conducted a comprehensive survey of DNA analyst training programs across U.S. forensic laboratories.

In this interview, Dr. Elkins shares the findings from this survey, exploring the resources, methodologies, and challenges shaping DNA analyst training today. From the critical role of hands-on practice to the need for more emphasis on troubleshooting and validation, her insights provide a roadmap for laboratories aiming to enhance their training programs while addressing resource constraints and workforce demands.

What initially led you and your team to conduct this survey on DNA analyst training in U.S. forensic laboratories? What gaps or needs in training inspired the project?

We were interested in training for a few reasons. First, new graduates of forensic programs reported long training periods of up to two years even after completing Masters degrees in Forensic Science. We wanted to understand the content and coverage the forensic laboratories are seeking and are assigning in training to help streamline the process. Long training programs have unintended ramifications for trainees and laboratories. University modules and courses should closely align to the content and terminology needed in testimony and sample analysis experience needed in the laboratory. Appropriate focus will alleviate the need for the laboratory to redo or retrain everything graduates learned in a course.

Secondly, students attend college and university for myriad reasons but one of the most common reasons students study forensic science is to get a job in a forensic science laboratory where they seek to make a difference. After four or six years (or more) of postsecondary education, students want to finally be able to make a difference and contribute to casework testing such as rape kit testing. They do not want to be hired and told it will be two more years of study and waiting to finally contribute to the efforts to make our communities safer. Additionally, forensic laboratory directors also want new hires to progress in training because they have backlogs and cases to test. Better understanding academic and laboratory capabilities and needs will allow better alignment of curriculum and laboratory training activities and hopefully reduce the time new hires spend in training.

The survey highlights a wide variety of resources that trainees are encouraged to study, from foundational books to laboratory-specific SOPs. Were there any resources that stood out as particularly essential or universally used across labs?

Numerous training resources are used especially Dr. John Butler's books, Advanced Topics in Forensic DNA Typing: Methodology, Advanced Topics in Forensic DNA Typing: Interpretation, and Fundamentals of DNA Typing, but also Forensic DNA Typing. Other frequently used resources include training manuals, SOPs, quality assurance documents, journal articles, books by other authors especially for statistics and probabilistic genotyping, manufacturer's manuals, ANSI/ASB standards, SWGDAM documents, OJP training resources and the NRC report.

Hands-on practice, shadowing, and readings were among the top training activities mentioned by respondents. In your experience, what makes these training methods so effective for new DNA analysts?

New hires are expected to know the theory and literature in their respective sections of the laboratory either prior to hire or following study and training. Most new hires need to additionally study and this is where readings are so important. Each laboratory has its own policies and procedures; new analysts need to learn these so shadowing is essential. One to one training is provided to new analysts in training. This is effective as trainees are provided individualized instruction and immediate feedback to develop and perfect their skills. To become a qualified analyst, each new hire must progress through hands-on practice, documented training samples and competency testing.

One area labs indicated they'd like to spend more time on in training is troubleshooting. How do you think labs could address this, and what are some specific challenges in troubleshooting that DNA analysts encounter?

We heard this from many respondents and interviewees. Trainees could be included in routine weekly freezer and instrument checks, software updates, validation of new instruments and tools, and troubleshooting errors and problems in testing that are noted or arise. Shadowing these activities will give the trainees insight into the decision making, steps and documentation that laboratory staff perform when troubleshooting as well as who they call for instrument maintenance authorizations and repairs. The challenge is taking trainees away from scheduled training tasks and new analysts away from casework. Incidents and issues that arise and warrant troubleshooting occur with little warning or regard to schedules.

Many labs reported using quizzes, oral exams, and final assessments to evaluate competency. In your opinion, are there specific assessment methods that seem particularly effective in gauging a trainee's readiness for casework?

Frequent quizzes, cumulative oral exams, and final written assessments are all useful tools for gauging a trainee's content knowledge and ability to explain concepts. Mock case sample processing and testimony best simulate the tasks and roles of the forensic scientist and readiness for casework.

In terms of training coordinators, it sounds like their role varies significantly depending on the lab's structure. Could you share any best practices for labs that have successfully implemented a training coordinator to support DNA analyst development?

The laboratory training and work assignment structure varies significantly depending on the laboratory structure. A forensic scientist may have many titles and roles including Forensic Scientist, Analyst, Technical Lead, Unit Supervisor, and Training Coordinator. Having a training coordinator is a best practice. The training coordinator creates or compiles and updates the training curriculum and reading list, reporting forms, practice and competency samples, conducts training modules, and monitors training daily activities and progress. The training coordinator writes and administers assessments including quizzes, examinations, oral examinations, and mock case testing and court testimony. As needed, the training coordinator will create a retraining plan and experiences. Training coordinators ensure that trainees have specific training activities each work day which makes training progress more efficiently.

For labs that lack the resources for an in-house training coordinator, what advice would you give to leaders or mentors who are balancing training with their casework responsibilities?

The training program needs to be organized with checklists and the trainees need to be self-directed and ask for help when they need it. Many laboratories are willing to share their training materials and reading lists with other laboratories developing their training programs. Scheduling a weekly check-in with mentees is another best practice.

Your survey noted that labs wanted to focus more on validation and root cause analysis in their training. How might labs integrate more of these critical skills into the training process, even with resource constraints?

The use of screenshots and previously documented troubleshooting and application of root cause analysis procedures could be used without additional consumable resources. Laboratories still need to schedule time for this training and refreshers but many laboratories are holding a day or afternoon a month for this.

Finally, based on the survey results, what do you see as the next steps for supporting and enhancing DNA analyst training across U.S. forensic labs? Are there areas where additional guidance or standardization could benefit the field as a whole?

There is a new Google group for trainers to share materials and best practices and we have launched a new website to host curriculum materials we have created for use in teaching and training.

West Palm Beach

A City That Offers More Than Just Sunshine

Written by: Tara Luther, Promega

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When people think of West Palm Beach, Florida, the first thing that comes to mind is often its sunny skies and warm coastal breeze. While the endless sunshine and pristine beaches are undeniably part of the charm, there's a lot more to this city than meets the eye. From its deep historical roots to its vibrant arts scene, West Palm Beach is a city that blends relaxation with innovation.

A City Built on Vision and Innovation

West Palm Beach's history is tied to one of Florida's most prominent figures—Henry Flagler. Back in 1894, Flagler founded West Palm Beach as a place to house the workers building his grand hotels in Palm Beach. What started as a workers' town has since evolved into a thriving urban center, but the sense of innovation that built the city remains strong.

Today, West Palm Beach is much more than just a gateway to Palm Beach's glitz and glamour. It's a city that has embraced modern development while still paying homage to its history. For a glimpse into that past, visit the Flagler Museum. Located in the grand estate where Henry Flagler once lived, the museum offers a fascinating look at Florida's early development and the man who helped shape it.

Flagler Museum

Where Culture and the Arts Come Alive

There's something about West Palm Beach that fosters creativity, and it shows. Take the Norton Museum of Art, for instance. With its impressive collection of American, European, and Chinese art, along with contemporary exhibitions, it's easy to get lost in its halls for an afternoon. Whether you're a seasoned art lover or someone who's just looking for a break from the day-to-day, the Norton provides a perfect retreat.

If performance arts are more your style, the Kravis Center for the Performing Arts is another gem in the city's crown. From Broadway productions to classical concerts, there's always something going on. It's not unusual to catch a world-class show or discover a local talent making waves in the arts scene. West Palm Beach's cultural energy spills into its streets, too. Just take a walk down Clematis Street and you'll be surrounded by murals, live music, and an ever-changing roster of festivals and events.

Explore the Great Outdoors

Sure, the weather here is fantastic year-round, but what makes West Palm Beach stand out is how seamlessly nature is woven into the fabric of the city. With an average of 234 days of sunshine annually, it's hard not to be tempted by the outdoors.

One place that really captures the essence of the region is Grassy Waters Preserve. It's part of the Everglades ecosystem, and if you've never had the chance to explore this unique landscape, you're in for a treat. Whether you prefer hiking, kayaking, or just watching the wildlife, it's a great way to spend a few hours reconnecting with nature. And if you're more into a casual stroll, the Flagler Drive waterfront promenade offers stunning views of the Intracoastal Waterway with plenty of places to stop and enjoy the scenery.

Looking for something more? Okeeheelee Park is a sprawling outdoor haven with biking trails, freshwater lakes, and endless space to relax or get moving. Whether you're into jogging, paddleboarding, or even just a picnic in the sun, you'll find that West Palm Beach knows how to do outdoor living right.

A Culinary Scene That Delivers

If there's one thing you don't want to overlook during your time in West Palm Beach, it's the food. The city's culinary scene is as diverse as it is delicious. Whether you're a seafood enthusiast, a lover of Southern comfort food, or someone who likes a more international flavor, there's something here for every palate.

Start with the seafood, because being this close to the ocean means fresh is an understatement. You'll find everything from lobster to snapper served in both upscale restaurants and casual beachside spots. The Regional Kitchen & Public House is known for its modern take on Southern cuisine, with dishes that feel familiar but elevated. If French cuisine is more your speed, Pistache French Bistro offers a cozy yet sophisticated dining experience right in the heart of downtown.

For something a bit more laid-back, you can't go wrong with the food truck scene. Clematis Street is a hotspot for quick and flavorful eats, offering everything from gourmet grilled cheese to tacos that rival the best of them.

Retail Therapy and Entertainment

If shopping and entertainment are on your list, you're in the right place. Rosemary Square (formerly CityPlace) is West Palm Beach's shopping and entertainment hub. This open-air plaza has everything from luxury retailers to local boutiques, plus plenty of dining options to recharge after a few hours of browsing. Grab a coffee, do a little people-watching, and take in the lively atmosphere.

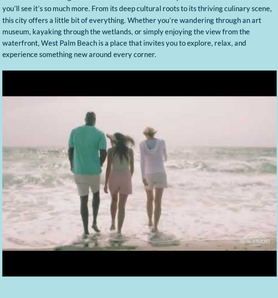
For those with an eye for vintage, Antique Row is a must-visit. With its charming collection of shops, art galleries, and design studios, it's easy to spend a day exploring this quirky yet sophisticated part of town. Whether you're hunting for rare finds or simply looking to enjoy a quiet afternoon, this is the spot.

More Than Just a Gateway

One of the perks of West Palm Beach is its location. While the city itself has plenty to offer, it's also perfectly situated for those wanting to explore more of South Florida. Miami is just a short drive away if you're craving the fast pace of city life, while the quieter beaches of the Treasure Coast lie to the north. Palm Beach International Airport is right around the corner, making it easy to get here—or take off on your next adventure.

But while it's easy to talk about West Palm Beach as a "gateway," the truth is, it's a destination in its own right. There's an energy here—a mix of laid-back coastal living and a pulse of creativity and innovation—that sets it apart from other places.

West Palm Beach might be known for its sunshine but spend a little time here and you'll see it's so much more. From its deep cultural roots to its thriving culinary scene, this city offers a little bit of everything. Whether you're wandering through an art museum, kayaking through the wetlands, or simply enjoying the view from the waterfront, West Palm Beach is a place that invites you to explore, relax, and experience something new around every corner.



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