

# SWAFS 2024 Full Schedule

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## **DRUG CHEMISTRY- OSAC SWGDRUG**

Monday, October 7th, 8:00 A.M. - 11:30 A.M.

*Jennifer Hatch, David Huang*

### **Abstract:**

The Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG) is an organization that works to improve the quality of the forensic examination of seized drugs and to respond to the needs of the forensic community by supporting the development of internationally accepted minimum standards, identifying best practices within the international community, and providing resources to help laboratories meet these standards. This presentation will cover the history and objectives of SWGDRUG, give insight into the process by which SWGDRUG Recommendations and Supplementary Documents are created and revised, and provide updates on current SWGDRUG Recommendations, Supplementary Documents, and other Resources.

### **Biographies:**

Jennifer Hatch is the System Trainer for the Seized Drugs discipline at the Texas Department of Public Safety. She has been employed with the TX Department of Public Safety for 12 years. She has a Bachelor's degree in chemistry from Monmouth College in Illinois and her Master's degree in Chemistry with a focus in Analytical Chemistry and Biological Chemistry from Indiana University in Bloomington, Indiana. She is a member of SWAFS, CLIC, and OSAC.

David Huang has been a Forensic Chemist with the United States Postal Inspection Service since February of 2022. Prior to that he was a Forensic Analyst with the Houston Forensic Science Center from 2013 to 2021. He has a Bachelor's of Science in Chemistry from the University of Texas at Austin, and is a member of the Southwestern Association of Forensic Scientists (SWAFS), the Clandestine Laboratory Investigating Chemists (CLIC), and the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG).



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## **TOXICOLOGY - Improving Consistency in Forensic Alcohol Calculations**

Monday, October 7th, 8:00 A.M. - 11:30 A.M.

*Jennifer F. Limoges, Chris Heartsill*

### **Abstract:**

Performing calculations related to ethanol is a common practice for forensic toxicologists, however, there can be significant variability in how this work is conducted. This variability exists from state to state and between labs within a state but can even extend to analysts within a single laboratory. ANSI/ASB BPR 122 Best Practice Recommendations for Performing Alcohol Calculations in Forensic Toxicology was developed to improve the quality and consistency of this service. This session will review the pharmacokinetic principles of alcohol as they relate to performing calculations in forensic toxicology casework. The recommendations contained within ANSI/ASB BPR 122 will be discussed and examples will be provided of how to apply those to real-world case scenarios.

### **Biographies:**

Jennifer Limoges, MS, is the Associate Director/Toxicology at the New York State Police Forensic Investigation Center. She received her BS in Chemistry from Clarkson University and her MS in Forensic Science from the University of New Haven. She began working for the New York State Police as a Forensic Scientist in 1994. Ms. Limoges is an active member of the Society of Forensic Toxicologist (SOFT) and the American Academy of Forensic Sciences (AAFS). She was a member of the SOFT Board of Directors from 2011-2017, serving as President in 2016, and is a current member of the SOFT/AAFS Drugs & Driving Committee. She is a member and Past President of the Northeastern Association of Forensic Scientists (NEAFS), a member of the International Association of Chemical Testing (IACT), and is certified by the American Board of Criminalistics (ABC-GKE). Ms. Limoges is part of the National Safety Council's Alcohol, Drugs, and Impairment Division (NSC ADID), and has been on their Executive Committee since 2008. She received the NSC ADID's prestigious Robert F. Borkenstein Award in 2023 for her outstanding contributions to the field of alcohol and drug related traffic safety. Ms. Limoges' primary area of expertise is in impaired driving issues. She co-authored the 2013 JAT publication "Recommendations for Toxicological Investigation of Drug Impaired Driving and Motor Vehicle Fatalities," as well as the 2017 and 2021 updates. Ms. Limoges is a strong proponent of continuing education. She has hosted numerous workshops over



the years at both the local and national level, providing training to toxicologists, law enforcement officers, attorneys, and judges. Ms. Limoges is also very active in standards development within the forensic science community. She worked to establish the Academy Standards Board (ASB) and currently serves as the Chair. She is a member of the ASB Toxicology Consensus Body and is a past member of the OSAC Toxicology Subcommittee and SWGTOX.

Chris Heartsill is currently certified by the American Board of Forensic Toxicology as a Diplomate - Forensic Toxicology and received his B.S. degree in Chemistry from East Central University in 1991. Chris has been working in analytical chemistry for over 33 years with more than 29 years of forensic toxicology experience including the areas of human performance forensic toxicology, postmortem forensic toxicology, and forensic laboratory quality management. Chris is currently working as the Regional Toxicology Liaison for NHTSA Region 7. He was previously



the Quality Manager for the Dallas Police Department Crime Scene Response Section. Prior to coming to the Dallas Police Department, he served as the Quality Manager for the Tarrant County Medical Examiner's Office in Fort Worth, Texas and the Toxicology Supervisor, Toxicologist, Quality Manager, and Breath Testing Technical Supervisor at the Dallas County Medical Examiner's Office in Dallas, Texas. Chris is an active member of the Society of Forensic Toxicologists, currently serving as the President Elect, member of the Finance Committee, and Editor of ToxTalk. Other professional organizations include the Southwestern Association of Toxicologists, serving two individual terms as President, Grant Committee Chair, and Historian, the Texas Association of Crime Laboratory Directors, and the National Safety Council Alcohol, Drugs & Impairment Division, serving on the Executive Board and performing duties as Secretary. Chris participates in the creation of standards, guidelines, and best practices by serving on the OSAC Toxicology Subcommittee.

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**QUALITY - Understanding Measurement Uncertainty and Traceability**

Monday, October 7th, 8:00 A.M. - 11:30 A.M.

*Stacey Winkler*

**Abstract:**

This workshop will focus on a better understanding of measurement uncertainty and metrological traceability, both critical components of a laboratory's quality program. Topics covered will include sources of measurement uncertainty, understanding a budget, and conformance to ISO/IEC 17025 and ANAB AR 3125 standards and understanding the difference between quality traceability and metrological traceability. Attendees will also be provided strategies for effectively communicating these technical topics in a simplified way in a courtroom setting and examples for training new employees. This workshop is perfect for professionals looking to deepen their understanding of measurement uncertainty and metrological traceability and their ability to relay these topics in an understandable way.

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**DRUG CHEMISTRY - H2 Validation**

Monday, October 7th, 1:00 P.M. - 4:30 P.M.

*Paige Stanfield, H. Ross Ehmann*

**Abstract:**

Helium supply constraints and rising costs are starting to impact GCMS labs. These issues are set to worsen as the US government has finally sold the National Helium Reserve, old plants are decommissioned, and new ones are delayed. Switching to hydrogen GCMS presents a readily available solution to these problems. This workshop is intended to introduce basic concepts associated with hydrogen GCMS and illustrate how a large lab system implements it. Please note the objective is not converting existing helium GCMS instruments to hydrogen. Rather, what will be presented is the ground up implementation of hydrogen GCMS systems utilizing recently developed hydrogen inert sources. It is hoped by the end of the workshop attendees will acquire understanding and enough technical knowledge to implement hydrogen GCMS at their own laboratories.

**Biographies:**

Paige Stanfield is currently employed at the Texas Department of Public Safety Crime Lab in Houston Texas, where she has been a dedicated member of the seized drug section for the past four years. Prior to her tenure at DPS, Paige worked for two years at the Institute of Forensic Sciences also located in Houston Texas. Her forensic science career began at the Department of Public Safety in Mississippi in 2018. Paige graduated from the University of Mississippi in 2015, laying the foundation for her expertise in forensic sciences.

H. Ross Ehmann has been practicing forensics for almost 15 years. He is a member of AAFS and certified in drug analysis by ABC. In addition to his tenures in public and private labs, Mr. Ehmann has added to the forensic community having a modest amount of publications and presentations to his name. Mr. Ehmann earned a Master's degree in forensic science from Sam Houston State University in 2009 where he met his wife and fellow forensic scientist Jessica. He is currently a drug analyst at the Texas Department of Public Safety Houston crime lab along with Jessica who's always just down the hall.

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## **TOXICOLOGY - An Overview of Toxicology and the Building of New Partnerships**

Monday, October 7th, 1:00 P.M. - 4:30 P.M.

*Mary Lynn Heffington, Kenton Leigh, Tom Fisher*

### **Abstract:**

This workshop will be an interactive workshop discussing current workflows in Forensic Toxicology as well as the building of new relationships with public health entities and other state agencies.

The public health science and forensic science communities intersect in many ways, from using the same scientific techniques to addressing similar issues in the community, such as substance abuse. Unfortunately, many states do not maintain working relationships between their forensic and public health entities. This talk will introduce the audience to the CDC's Laboratory Response Network for Chemical Threats (LRN-C) and discuss how members of the LRN-C are ideal for partnerships with the forensic community. Information will be shared on the analytical capabilities of Arkansas' LRN-C laboratory, the Chemical Terrorism (CT) Laboratory at the Glen F. Baker Public Health Laboratory, and how it is being leveraged to assist local forensic science activities. In July of 2024, the CT Laboratory and Arkansas State Crime Laboratory collaborated to begin a study on polysubstance use in suspected impaired Arkansas' drivers. Results and impacts of this study will be discussed, as well as how the project went from an idea to fruition, and how this collaboration can be a model for other states to replicate. Additional partnerships have been built with the Department of Public Safety (DPS), the Office of the Arkansas Drug Director and the Arkansas Opioid Recovery Partnership (ARORP). By forming new partnerships, we have been able to collect and share data and information that provides strategic and tactical intelligence to law enforcement agencies and to communities with intentions of educating, informing, and protecting the citizens of Arkansas.

### **Biographies:**

Mary Lynn Heffington is the Forensic Toxicology Technical Leader for the Arkansas State Crime Laboratory. She has a Bachelor of Science degree in Biology from Lyon College and a Master of Business Administration from Louisiana State University. In her role as technical leader, she has trained new analysts, performed method development and validations, and played a key role in writing new policies and updating pre-existing policies. Mary Lynn has worked for the state crime laboratory for 6 years, serving as an analyst, the section quality manager, a grievance officer for the Department of Public Safety, and an internal auditor for the laboratory. She is an active member of the Society of Forensic Toxicologists serving as a finance committee member and a workshop coordinator for the 2025 annual meeting as well as a member

of the Arkansas Impaired Driving Prevention Task Force. Mary Lynn previously worked as an EMT in Little Rock, AR and still works part-time and maintains NREMT certification.

Kenton Leigh is currently employed by the Arkansas Department of Health at the Glen F. Baker Public Health Laboratory where he serves as the Director of the Office of Alcohol Testing and manager of the Chemical Terrorism Laboratory. Kenton holds a Bachelor of Science degree in Biology and a Master of Science degree in Molecular Bioscience, both from Arkansas State University, and has over a decade of experience as both an analyst and manager in cell biology and analytical chemistry laboratories. He is a member of the Association of Ignition Interlock Program Administrators (AIIPA) and the Arkansas Impaired Driving Prevention Task Force.

Tom Fisher began his career in 1992 as a Deputy Sheriff with the Faulkner County Sheriff's Office (FCSO). Director Fisher performed duties including patrol, criminal investigation, and drug task force operations for the FCSO until 1997. In October of 1997, he began his career as a Special Agent with the Drug Enforcement Administration (DEA). Director Fisher was assigned to the St. Louis and New Orleans Field Divisions during his career. During his career with DEA, Director Fisher was responsible for conducting complex drug conspiracy investigations, domestic and international money laundering investigations, providing enhanced undercover activities throughout multiple states, and coordinating large scale enforcement operations and interstate investigations. For approximately eight years, he conducted criminal and civil investigations related to DEA registrants in coordination with state oversight boards while part of the Tactical Diversion Squad, which focused efforts on addressing the overdose epidemic specific to illicit drug distributors, negligent prescribers, and distributors of pharmaceutical controlled substances. Director Fisher retired from DEA in December of 2021. Prior to assuming his responsibilities as Drug Director, Tom served as an Overdose Response Strategy Analyst for the Gulf Coast High Intensity Drug Trafficking Area (HIDTA), a program initiative organized under the White House and the Office of National Drug Control Policy (ONDCP) Overdose Response Strategy (ORS) initiative.





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## **FIREARMS - Suit Up: Answering Tough Questions – A Daubert Experience**

Monday, October 7th, 1:00 P.M. - 4:30 P.M.

*Amy Weber, Julie Knapp*

### **Abstract:**

This is an interactive class discussing the Daubert challenges to the Firearm and Toolmark discipline. During the class, we will be taking you through a series of Daubert questions and discussing responses to these questions. Be prepared with answers for the Daubert prongs, validation study error rates, the NAS report, PCAST report, your qualifications, and more! Your CV is required to be submitted 30 days before class. Only active forensic examiners are allowed in this class.

### **Biographies:**

Amy Weber is a forensic scientist at the Nebraska State Patrol Crime Lab, specializing in firearm/toolmark and footwear/tire impression analysis. She holds a B.S. in Geological Sciences (geophysics/geo-engineering) from Northern Illinois University and a M.A.T. degree in Earth Sciences (earth sciences, physics, chemistry) from the University of South Carolina. Amy has worked in several laboratories over the course of her 20-year forensic career, and has testified as an expert witness in South Carolina, Kansas, Nebraska, as well as in the federal court systems. She is a Distinguished Member of the Association of Firearm and Tool Mark Examiners (AFTE), serving as current Chair of the AFTE Standardization/Training Committee and is a former member of the AFTE Board of Admissions.

Julie Knapp is a senior forensic scientist/technical leader for the state of Colorado. She has a Bachelor of science in Chemistry with an emphasis in Criminalistics from the Metropolitan State University of Denver. Julie has over 20 years of experience in Firearm and Toolmarks with expertise in toolmark examination to include handheld tools, firearms functionality, serial number restoration, fracture match, NIBIN, distance determination, and crime scene. She has testified and assisted in a number of Daubert style hearings and oversees a national periodic meeting regarding Daubert challenges in the firearm and toolmark field. She is certified in the areas of firearms identification and distance determination, is an ANAB assessor, and is a distinguished member of the Association of Firearm and Tool Mark Examiners (AFTE).

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## **DRUG CHEMISTRY - Manufacturing Drug Trends**

Wednesday, October 9th, 8:00 A.M. - 11:30 A.M.

*Terra Lucas, Tamara Keller*

### **Abstract:**

Much like drug trends have changed over the years, so have the types of manufacturing; it's not just meth labs anymore. This presentation will discuss fentanyl synthesis, methamphetamine lab trends, DMT extraction labs, mushroom grows, and other types of manufacturing that have been seen. In addition, some case studies of interesting manufacturing crime scenes will be discussed.

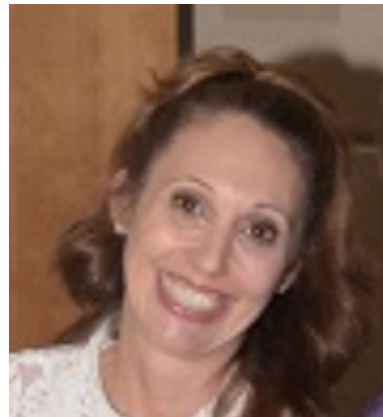
### **Biographies:**

Terra Lucas earned a bachelor's degree in chemistry with a minor in Forensic Science from Ferris State University, Big Rapids, MI in 2010. She began her forensics career as a Crime Scene Specialist for the Little Rock Police Department in June 2012. She then became a Forensic Drug Chemist at the Arkansas State Crime Laboratory in November 2014 and was promoted to the Chief Forensic Chemist of the ASCL satellite lab in Lowell, AR in Oct. 2021. Terra is a Distinguished Member of SWAFS and has served on the Admissions Committee from 2016-2022, chaired the Meeting Advisory Committee in 2020, served as a Board of Directors member for the 2021/2022 term, and served as the SWAFS Secretary and Membership Committee Chair for the 2023/2024 term. She became a Drug Analysis Fellow with the American Board of Criminalistics in 2018 and became certified and competent as a Clandestine Laboratory Chemist in 2020. Terra is also a member of Clandestine Laboratory Investigating Chemists Association, serving as their Historian, a member of the Electronic Resources Committee, and a member of the 2021/2022 Audit Committee. In addition to her role as the Chief Forensic Chemist, Terra has trained new analysts, and performed method development, validations, and training of new analytical techniques in her lab. She is an ANAB Technical Assessor and a coordinator of ASCL's Summer Internship Program and has served as a Safety Officer, Grievance Officer, and on her laboratory's internal audit team.



Tamara graduated from Northern Arizona University in 1995 with a Bachelor of Science degree in Criminalistics/Forensic Chemistry. She joined the Drug Enforcement Administration South Central Laboratory in 1997 and continued her career as a Senior Forensic Chemist until her retirement in 2015. During her time at DEA, she investigated

numerous clandestine labs, assisted with search warrants, and testified in court frequently. She is active in many professional organizations, including the Southwestern Association of Forensic Scientists (SWAFS) and the Texas Narcotics Association (TNOA). She has held many board positions and continues to be an active member today. She went back to graduate school at Oklahoma State University and completed her Master's in Forensic Science in 2022.



After retirement, Tamara joined the Waters Corporation and worked as a Chromatography/Chemistry Specialist, specializing in forensic applications, until 2023. In this role, she assisted customers with method development and chromatography challenges. Currently, Tamara is a Technical Trainer with 908 devices in the Field Forensics group. She focuses most of her work in the field of presumptive drug testing for law enforcement and laboratory personnel.

Tamara is married to her college love, Justin, and together are raising 3 boys. She spends most of her weekends at various sporting events watching her kids do what they love. Her hobbies include running, reading, baking and gardening. And, she adores her favorite dogs Lola and Winston!

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## **TOXICOLOGY - QTOF: From Purchase to Implementation**

Wednesday, October 9th, 8:00 A.M. - 11:30 A.M.

*Danielle Mata*

### **Abstract:**

Liquid chromatography-quadrupole time-of-flight instrumentation is a game changer for toxicology screening. However, with its improvements in detection and drug trend monitoring comes a steep learning curve, especially for laboratories that have minimal experience with liquid chromatography. At these presentations, hear from a laboratory that purchased their first LC-QTOF in 2016 and implemented a validated method for over 300 compounds in 2018 and has continued to improve and make changes to their process. Learn about some of the struggles and triumphs on everything from purchasing, developing, validating, implementing and continually improving this method. Comparisons will be made to traditional screening techniques and the pros and cons of LC-QTOF and immunoassay screening will be discussed. The speaker welcomes any questions or issues your laboratory is having with your own LC-QTOF journey.

### **Biography:**

Dani C. Mata, MSFS, is currently a Senior Forensic Scientist for the Forensic Chemistry Bureau of the Orange County Crime Lab, CA where she has worked since 2007. Ms. Mata has been certified by the American Board of Forensic Toxicologists as a Diplomate in Forensic Toxicology since 2015 and is currently a Director on the board. In 2015 and 2016 Ms. Mata served as an affiliate on the Organization of Scientific Area Committee Task Group on Report and Testimony and starting in 2020 became a member of the Toxicology Subcommittee in 2020. Ms. Mata has been a member of the California



Association of Toxicologists (CAT) since 2009 and has co-hosted two of the meetings and presented at nine CAT meetings. For CAT, she has co-chaired the Research Grant Committee for 2012 – 2014, and Literature Review Committee for 2012 – 2018. Ms. Mata has been a member of the Society of Forensic Toxicology (SOFT) since 2011 and has served on the Young Forensic Scientist Committee from 2013 – 2016, The Award Committee 2017 – 2020, The Toxicology Resource Committee 2020 to present and the NPS Committee 2016 – present, where she was chair from 2017 - 2023. She was the Volunteer co-Coordinator for the 2016 SOFT meeting and was the co-host to the SOFT 2020 meeting, which ended up being cancelled due to the COVID-19 pandemic. She was awarded the SOFT 2012 Young Scientist Meeting Award, SOFT 2021 Young Forensic Toxicologist Service Award and the 2022 AAFS Toxicology Section's Ray Abernethy for Outstanding Forensic Toxicology Practitioner.

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## **FIREARMS - NIST Research to Support Firearm and Toolmark Analysis with Quantitative Similarity Metrics and Statistical Weight of Evidence**

Wednesday, October 9th, 8:00 A.M. - 11:30 A.M.

*Alan Zheng*

### **Abstract:**

The 2009 report by the National Academies on forensic science in the United States expressed concern that "... the decision of the toolmark examiner remains a subjective decision based on unarticulated standards and no statistical foundation for estimation of error rates." The report recommended the development of precisely specified and scientifically justified protocols that yield an objective determination of a match or non-match with well-characterized confidence limits. NIST has been conducting research for more than a decade to directly address these challenges through its firearm and toolmark forensic science focus area. The research has seen a paradigm shift in the 3D measurement of toolmarks, the use of Virtual Comparison Microscopy, database development, statistical protocols, and physical/documentary standards development. This workshop will highlight the state-of-the-art research methods, results, as well as the current debates within the field. Participants will walk away with knowledge of how the developed tools could support their casework and testimonies in the future.

### **Biography:**

Xiaoyu Alan Zheng is a Mechanical Engineer in Sensor Science Division of the National Institute of Standards and Technology (NIST). He has a B.S. and M.S. in Mechanical Engineering and focuses his research on objective measurements, comparisons, and statistical weight of evidence reporting of 2D/3D firearm toolmarks. He is currently a member of the Subcommittee on Firearms & Toolmarks in the NIST OSACs, the chair of the Technical Advisor committee for AFTE, and the co-chair of the Technical Working Group for 3D Toolmark Technologies (TWG3D2T).



Xiaoyu Alan Zheng is a Mechanical Engineer in the Sensor Science Division of the National Institute of Standards and Technology (NIST). He has a B.S. and M.S. in Mechanical Engineering from Johns Hopkins University. His primary area of research focuses on advancing the science of forensic firearm and toolmark analysis through documentary standards, measurement methods, state of the art instrumentation, database development, statistical population characterization and objective similarity

metric research and development. He currently leads the development of the Reference Population Database for Firearm Toolmarks (RPDFT) to enable the calculation of statistical weight of evidence in firearm toolmark comparisons. He has been the PI on multiple National Institute of Justice (NIJ) grants and is currently on his fourth investigating the parity between examiner conclusions and score-based likelihood ratios generated by automated systems. He is currently a member of the Subcommittee on Firearms & Toolmarks in the NIST OSACs, the chair of the Technical Advisor committee for AFTE, and the co-chair of the Technical Working Group for 3D Toolmark Technologies (TWG3D2T). He also has a role in Surface Texture metrology at NIST and supports U.S. industry needs through ASME B46 documentary standards development and low uncertainty calibrations of roughness, step heights, and other surface measurements. This work also supports international comparability and traceability in surface texture measurements by representing NIST for international key comparison studies.

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## **DRUG CHEMISTRY - A Roadmap to Improve Research and Technology Transition in Forensic Science**

Wednesday, October 9th, 1:00 P.M. - 4:30 P.M.

*Catheine M. Grgicak, Stephanie Stoiloff, Henry Maynard*

### **Abstract:**

The Forensic Laboratory Needs Technology Working Group (FLN-TWG), formed by the National Institute of Justice (NIJ) and steered by the Forensic Technology Center of Excellence (FTCOE) at RTI International, created A Roadmap to Improve Research and Technology Transition in Forensic Science to support NIJ's mission of improving knowledge and understanding of federal, state, local, and tribal forensic science service providers' (FSSPs') technology needs.

The development, validation, and adoption of novel technology and knowledge is critical to maintaining a modern domain. FSSPs that adopt new systems are often better able to understand anomalous events of public interest, therein positivity impacting criminal justice policy and practice, and society. Successfully translating research and new technology into operations is conditioned, however, on productive research and development, testing and evaluations (RDT&E).

Despite strong support for RDT&E within the forensic domain, siloed efforts put at risk effective translation of value-adding technologies. Innovative technologies and new knowledge can, therefore, become lost or forgotten during the transition from research laboratory to FSSP and end up in a "valley of death", therein limiting broad adoption of, potentially, revolutionizing knowledge, systems or products. If implementing new technology and knowledge offers gains that exceed current systems, the questions then become: Is it possible to uncover what strategies or tools aid in ameliorating silo-effects? In the absence of an FSSP research department, in what ways can FSSP personnel engage in RDT&E? Is there a stage at which practitioners should become involved in RDT&E? In this workshop we attend to these questions, and more.

The workshop is intended to accomplish the following: Articulate actions members of the forensic community can take to improve the transition of research and technology; highlight research partnership opportunities to better align researchers and FSSPs; improve awareness of forensic community perspectives and emphasize a shared lexicon; and expound the realities and opportunities of each member of the RDT&E ecosystem, therein building a better understanding of the roles and responsibilities of each.

### **Biographies:**

Catherine Grgicak (Gerg-i-chuck) is an Associate Professor and Henry Rutgers Chair of the Department of Chemistry at Rutgers University in Camden NJ, and serves

as Program Director for the Forensic Science programs. She received her M.S.F.S. from the University of Alabama at Birmingham, and her Ph.D. in Chemistry from the University of Ottawa. Her Laboratory for Forensic Technology and Integration (LFTDI) develops systems and procedures that improve forensically relevant data generating and modeling processes.

She is a member of the Journal of Forensic Science's editorial board, editorial board of Electrophoresis, Forensic Laboratory Needs Technical Working Group, Expert Working Group on Human Factors in DNA Interpretation, American Society of Forensic Sciences, the International Society of Forensic Genetics, the American Academy of Forensic Sciences and the Center for Computational and Integrative Biology at Rutgers University.

She co-developed NOCIt, a federally funded research product that was recently licensed to SoftGenetics, LLC, and she developed and stewards the PROVEDIt DNA database, which has been used in over 50 published research and validation studies.

Stephanie Stoiloff is the Chief Scientific Officer at the Miami-Dade Police Department with more than twenty-six years of experience. She currently oversees the Forensic Services Division, including the Crime Scene and Evidence Bureau as well as a full-service, accredited Crime Laboratory that provides forensic services for the Miami-Dade Police Department, all municipal agencies in Miami-Dade County, and state and federal agencies, upon request.

Ms. Stoiloff currently serves on working groups and advisory boards including the national Forensic Laboratory Needs Technical Working Group established by the National Institute of Justice, the National Technology Validation and Implementation Collaborative (NTVIC); the American Society of Crime Laboratory Directors (ASCLD) Disaster Victim Identification, Advocacy, and Member Resource Committees, and the Federal Bureau of Investigation's Rapid DNA Crime Scene Technology Advancement Task Group. She is also a member of the Major Cities Chiefs Forensic Science Committee and the International Association of Chiefs of Police (IACP) Police Investigative Operations Committee.

Ms. Stoiloff served on the ASCLD Board of Directors as well as served as a member of the Technical Working Group for the Preservation of Biological Evidence, the Sexual Assault Forensic Examination Response (SAFER) Working Group, and the Practitioner and Technical Advisory Board for the Center for Statistics and Applications in Forensic Evidence (CSAFE). Ms. Stoiloff also served as a member of a task team under the Criminal Intelligence Coordinating Council (CICC) to develop Promising Practices in Forensic Lab Intelligence. Ms. Stoiloff has provided presentations at national and international meetings on topics including forensic intelligence, gun crime intelligence, managing forensic operations, and Rapid DNA analysis.



Henry Maynard is the Chair of the ASCLD Forensic Research Committee (FRC). Additionally, he serves as the Lead Research Scientist for the US Army Criminal Investigation Laboratory in Forest Park, Georgia. Prior to working at USACIL, Mr. Maynard was a federal contractor who supported Research and Development (R&D) and Forensic Science Training efforts for the Office of Investigative and Forensic Sciences (OIFS) within the National Institute of Justice (NIJ). Before that, he was a forensic practitioner at NMS Labs. He has formally been trained in the areas of Forensic Toxicology, Drug Chemistry, and Explosives Analysis.

Mr. Maynard is very active in the forensic community and maintains memberships with the American Academy of Forensic Sciences, the American Chemical Society, the American Society of Crime Lab Directors (ASCLD), the Council of Forensic Science Educators (COFSE), the International Association of Bomb Technicians and Investigators (IABTI), Project Management Institute (PMI), American Association for the Advancement of Science (AAAS), the National Technology Validation and Implementation Collaborative (NTVIC), and the Center for Statistics and Applications in Forensic Evidence (CSAFE). He is very active with ASCLD, as he serves as a board member on the ASCLD Board of Directors, Chair of the Forensic Research Committee, creator of the Laboratories and Educators Alliance Program (LEAP), instructor for the ASCLD Leadership Academy Level II, and co-chair for the Training and Education Committee.

Mr. Maynard holds a Bachelor of Science degree in Biochemistry and a Master's of Science in Forensic Science degree.

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## **TOXICOLOGY - Detection of Impairing Substances in Blood and Oral Fluid of Drivers: Implications for Policy and Law Enforcement Practices**

Wednesday, October 9th, 1:00 P.M. - 4:30 P.M.

*Joseph O. Jones, Ph.D.*

### **Abstract:**

The 2023 Louisiana Oral Fluid Pilot Study represents a pivotal advance in the methods of detecting and prosecuting drug-impaired driving (DUID). This study was designed to evaluate the efficacy of oral fluid testing as an alternative to traditional blood and urine tests in supporting DUID cases across Louisiana. The initiative aimed to integrate oral fluid testing within law enforcement workflows, examining its impact on the timeliness and effectiveness of substance detection following driving incidents.

Results from the pilot study underscore the potential of oral triage as a critical tool in roadside testing. The study confirmed that oral fluid testing could detect a wide range of psychoactive substances with a high degree of accuracy comparable to blood tests but offered the added benefits of non-invasiveness and quicker results. Significantly, the findings highlight a high incidence of poly-drug use, revealing that oral fluid testing is not only feasible but also crucial in capturing the complexities of substance influence beyond alcohol.

The implications of these findings are profound. They suggest a need for policy shifts to adopt oral fluid testing widely across the state, which could lead to more efficient law enforcement and safer roadways. This presentation will delve into the methodology, results, and policy recommendations of the pilot study, aiming to foster a broader understanding and discussion about the future of DUID enforcement.

This analysis not only enriches the academic and practical discourse on forensic toxicology and law enforcement but also serves as a model for other states considering similar approaches to combat impaired driving.

### **Biography:**

Dr. Jones has been working in the forensic science community since 2006. Currently, he holds the position of System Director at the North Louisiana Criminalistics Laboratory. In his executive role, he oversees the operations of two forensic laboratories and an evidence hub that serves the northern 29 parishes of Louisiana. As a forensic toxicologist, he provides crucial assistance to law enforcement and legal personnel in cases of impaired driving and offers expert interpretation of toxicological evidence.



He earned his Ph.D. from Oklahoma State University's Center for Health Sciences in Tulsa, OK, focusing his research on policies related to impaired driving and forensic toxicology. He obtained his Master of Science in Forensic Medicine from the Philadelphia College of Osteopathic Medicine in 2007, and his Bachelor of Science in Forensic Science from Baylor University in 2004. He is an active member of several professional organizations, including the National Safety Council's Alcohol and Drug Impaired Driving (NSC-ADID) division, the Society of Forensic Toxicologists (SOFT), and the American Society of Crime Laboratory Directors (ASCLD). Additionally, he serves on the Louisiana Governor's Drug Policy Board and actively participates in the DWI Taskforce in Louisiana, underscoring his commitment to improving public safety and health policy in the state. He also contributes to the training of Drug Recognition Experts (DRE) nationwide as an adjunct instructor for the Drug Evaluation & Classification (DEC) Programs in Louisiana, Indiana, Georgia, Ohio, and Oklahoma.

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**FIREARMS – Magnetic Particle Inspection and Barcode Deciphering**

Wednesday, October 9th, 1:00 P.M. - 4:30 P.M.

*ATF Firearm and Toolmark Examiner – Serial Number Restoration Instructor*

**Abstract:**

Firearms recovered with obliterated serial numbers are submitted to laboratories for serial number restoration processing. There are various methods to restore serial numbers and this workshop will provide instruction on restorations using magnetic particle inspection (MPI) with Magnaflux. The course will include lecture, demonstrations, and hands on practical exercises. The workshop will also present the manual decryption process of partially obliterated barcodes and the method of interpreting the barcode characters.

**\*\*Registrants need to bring lab coat and protective eyewear to the class\*\***

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## **QUALITY - From Symptoms to Solutions: Ensuring Excellence Using Quality Assurance Strategies**

Wednesday, October 9th, 1:00 P.M. - 4:30 P.M.

*Uyen Henson*

### **Abstract:**

This presentation is an interactive discussion illustrating the use of multiple quality assurance tools and strategies to address laboratory incidents, focusing on practical solutions. We will navigate the quality assurance process by emphasizing the importance of quality assurance to build trust and deliver high-quality services; continuous improvement through ongoing projects such as training and blind quality controls testing; and risk management through proactive measures using techniques like root cause analysis and trend analysis.

Using the smart quality approach, we will discuss redesigning quality processes using automation, digitization, and advanced analytics. With a strong quality program, we continue our commitment to excellence while promoting a just culture.

### **Biography:**

Uyen Henson is the Quality Manager at the Texas Department of Public Safety Crime Laboratory in Garland. She has a Bachelor of Science degree in Forensic Science with a minor in Biology from Baylor University and a Master of Science degree in Forensic Science from the University of Central Oklahoma. Uyen began her forensic career as a DNA analyst with the Texas Department of Public Safety Crime Lab in Houston in 2002, then promoted to DNA trainer in 2007. After transferring to the Texas DPS Garland Lab, she became the Quality Assurance Specialist in 2013, then Quality Manager in 2020. Uyen is a technical assessor for the ANSI National Accreditation Board (ANAB). She is on the executive board of the Association of Forensic Quality Assurance Managers (AFQAM), the secretary of the Texas Association of Crime Laboratory Directors (TACL), and a member of the American Society of Crime Laboratory Directors (ASCLD). She was also an Associate Professor of Practice at the University of Texas at Dallas, teaching Forensic Biology from 2013-2024. Uyen is a Certified Forensic Manager I.

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## **ALL DISCIPLINES - General Session**

Thursday, October 10th, 8:00 A.M. - 11:30 A.M.

*Dep PA Will Jones, Att. Alex Morphis*

**Abstract:** Pending

### **Biographies:**

Will Jones began his term as the Sixth Judicial District's Prosecuting Attorney on January 1, 2023. With experience that spans over two decades, Will is a career prosecutor who has served in Pulaski, Perry, Jefferson and Lincoln Counties, as well as serving as a Deputy Attorney General. While the traditional goals of prosecution continue to be at the forefront in his office, Will has adopted a new parallel approach for seeking justice and increasing public safety. This approach focuses not only on reacting to crime, but also on crime prevention through strong relationships and collaboration with local leaders, community partners and all levels of law enforcement.



Alex A. Morphis is a criminal defense attorney admitted to the Arkansas Bar in 2019. He is a graduate of the University of Arkansas at Little Rock William H. Bowen School of Law, where he earned his Juris Doctor in 2019. Morphis earned his bachelor's degree from the University of Tennessee at Knoxville in 2015.

Alex practices primarily with homicide offenses, sexual offenses, and violent offenses. He is an active member of the legal community, holding memberships in the Pulaski County Bar Association, Arkansas Bar Association, Arkansas Association of Criminal Defense Lawyers, and the National Association of Criminal Defense Lawyers.

Alex is currently in his fifth year of practicing law at the James Law Firm in Little Rock, Arkansas. His wife, Madison, is an occupational therapy assistant. He and his wife, Madison, have two daughters, Frankie, 4, and Sophie, 7 months. They also have two labrador retrievers, Motley and Crue. When not in the courtroom, Alex enjoys spending time with his family and cheering on the Tennessee Volunteers.

