
Curriculum Vitae

Quality Assurance Manager ~ DNA Technical Lead ~ CODIS Administrator ~ Forensic DNA Expert ~ Crime Scene Investigation ~ Method Research/Validation/ Implementation ~ Training Courtroom Testimony ~ Bloodstain Pattern Analysis ~ Molecular Testing for Public Health

Accomplished forensic science professional with over two decades of extensive experience in multiple aspects of the forensic science laboratory operations and a proven track record as a successful technical leader, quality manager, as well as adaptive responses to emergent situations.

Key Strengths:

- ◆ Training/ Mentoring
- ◆ Innovative
- ◆ Quality Focused
- ◆ Resource Management
- ◆ Strategic Planning
- ◆ Integrity
- ◆ Validation
- ◆ Implementation
- ◆ Customer Service

Leadership Highlights

- Maintained and expanded scope of laboratory's ISO/IEC 17025 accreditation as the Laboratory Quality Assurance Manager
- Obtained private grant funding for capital equipment and critical supplies
- Researched new procedures to improve efficiency, and service delivery to customers, and reduce laboratory costs
- Collaborated with senior leadership to set strategic objectives and annual budgeting
- Liaised with multi-agency stakeholders to improve delivery of services to the public:
 - Provision of sexual assault medical examinations
 - National pandemic response
- Implemented automated reporting of test results to customers to improve service delivery, communication, and reduce administrative errors
- Supervised staff to ensure consistent operations and attainment of organizational and individual goals
- Organized and chaired annual general meeting and seasonal workshops as the two-term elected Chairperson for the Association of Forensic DNA Analysts and Administrators (AFDAA)
- Initiated process to obtain 501(c)(3) status for AFDAA.

Awards, Education, Specialized Training

Member of the Most Excellent Order of the British Empire (Honorary), 2020

Queen's honour for services to the COVID response in the Cayman Islands, and particularly the outstanding contribution to the country's capacity and ability to carry out wide-scale testing.

Masters of Science in Pharmacy, 2006

Concentration in Forensic Serology and DNA
University of Florida Gainesville

Certificate, Forensic DNA and Serology, 2005

University of Florida Gainesville

Bachelor of Science, Zoology, 1998

University of Texas at Austin

Bloodstain Pattern Analysis, 2007

Henderson Forensics, LLC, Canyon, TX
Level I, II, and III, 2007
Mentorship Program 2007-2009

FBI Quality Assurance Standards Auditor, 2003, 2007, 2020

Federal Bureau of Investigations

Forensic Technical Assessor ISO/IEC 17025:2017 Training, 2022

ANSI National Accreditation Board (ANAB)

Professional Profile

Organizations

Association of Forensic DNA Analysts and Administrators

Fellow 2003 - present

Chair Person 2015 - 2019,

Treasurer 2009 - 2010,

Website Developer/ Administrator 2009-present

Planned international scientific meetings and workshops for the organization during four-years of service as the Chair; began process of attaining non-profit status during service as the Treasurer; website: afdaa.org

International Society for Forensic Genetics

Member 2010 - present

American Association for Laboratory Accreditation

Member 2020-present

Experience

University of North Texas, Biological Sciences Department, Denton, TX

Clinical Assistant Professor, Forensic Science Program

August 2022 – present

Current Courses:

Forensic Molecular Biology

Biomedical Criminalistics

Teaching Philosophy: We never stop learning. We are constantly building on what we have learned in the past and applying it in novel situations. I focus on synthesis of knowledge that students have gained in previous courses and engaging and further developing critical thinking skills so that they learn to apply their knowledge in practical situations. My goal is to prepare students for professional practice in forensic science by providing them with the critical skills that will enable them to be successful on their chosen path.

Practical Forensics, Scientific Consulting

January 2022 – present

<https://practicalforensics.science/>

Owner/Consultant

Forensic Biology/DNA, Laboratory Quality Assurance, Bloodstain Pattern Analysis.

Creator and host of "Secrets from the Crime Lab" Podcast: A science podcast for professionals, students, and enthusiasts, featuring in-depth discussions about topics of interest from the worlds of science with subject matter experts from forensic fields including DNA, bloodstain pattern analysis, chemistry, and more.

Services

- Expert Case Review
- Expert Witness
- Laboratory Technical Lead Support
- Validation Planning and Review
- SOP Development and Implementation
- ISO Technical Assessments
- Crime Scene Consultation
- ISO/IEC 17025:2017 Quality Assurance Manager Support
- Laboratory Policy Development and Review
- Bespoke Training

**Cayman Islands Forensic Science Laboratory (CIFSL), Health Services Authority (HSA),
George Town, Grand Cayman**

A2LA, ISO 17025:2017 Accredited Laboratory; DNA Services compliant with 2020 FBI QAS

Forensic DNA Specialist

DNA Technical Leader, Laboratory Quality Assurance Manager, Custodian DNA database

September 2010 – July 2021

Direct and carry out the technical operations of the Forensic DNA Analysis Service of the CIFSL in conformance with international standards upon which accreditation is achieved and maintained; Develop and maintain, in partnership with stakeholders, the Biology/DNA Analysis services and molecular testing for the Public Health Department; Ensure the provision of resources (capital equipment, inventory, personnel, support services) and the implementation of methods and policies necessary to operate the Service in keeping with customer, HSA, statutory and accreditation requirements.

Nominal Roles

Quality Manager ISO/IEC 17025:2017: Responsible for the CIFSL's ISO 17025-Based Quality Assurance Program for DNA Analysis, Forensic Chemistry, Criminalistics, and Specialized Molecular Testing. Conduct internal Assessments to ISO 17025:2017 and work towards accreditation for Drug Chemistry and Morgue Services.

DNA Technical Leader: Direct technical operations of the DNA Analysis Services; supervise and train scientists, technicians, and assistants.

CODIS Custodian: Manage and maintain National DNA Database of the Cayman Islands (NDDCI, CODIS 7.0).

Forensic DNA Specialist: Conduct DNA analysis on evidentiary, database samples, and for Parentage Testing for criminal, legal, and private purposes; Conduct Technical and Administrative reviews; Prepare detailed technical reports regarding analyses of physical evidence and provide Expert Testimony in English Law based courts.

Other Duties: Validate and implement specialized assays for public health screening for viruses; Peer Review of urine drug screens and serial number restorations; Provide training for law enforcement, legal, and health professionals; Provide Bloodstain Pattern Analysis Services; Scenes of Crime Investigative Support.

Special Projects: Emergency development and implementation of *SARs-CoV-2* real-time PCR detection and addition of testing to laboratory scope of accreditation; development, implementation, and training of Medical Technologists in the CDC Trioplex real-time PCR detection of *Dengue*, *Chikungunya*, and *Zika* viruses; Improvement to the forensic examination for victim's of sexual assault in conjunction with the UK National Crime Agency.

**Texas Department of Public Safety Crime Laboratory Service
Austin, TX**

ASCLD/LAB International ISO 17025:2005 Accredited Forensic Laboratory

Forensic Scientist III, Serology/DNA Casework Section

July 2005- September 3, 2010

Conducted complex forensic examination of evidence for potential DNA Sources, Administered Casework CODIS Database. Selected from among all of the DNA Analysts in the Crime Laboratory Service in 2009 to provide training for the Appeals Courts to the Judiciary, Prosecutors, Defense Attorneys, and Court Clerks in Biological Evidence Preservation and Handling and its impact of Post-Conviction Testing. Received acclamation for exemplary Expert Testimony.

Nominal Roles

Forensic DNA Scientist: Conduct Serological Screening and DNA analysis of evidentiary items, Crime scene investigation, Evidence Collection and Preservation, DNA Technical Review, Prepare detailed technical reports regarding analyses of physical evidence, Testify as an expert witness regarding analyses.

CODIS Administrator: Administer local DNA database (CODIS) for headquarters casework section; Manage Searches and issue Hit Notifications; Ensure DNA Analysts comply with NDIS Procedures; Training of Analysts in GDIS architecture, DNA profile deductions from mixtures for optimal searching, and developed a training program for Law Enforcement personnel about general information on DNA databasing and criminal investigations as well as both State and National legislation.

Other Duties: Validate, Program, Operate, and maintain robotic workstations; Develop and Integrate internal Excel Worksheet Macros with Automation and Instrumentation for streamlining of documentation and High-Throughput Casework Analysis; Develop SOPs and Training Programs for completed validation projects and submitted to the Technical Leader; Continuing education/training speaker on various Forensic topics.

DNA Analyst, CODIS Program

August 2002- July 2005

Automated and Manual DNA extraction and STR analysis of blood samples from convicted offenders and upload to SDIS. High-Throughput Operation of Hamilton 96-Probe robotic workstation using the QIAamp Blood Kit for DNA extractions followed by Picogreen quantification on Fluorometer. Performed routine operation, maintenance and training on various robotic workstations and Developed SOPs. Conducted DNA Technical Review.

University of Texas MD Anderson Cancer Center, Science Park Research Division
Smithville, TX
Research Assistant II, Molecular Biology Facility Core
September 1999- August 2002

Provide molecular biology services to laboratories on request; Provide data analysis in written and oral format; Conduct experiments from established protocols/literature; Develop, troubleshoot, optimize, and implement new assays; Utilize/train on automated workstations and imaging equipment; Negotiate pricing/order laboratory supplies and equipment; Explain techniques used and data analysis to researchers; Conduct tours of Molecular Biology Lab.

Validations, Projects, Select Equipment

Oversee, develop, and perform numerous validations both independently and as part of Teams along with accompanying SOPs and training documents.

- ◆ Acquisition and validation planning for the Oxford Nanopore MinION and Verogen MiSeq FGx for genomic sequencing of *SARs-CoV-2*
- ◆ ABI TaqPath™ COVID-19 Combo Kit, IVD (ABI QuantStudioDx, ABI 7500)
- ◆ Seasun Biomaterials U-TOP™ COVID-19 Detection Kit, CE-IVD (ABI QuantStudioDx, ABI 7500, Rotorgene 6000)
- ◆ Maxwell® RSC Viral Total Nucleic Acid Purification Kit, FDA-EUA on the Maxwell RSC and FSC
- ◆ *E-SarbecoV/RdRP* RT-PCR detection of SARS-CoV-2 Laboratory Developed Test for Public Health Surveillance (provided by PAHO) (ABI QuantStudioDx, ABI 7500)
- ◆ CDC Trioplex Real-time RT-PCR Assay for the detection of *Zika, Chikungunya, and Dengue* (ABI 7500)
- ◆ QIAamp Viral RNA Mini Kit (nasopharyngeal, blood, urine)
- ◆ PowerQuant® System
- ◆ *Lab Retriever* Software for the calculation of Likelihood Ratios, Probabilistic Genotyping
- ◆ PowerPlex® Fusion System
- ◆ Veriti®96-Well Thermal Cycler
- ◆ QIACube DNA Isolation
- ◆ Identifiler® Plus Amplification
- ◆ Plexor HY DNA Quantification
- ◆ Maxwell 16 LEV DNA Extraction
- ◆ Applied Biosystems Prepfiler DNA extraction procedure of Tecan Freedom EVO robot
- ◆ Perkin Elmer Multiprobe II robot for automated quantitative PCR and DNA normalization and amplification setup

- ◆ Hamilton ML4000 robot for automated sample setup for Genetic Analyzer
- ◆ Assisted in internal development, validation and implementation of Hamilton ML 4000 automated loading of a porous membrane comb for the purpose of loading samples onto the ABI 377 DNA Sequencer
- ◆ Automated DNA IQ/BIOMEK 2000 DNA extraction
- ◆ TECAN Genios plate-reader and BIOMEK 2000 for DNA quantification and automated normalization

Technical Skills and Equipment:

- ◆ *Genetic Analyzer/ Sequencers:* ABI 377, 310, 3700, 3130, 3130XL, 3500
 - ◆ *Lab Automation:* Maxwell RSC and FSC, Maxwell 16 and Maxwell 16LEV, QiaCube, Hamilton 96-probe and ML 4000 Series Robotics, Perkin Elmer Multiprobe II, Tecan Freedom EVO Robot 8-tip, Beckman Biomek 2000 Robotic Workstation
 - ◆ *Real-time PCR Instruments:* ABI 7000, ABI 7500, Corbett (QIAGEN) Rotorgene 6000, ABI QuantStudioDx
 - ◆ *Thermalcyclers:* ABI 480, 9600, 9700, Veriti; MJ Research, BioRad
 - ◆ *Other Equipment:* Alternative Light Sources – Polilight, CrimeScope, Crime-Lite; Microscopes, Protean IEF Cell, Imaging Equipment, Various Electrophoretic Apparatus, Centrifuge, Tecan Genios Fluorometer, Vacuum Concentrator, Scintillation Counter, UV Spectrophotometer
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| <ul style="list-style-type: none"> ◆ FBI QAS Auditor Trained ◆ ISO Assessments ◆ Presumptive/Confirmatory Body Fluid Testing ◆ STR Typing: PRO/CO, PP16, ID, ID Plus, Verifiler Plus ◆ PCR ◆ Genotyping ◆ DNA Sequencing: Manual ³³P di-deoxy/ automated gel and capillary ◆ DNA Quantification: UV, fluorometric, Real-time PCR ◆ Protein Quantification ◆ Species Origin: Ouchterlony, Hematrace ◆ Electrophoresis: Submarine, Slab, Capillary ◆ Robotic Maintenance and Repair | <ul style="list-style-type: none"> ◆ Light Microscopy ◆ SSCP ◆ Mutation Detection ◆ DNA Primer Design ◆ Nucleic Acid and Protein Purification ◆ Western Blotting ◆ Proteomics: IEF, 2-D Gels ◆ Bloodstain Pattern Analysis ◆ Genomic DNA Isolation: Automated and Manual – Organic, DNA IQ, Prepfile, FTA, QIAamp: Blood, Micro, Investigator ◆ CODIS Software 5.7.3, 5.7.4, 7.0 ◆ Working knowledge of Visual Basic and VBA (Excel Macros), HTML, CSS, Website design, R |
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Publications and Acknowledgements

Publications

Faris JS, Tanzillo-Swarts A. Allele frequencies of 15 autosomal STR loci in the Caymanian population. *Int J Legal Med.* (2014)

Bob Henderson, J.D. Robertson, Angela Tanzillo-Swarts, Brandi Mohler, Christina Ramirez. Introduction to Bloodstain Pattern Analysis. The Texas Engineering Extension Service. (2008)

Liu, J., Shen, J., Tanzillo-Swarts, A., Bhatia, B., Maldonado, C.M., Person, M., Lau, S., Tang, Dean G. (2003). Reduced Annexin II expression is reduced or lost in prostate cancer cells. *Oncogene.* 22: 1474-1485.

Abstract presented at AACR 2002:

Liu, J., Shen, J., Tanzillo-Swarts, A., Person, M., Lau, S., Tang, Dean G. (2002). Reduced or Lost Expression of Annexins I and II in Prostate Cancer Cells.

Acknowledgements

Shengli Cai, Jeffrey I. Everitt, Hiroyuki Kugo, Jennifer Cook, Elena Kleymenova and Cheryl Lyn Walker. (2003). Polycystic Kidney Disease as a Result of Loss of the Tuberous Sclerosis 2 Tumor Suppressor Gene During Development. *American Journal of Pathology.* 162:457-468.

Wang, A., Johnson, David G., MacLeod, Michael C. (2001). Molecular Cloning and Characterization of a Novel Mouse Epidermal Differentiation Gene and Its Promoter. *Genomics.* 73: 284-290

Presentations

- ◆ Cayman Islands Forensic Science Laboratory: Not Your Everyday Forensic Science Laboratory. Association of Forensic Analysts and Administrators Meeting, Houston, TX, August 2, 2019.
- ◆ Advanced Forensic Technology and Use in Supporting Child Abuse Investigations. Child Justice Seminar, Cayman Islands Government, Department of Children and Family Services. Cayman Islands, 7-Nov-17.
- ◆ Probabilistic Genotyping (Overview). Inaugural Meeting of the Caribbean Association of Forensic Sciences. Kingston, JM. 22-Jul-16

- ◆ Blood in Paradise: A Field Study on the Effects of the Caribbean Environment on Forensic DNA Typing of Bloodstains. Inaugural Meeting of the Caribbean Association of Forensic Sciences. Kingston, JM. 22-Jul-16
- ◆ CODIS: DNA Databanking in the Cayman Islands. Inaugural Meeting of the Caribbean Association of Forensic Sciences. Kingston, JM. 21-Jul-16
- ◆ New Frontiers in DNA Profiling. A Review of NGS future in Forensic Human Identification. Inaugural Meeting of the Caribbean Association of Forensic Sciences. Kingston, JM. 21-Jul-16
- ◆ Validation and Implementation of Probabilistic Genotyping Software. Association of Forensic Analysts and Administrators Meeting, Dallas, TX, July 30, 2015.
- ◆ DNA Awareness Workshop. Understanding DNA Analysis & Profile Results: Considerations for SIOs. RCIPS Training and Development Unit. 3 hours. 25-Feb-15.
- ◆ Scenes of Crime and EMS: Balancing Personal Safety, Patient care, and Evidence Preservation. Health Services Authority. 1 hour, October 7, 2013
- ◆ Medical Examinations for Physical Evidence in Cases of Sexual Assault, Indecent Assault, and Defilement. Health Services Authority. 2 hours, June 7,14,21,and 28, 2013
- ◆ RCIPS Investigator's Course, Provided supplemental instruction for Forensic DNA Evidence. RCIPS Training and Development Unit. 4 hours, October 27, 2011.
- ◆ DNA- Collection and Preservation of Biological Evidence, 2 1/2 day training course to Military Police Investigators, in association with Henderson Forensics and the Texas Municipal Police Association (TCLEOSE credit), Ft Hood, September 7-9, 2010.
- ◆ DNA- Collection and Preservation of Biological Evidence, 2 1/2 day training course to Military Police Investigators, In association with Henderson Forensics and the Texas Municipal Police Association (TCLEOSE credit), Co-taught with Brandi Mohler, Ft Hood, August 4-6, 2010.
- ◆ DNA Evidence to Regional CID Meeting, San Marcos, TX. March 11, 2010.
- ◆ Evidence Preservation and Storage, Texas District and County Attorney's Association Annual Legislative Update, Corpus Christi, TX. September 24, 2009
- ◆ Understanding the DNA Database. The HEAT Project, Serial Investigations Training Seminar, Texas Christian University, August 4, 2009.
- ◆ Evidence Preservation and Storage, Indigent Defense Seminar, Texas Criminal Defense Lawyers Association. May 15, 2009.
- ◆ Evidence Preservation and Storage, Texas Center for the Judiciary Winter Regional Conference, Regions 3, 4, 5, 6, 7, and 9. February 24, 2009.
- ◆ Evidence Preservation and Storage, Texas Center for the Judiciary Winter Regional Conference, Regions 1, 2, and 8. San Antonio, TX January 26, 2009.
- ◆ Understanding the DNA Database, Continuing Education Lecture to Investigators and Judiciary at TXDPS Training Academy. (TCLEOSE credit), February 11, 2009.
- ◆ Evidence Preservation and Storage, 37th Annual County and District Clerks' Continuing Education Seminar, January 12-15, 2009 in College Station, TX
- ◆ Homicide Case Presentation at the Winter Association of Forensic Analysts and Administrators Meeting, January 30, 2009

- ◆ Interesting Case Presentation at the 19th International Symposium on Human Identification, Hollywood, CA. October 15, 2008
- ◆ Understanding the DNA Database, Lecture to Investigators and lawyers at TXDPS Training Academy. (TCLEOSE credit), August 19, 2008.
- ◆ Forensic DNA from Crime Scene to the Laboratory, Lecture to Georgetown High School Biotechnology class, Austin, TX. May 9, 2007.
- ◆ Forensic DNA from Crime Scene to the Laboratory, Lecture to TXDPS training school “Investigative Analysis of Homicide and Violent Crimes”, August 20, 2007.
- ◆ Forensic DNA from Crime Scene to the Laboratory, Lecture to Georgetown High School Biotechnology class, Austin, TX. May 11, 2007.
- ◆ Forensic DNA from Crime Scene to the Laboratory, Lecture to University of Texas Police Department, Austin, TX. May 8, 2007
- ◆ Automated DNA Extraction on the Biomek 2000 Using Promega's DNA IQ System, Promega User's Group Meeting, 16th International Symposium on Human Identification, Grapevine, TX. September 30, 2005.
- ◆ Optimization, Validation, and Implementation of the DNA IQ™ System on the Biomek 2000 for the Texas DPS CODIS Laboratory, Promega Summer Expedition, Austin, TX. June 21, 2005.
- ◆ Poster Presentation - Optimization and Validation of a Method for Automated DNA Extraction from Whole Blood for the CODIS Forensic DNA Database, Texas Genetics Society Meeting, Dallas, TX. April 8, 2005.
- ◆ Biomek 2000/DNA IQ System: Tweaking and Validating, Association of Forensic Analysts and Administrators Meeting. January 15, 2004.

Continuing Education and Training

- ◆ FBI DNA Auditor Training, 2020 Quality Assurance Standards, CBT, completed April 23, 2022
- ◆ Forensic Technical Assessor ISO/IEC 17025:2017. ANSI National Accreditation Board (ANAB), Instructor Led Remote Training. 5 days, January 24-28, 2022
- ◆ Forensic - 17025 Technical Assessor Preparation Course. ANSI National Accreditation Board (ANAB). 8 hours, online. January 23, 2022.
- ◆ Pedigree Analysis in R. Thore Egeland & Magnus Vigeland. International Society of Forensic Genetics Summer School (Virtual). 12 hours, July 28-30, 2021.
- ◆ Statistical Genetics. Bruce Weir & Sanne Aalbers. International Society of Forensic Genetics Summer School (Virtual). 8 hours, July 26-27, 2021.
- ◆ Inference of relationships – From basic to advanced kinship statistics. Daniel Kling & Andreas Tillmar; International Society of Forensic Genetics Summer School (Virtual). 8 hours, July 26-27, 2021.

- ◆ Advanced DNA Mixture Interpretation Workshop. Peter Gill, Corina Benschop, Oyvind Bleka; International Society of Forensic Genetics Summer School (Virtual). 8 hours, July 22-23, 2021.
- ◆ Spring AFDA Workshop on Advanced Topics in Probabilistic Genotyping presented by Mike Coble and Dawn Boswell, UNT Center for Human Identification. March 23, 2021
- ◆ Summer Meeting, Association of Forensic DNA Analysts and Administrators, Houston, TX. 1 ½ days, August 5-6, 2020.
- ◆ Next Generation Sequencing Workshop. Houston, TX. ½ day, July 31, 2019
- ◆ Summer Meeting, Association of Forensic DNA Analysts and Administrators, Houston, TX. 1 ½ days, August 1-2, 2019
- ◆ ISO/IEC 17025 transition from 2005 to 2017, Presented by Tim Osborne, Director of Training, A2LA. Winter Workshop, Association of Forensic DNA Analysts and Administrators, Austin, TX. 1 day, February 28, 2019
- ◆ Summer Meeting, Association of Forensic DNA Analysts and Administrators, Houston, TX. 1 ½ days, August 2-3, 2018
- ◆ Summer Meeting, Association of Forensic DNA Analysts and Administrators, Houston, TX. 1 ½ days, August 2-3, 2018
- ◆ Promega Technology Tour, Houston, TX. ½ day, August 1, 2018
- ◆ Courtroom Testimony, Winter Workshop of the Association of Forensic DNA Analysts and Administrators, Austin TX 1 ½ days, January 18-19, 2018
- ◆ Summer Meeting, Association of Forensic DNA Analysts and Administrators, Austin, TX. 1 ½ days, July 6-7, 2017.
- ◆ Cognitive Bias in Forensic Science, Dr. Itiel Dror. Winter Workshop of the Association of Forensic DNA Analysts and Administrators, Austin TX 1 day, March 23, 2017
- ◆ Inaugural Meeting of the Caribbean Association of Forensic Sciences. Kingston, JM. July 20-22, 2016
- ◆ Summer Meeting and 1 day Workshop on Likelihood Ratios and Probabilistic Genotyping, Association of Forensic DNA Analysts and Administrators, Austin TX. 2 days, July 14-15, 2016
- ◆ Promega Technology Tour, Austin, TX. ½ day. July 13, 2016
- ◆ Summer Meeting, Association of Forensic DNA Analysts and Administrators, Dallas TX. 1 ½ days, July 30-31, 2015
- ◆ Probabilistic Genotyping and the Lab Retriever Software for the calculation of likelihood ratios that incorporate a probability of drop-out. Scientific Collaboration, Innovation & Education Group, Norah Rudin and Keith Inman. Health Services Authority, Grand Cayman, 3 days, March 23-25, 2015
- ◆ FBI 20th National CODIS Conference, 2 days, Norman, OK. November 18-19, 2014
- ◆ DNA Analyst Webinar Series: Probabilistic Genotyping & Software Programs (Part 1). National Institute of Standards and Technology. 4 hours. May 28, 2014.
- ◆ Association of Forensic Analysts and Administrators Meeting Combined DNA Index System (CODIS) Training (v7.0). U.S. Department of Justice, Federal Bureau of Investigation, Laboratory Division, CODIS Unit. October 22-24, 2013

- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, San Antonio, TX, May 30-31, 2013
- ◆ *Rapid DNA – The Evolution of Forensic DNA Analysis*, Webinar, 1 hour, September 25, 2012
- ◆ ISO/ IEC 17025:2005 Auditing Workshop, ANSI-ASQ National Accreditation Board (FQS), Health Services Authority, Grand Cayman, 2 days, August 28-29 , 2012
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, San Antonio, TX. June 29-30, 2012
- ◆ Caribbean Association of Prosecutors, Transnational Crime & Forensic Training Workshop, Grand Cayman, 2 days, June 14-15, 2012
- ◆ Cayman Ataxia, gene cloning, origin, protein and mouse model, Health Services Authority, Grand Cayman, 1Hour, March 24, 2012
- ◆ Nucleic Acids Extraction – Qiacube, Capris Medica, 1 day, on-site CIFSL, September 24, 2011
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, San Antonio, TX. July 7-8, 2011
- ◆ Casualty Bureau Training, 1 day, Royal Cayman Islands Police Service, Training Facility, Grand Cayman, BWI, September 29-30, 2010
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. July 8-9, 2010
- ◆ Winter Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. January 28-29, 2010.
- ◆ FBI 15th National CODIS Conference, 3 days, Reston, VA. November 2-4, 2009.
- ◆ Advanced DNA Typing Workshop, Dr Bruce McCord and Dr. John Butler, National Institute of Justice and Florida International University. July 20-24, 2009.
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. July 16-17, 2009
- ◆ Winter Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. January 29-30, 2009
- ◆ HID EVOLution Extraction System Training, 3 days, Austin, TX. December 15-17, 2008.
- ◆ FBI 14th National CODIS Conference, 3 days, Crystal City, VA. November 10-12, 2008.
- ◆ Troubleshooting Common Laboratory Problems, 3 hour lecture at 19th International Symposium on Human Identification, Hollywood, CA. October 16, 2008.
- ◆ 19th International Symposium on Human Identification, Hollywood, CA. October 14-16, 2008.
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. August 7-8, 2008.
- ◆ Applied Biosystems Annual User’s Forum, 1 day, Austin TX. August 6, 2008.
- ◆ Winter Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. January 31 – February 1, 2008
- ◆ Advanced Bloodstain Pattern Analysis Level III, Henderson Forensics, 50 hours, Canyon, TX. November 5 – 9, 2007.
- ◆ FBI 13th National CODIS Conference, 3 days, Burlingame, CA. October 29-31, 2007.

- ◆ Southwestern Association of Forensic Scientists, Mini Robots Presentation Training Workshop, 1 day, Austin, TX. October 7, 2007.
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. August 2-3, 2007.
- ◆ Advanced Bloodstain Pattern Analysis Level II, Henderson Forensics, 5 days, Austin TX. July 23-27, 2007.
- ◆ Applied Biosystems 2007 Future Trends in Forensic DNA Technology Seminar Series, Austin, TX, 1 day, July 10, 2007.
- ◆ Texas Department of Public Safety Law Enforcement Academy, Bloodstain Pattern Analysis Level I, 5 days, Austin, TX. March 26-30, 2007.
- ◆ Applied Biosystems 12th Annual User's Forum, San Antonio, TX, ½ day, February 21, 2007
- ◆ FBI DNA Auditor Training, 1 ½ days, San Antonio, TX. February 19, 2007.
- ◆ Winter Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. January 25, 2007.
- ◆ FBI Specialized CODIS Software Training, 5 days, SAIC, Vienna, VA, January 8, 2007.
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. July 27, 2006.
- ◆ Applied Biosystems HID Systems Training, 4 days, Austin, TX. May 23, 2006
- ◆ Winter Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. January 12, 2006.
- ◆ Macroscopic Hair Examination Training, TxDPS, Austin, TX. October 27, 2005.
- ◆ 16th International Symposium on Human Identification, Grapevine, TX. September 26-29, 2005.
- ◆ Implementing Automation in the Lab Workshop, 16th International Symposium on Human Identification, Grapevine, TX. September 29, 2005.
- ◆ Presenting DNA Evidence in Court, 16th International Symposium on Human Identification, Grapevine, TX. September 26, 2005.
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. August 4-5, 2005.
- ◆ Promega Summer Expedition, Austin, TX. June 21, 2005.
- ◆ Winter Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. January 15, 2004.
- ◆ 14th Int. Symposium on Human Identification, 3 days, Phoenix AZ. September 29- October 2, 2003.
- ◆ Basic Principles in Statistics, 8 hours, 1 CFE, Phoenix, AZ. September 29, 2003.
- ◆ Summer Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. August 1, 2003.
- ◆ DNA Auditor Training presented by Federal Bureau of Investigation, Laboratory Division, 2 days, Austin, TX. May 6, 2003.
- ◆ Winter Association of Forensic DNA Analysts and Administrators Meeting, 1 ½ days, Austin, TX. January 10, 2003.