

Heather L. Harris
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EDUCATION

Juris Doctor, Temple University Beasley School of Law, Philadelphia, PA

- Evidence Tainted by Forensic Fraud, a major review article discussing the practice and implications of fraudulent forensic science, produced as independent research under Professor M. Libonati, 2004-2005
- Admitted to the Pennsylvania Bar, October 2006

Master of Forensic Science, The George Washington University, Washington D.C.

- Areas of Concentration: Chemistry and Toxicology
- Admitted to the American Board of Criminalistics as a Diplomate in Comprehensive Criminalistics and Drug Analysis, August 2008

Bachelor of Arts in General Studies, University of North Texas, Denton, TX

- Areas of Concentration: Anthropology, Biology and Chemistry

PROFESSIONAL EXPERIENCE

Forensic Chemistry Consultant, October 2006-Present

- Review and evaluate available case information, including methods of analysis, quality control records, analyst qualifications, law enforcement incident reports, laboratory data and reports, pharmacy records, medical records, environmental monitoring records, laboratory operating procedures, etc.
- Produce expert reports on legal and scientific issues involving forensic evidence.
- Provide expert opinions in depositions and courtroom testimony.
- Develop and instruct forensic chemist training program for ASCLD/ISO accredited crime laboratory.
- Provide technical advice and review for controlled substance casework and special project work.
- Develop and supervise validation projects for forensic chemistry analytical methods.
- Develop and instruct CLE classes covering the forensic sciences and their use in casework.
- Perform grant review for National Institute of Justice Office of Forensic Sciences and the PA Commission on Crime and Delinquency
- Produce independent research and studies for conference presentations or publications.

Adjunct Professor, Arcadia University, Master of Science in Forensic Science, October 2006-Present

- Develop and instruct Forensic Chemistry, Advanced Forensic Chemistry and Trace Evidence lecture and lab courses and the final semester 5-week lab practicum.
- Participate on faculty panel for student oral technical review boards and moot courts.
- Direct and supervise research projects for selected students and prepare final results for publication and/or presentation.

Forensic Chemist, National Medical Services, Criminalistics Section, July 2002-March 2006
ASCLD-LAB Accredited

- Identify and analyze controlled substances and pharmaceutical preparations using chemical, microscopic and instrumental methods of analysis.
- Produce reports and supporting documents concerning evidence analysis, findings and conclusions.

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- Provide expert services, such as consultations and case reviews, through both reports and testimony.
- Testify to results of analyses and opinions in local, state and federal courts.
- Develop and validate new methods of chemical analysis for physical evidence.
- Monitor quality assurance/quality control activities of section to ensure compliance with authorized policies, procedures and good laboratory practices.
- Train other personnel in understanding and applying chemical and instrumental methods.
- Oversee the work products of junior forensic chemists with emphasis on technical and administrative reviews.

Forensic Scientist, Bexar County Forensic Science Center, Criminal Investigation Laboratory, August 2000-May 2002

ASCLD-LAB Accredited

- Identify and analyze controlled substances, pharmaceutical preparations and fire debris using chemical, microscopic and instrumental methods of analysis.
- Produce reports and supporting documents concerning evidence analysis, findings and conclusions.
- Testify to results of analyses in local, state and federal courts.
- Assist senior analysts in microscopic hair comparisons, gunshot residue analyses and shooting distance determinations.

Toxicology Research Assistant, Nichols T. Lappas, PhD., The George Washington University, Department of Forensic Sciences, April 1999-June 2000

- Conduct literature research in the areas of toxicology and pharmacology.
- Review case files to determine what information is necessary for trial.
- Prepare reports of findings to assist expert witnesses in preparation for trial.

INTERNSHIP

Dallas Police Department, Physical Evidence Unit, Spring 1998

- Assist officers in collecting evidence at crime scenes.
- Prepare evidence for transfer to laboratory.
- Enter fingerprint profiles into the Automated Fingerprint Information System.

PROFESSIONAL MEMBERSHIPS

Advisory Committee for the Evaluation of Controlled Substance Analogs, Core Committee Member, Structure Subcommittee Chair, 2012-2014

American Academy of Forensic Sciences, Member, 2003

American Board of Criminalistics, Diplomate, 2008

American Chemical Society, National Affiliate, 2001

AOAC International (formerly the Association of Official Analytical Chemists), Member, 2010

Chemical Consultants Network, Member, 2006

Northeastern Association of Forensic Sciences, Member, 2005

SELECTED PROFESSIONAL PRESENTATIONS

Application of Impurity Profiling to Seized MDMA Samples Using GC/MS with Hydrogen Carrier Gas, presented by Lisa Stevens, MSFS, NEAFS Annual Meeting (Hershey PA), November 2014

Defending Walter White: Understanding the Chemistry, Production and Defenses of a Meth Lab Case, NACDL 7th Annual Defending the Modern Drug Case Seminar (Las Vegas), September 2014

Understanding Gas Chromatography for DUI Analysis, NACDL and NCDD 2014 DWI

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Means Defend with Ingenuity Seminar (Las Vegas), September 2014

Cross-Examination of the Lab Analyst, NACDL and NCDD 2014 DWI
Means Defend with Ingenuity Seminar (Las Vegas), September 2014

The Era of Designer Drugs: An Ever Changing Landscape, AAFS Annual Meeting (Seattle),
February 2014

Revisiting the Laboratory: What to Request and Look for in the Laboratory Paperwork,
PACDL 2014 DUI and Motor Vehicles Seminar (Hershey PA), January 2014

Designer Drugs: Keeping Up with the Ever-Evolving Chemistry, PACDL 2014 DUI and Motor
Vehicles Seminar (Hershey PA), January 2014

No More Stipulations: Forensic Drug Chemistry for the Defense Attorney, NACDL 6th Annual
Defending the Modern Drug Case Seminar (Las Vegas), November 2013

Controlled Substance Analysis: Anatomy of a Drug Case, Administrative Office of the U.S.
Courts, Office of Defender Services' Multi-Track Federal Criminal Defense Seminar
(Buffalo NY), August 2013

Legal Issues and Analytical Challenges with Emerging Drug Analogs, presented with J.
Graham Rankin, Ph.D., MAAFS Annual Meeting (Roanoke VA), May 2013

DUI Blood Testing, Montgomery County (PA) Bar Association Criminal Defense Committee,
April 2013

Designer Drugs: Legal and Analytical Challenges for Forensic Laboratories and the Courts,
presented with Barry K. Logan, Ph.D., AAFS Annual Meeting (Washington D.C.),
February 2013

Scientific Method for Controlled Substance Analog Determination, presented with the
subcommittee chairs of the Advisory Committee for the Evaluation of Controlled
Substance Analogs, AAFS Annual Meeting (Washington D.C.),
February 2013

*Confrontation of the Lab Technician in DUI Blood Testing: Procedures, Policies and
Problems*, PACDL 2013 DUI and Motor Vehicles Seminar (Hershey PA), February 2013

Synthetic Designer Drugs: Is It an Analog? How Do You Know?, NEAFS Annual Meeting
(Saratoga Springs NY), November 2012

*Structural Analogs, Novel Compounds and the Federal Analog Act: The Disconnect
between Science and the Law*, American Chemical Society Annual Meeting
(Philadelphia), August 2012

K2 and Beyond: A Synthetic Cannabinoid Legal Primer, AAFS Annual Meeting (Chicago),
February 2011

Forensic Investigations: Problems with Contextual Bias, Villanova University
School of Law, Matthew J. Ryan Law and Public Policy Forum, January 2011

How to Use the NAS Report and Melendez-Diaz to Challenge Forensic Science

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Evidence in a Criminal Trial, Defender Association of Philadelphia, Criminal Defense Update CLE, June 2009.

The Reliability of a Controlled Substance Field Test Kit as a Basis for Probable Cause (Poster), AAFS Annual Meeting (Seattle), February 2006

Proper Techniques for Collection and Submission of Physical Evidence, Montgomery County District Attorney's Municipal Drug Task Force Training Seminar, March 2004 and April 2005

Basics of Forensic Drug Chemistry, Montgomery County District Attorney's Office, April 2003

SELECTED TRAINING COURSES COMPLETED

Enhanced Detection and Confirmation in Forensic Toxicology Screening Using a UHPLC-QTOF System, LCGC/Bruker Webinar, June 2014

The Science of DUID, Axion Analytical Laboratories (Chicago), January 2014

Emerging Trends in Synthetic Drugs Workshop, NIST Law Enforcement Standards Office in collaboration with DEA, April 30-May 1, 2013

Analysis and Interpretation of Chemical Unknowns, AAFS Annual Meeting (Washington D.C.), February 2013

Mass Measurement Uncertainty for Laboratories, Rod Gullberg at NMS Labs (Willow Grove PA), October 2012

Best Ethical Practices for Hiring and Managing Expert Witnesses, Jenkins Law Library (Philadelphia), August 2012

The Challenges of Analytical Method Validation of Designer Drugs in Non-Biological Samples by GC/MS, Agilent On-line Seminar, May 2012

Analysis and Interpretation of Mass Spectral Data, American Chemical Society at Chemspec USA (Philadelphia), May 2012

Melendez-Diaz, Bullcoming and Williams: Scientific Evidence and the Right to Confrontation, The Center for Forensic Science Research and Education at Arcadia University (Willow Grove PA), January 2012

Synthesis and Chemistry of Synthetic Cannabinoid Compounds, Iteramed at NMS Labs (Willow Grove PA), November 2011

Sixth Edition Sentencing Guidelines and Sentencing in Pennsylvania, Pennsylvania Commission on Sentencing, October 2007

Clandestine Laboratories, Montgomery County District Attorney's Municipal Drug Task Force Training Seminar, April 2005

How to Develop, Validate and Troubleshoot Capillary GC and HPLC Methods, American Chemical Society National Meeting (Philadelphia), August 2004

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Agilent GC/MSD ChemStation Data Analysis and Reporting, Agilent Technologies (Plano TX),
September 2003

*Rapid Screening of Drugs for Forensic Toxicology using Retention Time Locking
with GC/MS*, Agilent Technologies Webinar, August 2003

Analytical Tools for the Forensic Scientist, NEAFS Annual Meeting (Atlantic City),
November 2002

Microcrystalline Analysis and Discussion of Drugs, SWAFS Annual Meeting
(San Antonio), November 2001

*Methamphetamine: Clandestine Laboratory Investigation and Analytical
Approaches*, SWAFS Annual Meeting (San Antonio), November 2001

Forensic Chemist Seminar, Drug Enforcement Administration Special Testing and
Research Laboratory, June 2001

PROFESSIONAL MEETINGS ATTENDED

American Academy of Forensic Sciences Annual Meeting

- Atlanta 2002
- Chicago 2003
- Seattle 2006, Poster presentation to the Jurisprudence section
- Washington, D.C. 2008, Participated in Jurisprudence workshop
- Chicago 2011, Participated in Toxicology workshop
- Washington, D.C. 2013, Paper presentations to the Jurisprudence and Toxicology sections
- Seattle 2014, Paper presentation to the Jurisprudence section and moderated drug chemistry technical paper session

American Chemical Society National Meeting

- Philadelphia Fall 2008, Hosted booth for Chemical Consultants Network
- Philadelphia Summer 2012, Participated on Chemistry and the Law panel discussion

Mid-Atlantic Association of Forensic Scientists

- Ellicott City MD 2012
- Roanoke VA 2013, Participated in Drug Chemistry workshop

National Institute of Justice Biannual Trace Evidence Symposium

- Kansas City 2011

Northeastern Association of Forensic Scientists Annual Meeting

- Atlantic City 2002
- Long Branch NJ 2009
- Saratoga Springs NY 2012, Paper presentation in Drug Chemistry Scientific Session

Southwestern Association of Forensic Scientists Annual Meeting

- San Antonio 2001, Moderated technical paper session

PUBLICATIONS

The Fundamentals of Calibration, Understanding DUI Scientific Evidence, J. McShane and J. Lee, Eds., Thomson Reuters/Aspatore, 2014.