

Curriculum Vitae

Dr. Curt E. Harper

Chief Toxicologist
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Education:

- 2002-2007 University of Alabama at Birmingham (Birmingham, AL)
School of Medicine – Department of Pharmacology and Toxicology
Doctor of Philosophy (Ph.D.) in Pharmacology and Toxicology
- 2001-2002 University of Alabama at Birmingham (Birmingham, AL)
Department of Justice Sciences
Masters of Science in Forensic Science (MSFS)
- 1997-2001 Brescia University (Owensboro, KY)
Bachelors of Science (BS) [*Triple major*]
(1) Biology (2) Chemistry (3) Computer and Mathematical Science
Summa cum laude (GPA = 3.98)

Certifications:

- Fellow of the American Board of Forensic Toxicology (F-ABFT) [2013-Current]
- Drug Recognition Expert (DRE) [2015-Current]
- Drug Recognition Expert (DRE) Instructor [2016-Current]
- Advanced Roadside Driving Enforcement (ARIDE) Instructor [2016-Current]
- Standardized Field Sobriety Test (SFST) Instructor [2016-Current]

Work Experience (12 years as a Forensic Toxicologist):

- 4/2012 – Present Alabama Department of Forensic Sciences
Section – Toxicology (Birmingham, AL)
Chief Toxicologist (Toxicology Discipline Chief)
- 5/2010 – 4/2012 Virginia Department of Forensic Science
Section – Toxicology (Richmond, VA)
Forensic Toxicology Supervisor
- 6/2009 – 5/2010 Alabama Department of Forensic Sciences
Section – Toxicology (Mobile, AL)
Toxicology Section Chief

6/2008 – 5/2010 Alabama Department of Forensic Sciences
Section – Toxicology (Hoover, AL)
Driving Under the Influence of Drugs (DUID) Coordinator

10/2007 – 6/2008 Alabama Department of Forensic Sciences
Section - Implied Consent (Calera, AL)
Forensic Scientist I

2002-2007 Ph.D. Candidate
University of Alabama at Birmingham, Birmingham, AL
Department of Pharmacology and Toxicology

Summer 2002 Student Internship
U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Atlanta, GA
Focus: Arson and Explosives Investigation

2001-2002 Teaching and Research Assistant
University of Alabama at Birmingham, Birmingham, AL
Department of Justice Sciences – Forensic Science
Focus: Forensic Toxicology

1999-2001 Research and Development Technician
Daramic Inc., Owensboro, KY
Focus: Battery Separator Applications

Professional Memberships:

2020-Present Member of NSC-ADID
(*National Safety Council's Alcohol, Drugs and Impairment Division*)

2009-Present Society of Forensic Toxicologists (*SOFT*)

2012-Present International Association for Chemical Testing (*IACT*)

2009, 2018-Present The International Association of Forensic Toxicology (*TIAFT*)

2012-Present Alabama State Association of Forensic Sciences

2001-2003 American Academy of Forensic Science (*Section – Toxicology*)

Committees:

2013-Present SOFT/AAFS Drugs and Driving Committee, Chair (2019-Present)

2016-Present SOFT/AAFS Oral Fluid Committee, Vice Chair (2019-Present)

2015-Present ASB/OSAC Toxicology Subcommittee - Affiliate

2014-Present IACT Board of Director
2013-Present Alabama Impaired Driving Prevention Council
2013-Present IACT Training Committee Member

Honors and Awards:

2019 Kevin E. Quinlan Award for Excellence in Traffic Safety
by Foundation of Advancing Alcohol Responsibility (Responsibility.org)
2014 Paul E. Shoffeitt Distinguished Service Award
Alabama Department of Forensic Sciences
2009 Forensic Toxicology Training Program Certification - Permit # T019
Alabama Department of Forensic Sciences
2008 Alabama Peace Officers Standards and Training Commission
145th Academic Award (Top in Class)
2003 Forensic Science Graduate Student of the Year
University of Alabama at Birmingham

Training Courses, Meetings, and Workshops attended:

2019 SOFT Workshop – Best Practices for Investigation of Overdose Deaths (San Antonio, TX)
2018 SOFT Workshop – The Real C.S.I. Miami - A Collaborative Approach to Death Investigation with an Emphasis on Investigative Postmortem Toxicology (Minneapolis, MN)
2018 SOFT Workshop – Defending Your Testing Services Through Testimony (Minneapolis, MN)
2018 IACT Annual Meeting (Indianapolis, IN)
2017 SOFT Workshop – Drug-Facilitated Crime in the 21st Century (Boca Raton, FL)
2017 IACT Annual Meeting (Colorado Springs, CO)
2016 Green Lab, Dosing and Observation – Understanding Legal Marijuana – DRE Track (Denver, CO)
2016 International Association of Chief of Police (Drug Recognition Expert) Annual Meeting (Denver, CO)
2016 SOFT Workshop – Postmortem Interpretation of Toxic Pharmacodynamic Interactions (Dallas, TX)

- 2016 SOFT Workshop – Texas Medical Toxicology Detectives: From the Case Files of Parkland Hospital (Dallas, TX)
- 2016 IACT Annual Meeting (Orlando, FL)
- 2015 SOFT Workshop – Management Practices in Forensic Toxicology (Atlanta, GA)
- 2015 IACT Annual Meeting (Newport, RI)
- 2014 SOFT Workshop – Oral Fluid Testing: Basic Science and Practical Applications (Grand Rapids, MI)
- 2014 IACT Annual Meeting (Newport Beach, CA)
- 2013 SOFT Annual Meeting (Orlando, FL)
- 2012 SOFT Workshop – Contemporary Issues in Drunk Driving & Driving Under the Effects of Drugs (Boston, MA)
- 2011 Midwest Forensic Resource Center – Postmortem Toxicology Course (Ames, IA)
- 2011 SOFT Workshop – Spice Detection in Various Biological Matrices (San Francisco, CA)
- 2011 ASCLD/LAB-*International* Measurement Confidence Level 100 Traceability, Measurement Assurance and Measurement Uncertainty Web-Based Training Course
- 2010 SOFT Workshop – To Err is Human ... To Identify is Divine (Richmond, VA)
- 2010 SOFT Workshop – DFSA Applications & Interpretations (Richmond, VA)
- 2010 SOFT Workshop – A Stroll through the Cannabinoid Field: Pharmacology, Therapeutics, and Untoward Effects (Richmond, VA)
- 2010 Introduction to LC/MS/MS for Forensic Toxicology (Cedar Crest College)
- 2009 Blood Alcohol Concentration-Tracker Certification and Training (Atlanta, GA)
- 2009 Toxicology Analysis for Drugs in Blood Using LC/MS/MS
Georgia Bureau of Investigation – Division of Forensic Sciences (Atlanta, GA)
- 2009 37th Annual FBI Crime Laboratory Development Symposium (Madison, WI)
- 2009 Robert F. Borckenstein Course on the Effects of Drugs on Human Performance and Behavior (Bloomington, IN)
- 2008 Alabama Peace Officer Standards and Training Certification
Jacksonville Police Academy (Jacksonville, AL)
- 2007 Draeger Alcotest 7110 MKIII Operator Certification (Permit D00016)

- 2007 IACT Annual Meeting (Phoenix, AZ)
- 2007 Robert F. Borckenstein Course on Alcohol and Highway Safety: Testing, Research, and Litigation (Bloomington, IN)
- 2002 AAFS Annual Meeting (Chicago, IL)
- 2001 AAFS Annual Meeting (Atlanta, GA)

Forensic Toxicology Testimony Experience:

Virginia Department of Forensic Science: ~ 50 times
Alabama Department of Forensic Sciences: ~ 150 times

Total: ~ 200 times

Teaching Experience:

- 2007-10, Adjunct Professor
 2012-Present University of Alabama at Birmingham
 Department of Justice Sciences – Forensic Science
 JS 567 – Forensic Toxicology [2012-present]
 JS 677 – Advanced Forensic Toxicology [2015-present]
- 2015-Present Alcohol Course Faculty
 Robert F. Borckenstein Course on Alcohol and Highway Safety
 Topic: Forensically Defensible Blood Alcohol Analysis
 Indiana University
- 2009-2010 Guest Lecturer
 University at South Alabama
 Department of Political Science and Criminal Justice

Platform Presentations and Workshops

- 2019 SOFT Annual Meeting [San Antonio, TX]. Harper, CE, Logan, B., Yong, H., Tiscione, N., Guertin, S. Recommended Specimens, Scope, Cutoffs, and Strategies for DUI/D Testing & the Impact of Stop Limit Tests. Workshop.*
- 2019 SOFT Annual Meeting [San Antonio, TX]. Harper, CE, Huestis, M., Swortwood, M., Wagner, J. Oral Fluid Toxicology: Workplace Testing, Pain Management, and DUID. Workshop.*
- 2019 SOFT Annual Meeting [San Antonio, TX]. Harper, CE. Alabama’s Oral Fluid Drug Program – One Year Review. Platform Presentation.*
- 2019 SOFT Continued Education Workshop [Dallas, TX]. Harper, CE, Wagner, J., Swortwood, M. Alabama’s Oral Fluid Drug Program – One Year Review. Platform Presentation(s).*

2019 IACT Annual Meeting [Coeur d'Alene, Idaho]. Harper, CE. Oral Fluid Drug Testing in DUID Cases. *Workshop.*

2018 SOFT Annual Meeting [Minneapolis, MN]. Harper, CE. Methamphetamine and Driving in Alabama: A 10-year Retrospective Study. *Platform Presentation.*

2018 SOFT Annual Meeting [Minneapolis, MN]. Harper, CE, Miles, A. Weaving together the Toxicologist and the DRE. *Workshop.*

2018 TIAFT Conference [Ghent, Belgium]. Harper, CE. A 10 Year Retrospective Study on Zolpidem and Driving in Alabama. *Flash Presentation.*

2018 Randox Toxicology Scientific Session [Scotland]. Harper, CE. Ambien & Driving: DUID Testing with the Randox Evidence Analyzer. *Platform Presentation.*

2018 IACP-DAID Annual Meeting [Nashville, TN]. Harper, CE., Miles, A. Opioids and Driving. *Breakout.*

2018 IACP-DAID Annual Meeting [Nashville, TN]. Harper, CE., Wagner, J. Oral Fluid Testing in DUID Investigations. *Breakout.*

2018 DUID and Oral Fluid Workshop sponsored by SOFT and Governors Highway Safety Association [Latham, NY]. Harper, CE. How to Implement a Statewide Oral Fluid Drug Testing Program. *Platform Presentation.*

2018 IACT Annual Meeting [Indianapolis, IN]. Harper, CE. The Prevalence of Drugs Found in Cases with BACs <0.08% versus >0.08%. *Platform Presentation.*

2018 IACT Annual Meeting [Indianapolis, IN]. Harper, CE., Wagner M., Opioids and Driving. *Workshop.*

2017 Society of Forensic Toxicologists (SOFT) Annual Meeting (Boca Raton, FL) Harper, CE. Establishing an Oral Fluid Drug Testing Program in Alabama. *Platform Presentation.*

2017 AAA Impaired Driving Summit (Montgomery, AL). Harper CE. ADFS Toxicology, DUI Statistics, and the Opioid Epidemic. *Platform Presentation.*

2017 Agilent-sponsored RTI Lecture. Harper, CE, Hudson, J., Shonsey, E. Non-Pharmaceutical Fentanyls: Pharmacology and Trends. *Webinar.*

2017 Randox Toxicology Scientific Session [Scotland]. Harper, CE. Detection of Drugs of Abuse Using the Randox Evidence Analyzer and MultiStat in Blood, Urine, and Oral Fluid. *Platform Presentation.*

2017 Fall Municipal Law Conference (Orange Beach, AL). Harper CE. The Impact of Marijuana Legalization and an Update on the Opioid Epidemic. *Platform Presentation.*

2017 International Association for Chemical Testing (IACT) Annual Meeting [Colorado Springs, CO]. Harper, CE. Alabama's Oral Fluid Study Using the Draeger DT5000, Alere DDS2, and Randox Evidence MultiSTAT with LC/MS/MS confirmation. *Platform Presentation.*

2017 International Association for Chemical Testing (IACT) Annual Meeting [Colorado Springs, CO]. Harper, CE, Sanders, J., Sparks, M, Pevey, M., et al. Leadership and Management. *Workshop.*

2016 Fall Municipal Law Conference (Orange Beach, AL). Harper CE and Hughes B. Confronting the Confrontation Clause: Who is a Necessary Witness for a Toxicology Report? *Platform Presentation*.

2016 Society of Forensic Toxicologists (SOFT) Annual Meeting (Dallas, TX). Harper, et al. Evaluation of the 20-target DUID Biochip with the Randox Evidence Analyzer. *Platform Presentation*.

2016 Randox Toxicology Scientific Session [Scotland]. Evaluation of the 20 target ULTRA/DUID Biochip with Randox Evidence Analyzer in Blood, Urine, and Oral Fluid. *Platform Presentation*.

2016 International Association for Chemical Testing (IACT) Annual Meeting [Orlando, FL]. Harper, C.E., Durbin, T., et al. The Drug Recognition Program with Demonstration DRE Evaluation and Mock Court. *Workshop*.

2015 Randox Toxicology Scientific Session [Scotland]. Alabama Increase in Heroin and Fentanyl Overdoses Screened using Randox Toxicology Custom Biochip. *Platform Presentation*.

2015 Society of Forensic Toxicologists (SOFT) Annual Meeting (Atlanta, GA). Harper, C.E., Sanders, J., Sparks, M, Pevey, M., et al. Leadership and Management. *Workshop*.

2015 International Association for Chemical Testing (IACT) Annual Meeting [Newport, RI]. Harper, C.E., Wagner, B., et al. Uncertainty of Measurement. *Workshop*.

2015 National Traffic Safety Resource Prosecutor Webinar Series. Harper, C.E. and Hughes, B. The Myth of the DUI Defense: Rising BAC. *Webinar*.

2014 Society of Forensic Toxicologists (SOFT) Annual Meeting [Grand Rapids, MI]. Harper, C.E., Miles, A., et al. The Drug Recognition Program with Demonstration DRE Evaluation and Mock Court. *Workshop*.

2014 Randox Toxicology Scientific Session [Scotland]. Validation & Implementation of the Evidence Biochip Array Technology for Drugs of Abuse Testing in a Public Forensic Laboratory. *Platform Presentation*.

2014 International Association for Chemical Testing Annual Meeting [Newport Beach, CA]. Harper, C.E. and Williams P. Low Blood Alcohol Concentrations and Driving – Evidence for Lowering the Per se Law for Alcohol to 0.05%. *Workshop*.

2013 Society of Forensic Toxicologists (SOFT) Annual Meeting [Orlando, FL]. Harper, C.E. Limoges, J., Moore, C., Raymon, L., Huestis, M., Johnson, W. Marijuana: Old Drug, New Data: Expert Testimony. *Workshop*.

2013 Society of Forensic Toxicologists (SOFT) Annual Meeting [Orlando, FL]. Harper, C.E. Sanders, J., Ellis, K. Alprazolam – Alabama’s Most Prevalent Drug in DUID Cases. *Platform Presentation*.

2013 Drug Recognition Expert Annual Meeting [Oklahoma City, OK]. Harper, C.E. and Hughes B. Ask this, not that – Driving Under the Influence of Drugs. *Platform Presentation*.

2013 International Association for Chemical Testing (IACT) Annual Meeting [Minneapolis, MN]. Harper, C.E. Pevey, M., Lohmann, A, Kennedy, M. Alcohol Pharmacology and Special Topics. *Workshop*.

2013 International Association for Chemical Testing (IACT) Annual Meeting [Minneapolis, MN]. Harper, C.E. Difluoroethane and Driving. *Platform Presentation*.

2013 Practical Criminal Defense Law [Tuscaloosa, AL]. Harper, C.E. Driving Under the Influence of Drugs. *Platform Presentation*.

2012 NHTSA Region IV - Prosecuting the Drugged Driver (Current National Issues and Strategies) [St. Simons, GA]. Harper, C.E. The Toxicology of Drug-Impaired Driving: An Overview. *Platform Presentation*.

2012 Alabama State Association of Forensic Sciences (ASAFS) [Gulf Shores, AL] Harper, C.E. Emerging Drugs in Toxicology. *Platform Presentation*.

2012 Alabama District Attorneys Association Summer Conference [Orange Beach, AL]. Harper, C.E., Sanders, J., Hughes, B. Ask This, Not That – Forensic Toxicology. *Platform Presentation*.

2012 Society of Forensic Toxicology (SOFT) Annual Meeting. [Boston, MA] Harper, C.E., Hudson, J., Lawrence E. Driving under the Influence of Drugs Involving Phenazepam in Virginia. *Platform Presentation*.

2010 AAMA/AMJA Spring Municipal Law Conference Harper, C.E. Toxicology at Your Service – DUID Cases. *Platform Presentation*.

2010 AAMA/AMJA Spring Municipal Law Conference Harper, C.E. Toxicology at Your Service – DUID Cases. *Platform Presentation*.

2008 Cumberland Law School DUI Conference Harper, C.E., Pevey, M.A., and Carpenter, D.A. Saliva Drug Testing Using the Draeger Drug Check 5000. *Platform Presentation*.

2008 Hoover Municipal Judge's and Prosecutor's Conference Harper, C.E., Pevey, M.A., and Carpenter, D.A. Saliva Drug Testing Using the Draeger Drug Check 5000. *Platform Presentation*.

Publications:

Hudson, JS, Hutchings, JW, Wagner, RL, Harper, CE, Friel, PN (2013) Benzodiazepine and Z- Drug Quantitation Using an Agilent 6430 LC/MS/MS. Agilent Application Notes, Agilent Technologies.

Hudson, JS, Hutchings, JW, Wagner, RL, Harper, CE, Friel, PN (2013) Validation of a Benzodiazepine and Z- Drug Method Using an Agilent 6430 LC/MS/MS. Agilent Application Notes, Agilent Technologies.

Hudson, JS, Hutchings, JW, Wagner, RL, Harper, CE, Friel, PN (2013) Cannabinoid Quantitation Using an Agilent 6430 LC/MS/MS. Agilent Application Notes, Agilent Technologies

Hudson, JS, Hutchings, JW, Wagner, RL, Harper, CE, Friel, PN (2013) Validation of a Cannabinoid Quantitation Method Using an Agilent 6430 LC/MS/MS. Agilent Application Notes, Agilent Technologies.

Kidwell D.A., Kidwell J.D., Shinohara F, Harper C.E., Roarty K., Bernadt K., McCaulley R.A., Smith F.P. Comparison of daily urine, sweat, and skin swabs among cocaine users. *Forensic Science International*. 2003. 133: 63-78.

Harper, C.E., Patel, B.B., Wang, J., Eltoum, I.A., and Lamartiniere, C.A. Genistein and Resveratrol, Alone and in Combination, Suppress Prostate Cancer in SV-40 Tag Rats. *The Prostate*. 2009.

Harper, C.E., Patel, B.B., Wang, J., Eltoum, I.A., and Lamartiniere, C.A. Characterization of adenocarcinoma in SV-40 Tag transgenic rats as a model to study prostate cancer. *BMC Cancer*. 2009. Jan 26;9:30.

Harper, C.E., Patel, B.B., Wang, J., Eltoum, I.A., and Lamartiniere, C.A. EGCG suppresses high-grade prostatic intraepithelial neoplasia, but not late-stage prostate cancer, in TRAMP mice: Mechanisms of action. *The Prostate*. 2007. 67(14):1576-1589.

Harper, C.E., Patel, B.B., Wang, J., Eltoum, I.A., and Lamartiniere, C.A. Resveratrol suppresses prostate cancer progression in transgenic mice. *Carcinogenesis*. 2007. 9:1946-53.

Thesis Students:

Guertin, S., Gardner, E., and Harper, C. The Benefits of Automation in Forensic Toxicology: A Lean Six Sigma and Cost-Analysis Approach. UAB Thesis. 2020.

Buggs, C., Gardner, E., Linville, J., and Harper, C. Prevalence of Drugs in Blood Alcohol Concentrations Above Versus Below 0.08% in Alabama Driving Under the Influence Cases. UAB Thesis. 2019.

Ritchey, P., Gardner, E., Linville, J., and Harper, C. A Study of Drug Facilitated Sexual Assault Cases in Alabama: 2004-2014. UAB Thesis. 2015.