

Lauren M. Wiles, B.A.

EDUCATION

University of Colorado Boulder, Boulder, CO
B.A. Neuroscience

December 2014

EXPERIENCE

ChemaTox Laboratory, Inc.

Forensic Toxicology Assistant Laboratory Director

January - July 2019

Forensic Toxicology Supervisor

July 2015 - January 2019

Forensic Toxicology Analyst

January - July 2015

- Provide services to governmental and private agencies for analysis of bodily fluids and tissues for alcohol, drugs and other toxic substances. Responsible for quantitative analysis of blood, urine and other bodily fluids for the presence of alcohol and other volatiles using Headspace Gas Chromatography-Flame Ionization Detection (GC/FID). Perform analysis on blood and other body fluids for the presence of drugs and other toxic substances using Gas Chromatography/Mass Spectrometry (GC/MS) and Ultra Performance Liquid Chromatography/Tandem Mass Spectrometry (UPLC/MS/MS). Provide expert testimony on alcohol analysis, drug determination, and the effects of drugs on human performance. Certifying scientist. Supervise laboratory operations and train personnel.

ChemaTox Laboratory, Inc.

Forensic Toxicology Intern

October 2013 - January 2015

- Supported laboratory staff by maintaining glassware, performing validity testing, transferring specimens for long-term storage or disposal, numerically filing samples, building blood kits, and performing preliminary certification of paperwork. Assisted laboratory staff in special projects, including assisting in the validation of a GC/MS drug opiate method.

University of Colorado Boulder, Organic Chemistry Laboratory

January - December 2014

Student Researcher supervised by Dr. Maciej Walczak

- Involved in researching the total synthesis of an unprecedented highly sulfated lipopolysaccharide, Axinelloside A, a potent human telomerase inhibitor with potential for use in anticancer drug therapies. Explored the unique chemical and mechanistic properties of the molecule, and worked to optimize synthetic reactions. Trained in laboratory techniques specific to glycochemistry. Synthesized, purified, and characterized organic molecules using techniques such as column chromatography, thin layer chromatography, and nuclear magnetic resonance spectroscopy.

United States Marine Corps*January 2007 - January 2011*

Aviation Ordnance Technician

- Managed work center personnel; Delegated tasks in order to meet daily flight schedule deadlines, and ensured timely completion of aircraft maintenance priorities. Supervised maintenance performed on aircraft and armament equipment for quality and safety as a Collateral Duty Inspector. Directed the handling, loading, arming, and de-arming of aircraft ammunition and explosives as an Ordnance Team Leader. Cross-trained in other job fields to further support squadron in aircraft maintenance and flight operations. Awarded Navy-Marine Corps Achievement Medal for asset management of a mission-essential inventory program.

PRESENTATIONS**The Toxicology of Cannabis: From the Plant to the Stand***April 28th 2017*

Southwestern Association of Toxicologists

Toxicology of Cannabis*October 25th 2016*

Kansas Highway Patrol 11th Annual Joint Prosecutor/LEO Impaired Driving Seminar

Cannabis Toxicology: A Brief Introduction*October 6th 2016*

Colorado Coroners Association Medicolegal Death Investigation Training Course

CONTINUING EDUCATION**Annual American Academy of Forensic Sciences meeting***February 19th-23rd 2018*

Seattle, WA

Workshops

- Pharmacogenomics: Uses in Forensic and Clinical Toxicology
- Fentologs: Chemistry, Pharmacology, and Toxicology of Illicit Fentanyl and Emerging Opioids

Joint Society of Forensic Toxicologists and The International Association of Forensic Toxicologists meeting*January 6th-11th 2018*

Boca Raton, FL

Workshops

- Death Investigation - A Step by Step Guide to Postmortem Toxicology
- Making Leadership Meaningful and Productive - Leadership Within High-Stakes Organizations

Forensic Pharmacology*December 12th-14th 2016*

Through the Center for Forensic Science Research & Education

- General Principles of Pharmacokinetics and Pharmacodynamics
- Clinical Pharmacology of the Autonomic Nervous System
- Central Nervous System Pharmacology

Summation of AAA study “An Evaluation of Data from Drivers Arrested for Driving Under the Influence in Relation to Per se Limits for Cannabis”*August 15th 2016*

Presented by Barry K. Logan, Ph.D., F-ABFT

IACP Training Conference on Drugs, Alcohol, and Impaired Driving *August 13th-15th 2016*

Denver, CO

CDAC Traffic Safety Training Program: Marijuana Related Impaired Driving *August 12th 2016*

Lakewood, CO

Colorado Coroners Association 28th Annual Death Investigation Conference *June 8th-10th 2016*

Fort Collins, CO

Workshops

- Completed three day practical medicolegal death investigation training course

The Robert F. Borkestein Course on Alcohol and Highway Safety: Testing, Research and Litigation *May 22nd-27th 2016*

Bloomington, IN

Through the Indiana University Robert F. Borkestein Center for Studies of Law in Action and The Center for Forensic Science Research & Education

Topics: Historical Perspective on Forensic Alcohol Analysis; Pharmacology and Physiology of Alcohol; Chemistry and Biochemistry of Alcohol; Forensic Pharmacokinetics of Ethanol; 0.08 The Film that Changed a Nation's Law; Blood Alcohol Analysis: Theory and Practice; Breath Alcohol Instrumentation: Theory and Practice; Behavioral and Performance Effects of Alcohol on Driving; Approaches to Widmark Calculations; Practice and Pitfalls of Retrograde Extrapolation; Predicting Impairment: The Role of BAC and Complexity of the Driving Task Impairment; Principles and Applications of Standardized Field Sobriety Tests; Distribution of Ethanol between Blood and other Biological Specimens from Living and Deceased Persons; Basic Principles of Mathematics and Statistics in Alcohol Toxicology; The Changing Landscape: Standards in the Forensics Laboratory; Uncertainty of Measurement Determination in Blood and Breath Alcohol Testing; The Legal Framework for DUI - Constitutional Issues and Case Law; Analysis and Response to Defense Challenges in Forensic Alcohol Testing; The Confrontation Clause and Scientific Testimony; Expert Testimony: Basic Principles; Discussion - Expert Testimony: Practical Considerations

Annual Society of Forensic Toxicologists meeting*October 19th-23rd 2015*

Atlanta, GA

Workshops

- The Role of Benzodiazepines in DUID
- Sample Preparation in Forensic Toxicology: Back to the Past and a Look into the Future
- Managing a Forensic Toxicology Laboratory: A New Mindset and Approach

The Robert F. Borckenstein Course on the Effects of Drugs on Human Performance and Behavior

September 14th-18th 2015

Tempe, AZ

Through the Indiana University Robert F. Borckenstein Center for Studies of Law in Action and The Center for Forensic Science Research & Education

Topics: DUID Overview; National Roadside Survey and Crash Risk Assessment; Drug Recognition Expert (DRE) Program; Principles of Pharmacology and Drug Effects - Stimulants, Hallucinogens, Opiates, Benzodiazepines, CNS Depressants, and Cannabinoids; Effects on Human Performance and Behavior - Cocaine, Methamphetamine, Hallucinogens, "Bath Salts", Opiates, Carisoprodol, Butalbital, Topiramate, Cannabis, Synthetic Cannabinoids; On-Road Driving Studies - Cannabis, CNS Depressants: Antidepressants and Anxiolytics; Benzodiazepines, Zolpidem, and Other Imidazopyridines and Driving Impairment; Data Information and Resources; Oral Fluid Testing; Forensically Defensible Drug and Alcohol Testing in DUID - Laboratory Aspects; National Safety Council Recommendations for Drug Testing in DUID Investigations; Presenting Drug Impairment Evidence in Court - Prosecution Perspective, Defense Perspective.

IACP/NHTSA Drug Evaluation and Classification Training

June 1st-11th 2015

Avon, CO

Audited the following courses:

- CDOT Drug Recognition Expert Pre-School
- CDOT Drug Recognition Expert 7-Day School

Postmortem Toxicology: Interpretive Considerations and Challenges

April 15th-17th 2015

Milwaukee, WI

MAFS Spring 2015 Toxicology Workshop

- Specimen collection and storage; Anatomical findings; Postmortem clinical chemistries; Unexpected drug metabolites and endogenous compounds; Chemical and bacteriological drug instability; Postmortem decomposition; Postmortem redistribution; Tolerance

Annual American Academy of Forensic Sciences meeting

February 16th-20th 2015

Orlando, FL

Workshops

- Scientific Neutrality in Expert Witness Testimony

AFFILIATIONS

American Academy of Forensic Sciences

Associate Member

Society of Forensic Toxicologists

Associate Member

AWARDS

Navy and Marine Corps Achievement Medal

United States Marine Corps, Marine Attack Squadron 513, Yuma, AZ

*December 1st 2010***Marine Corps Good Conduct Medal**

United States Marine Corps, Marine Attack Squadron 513, Yuma, AZ

*January 29th 2010***Secret Security Clearance**

United States Marine Corps

*December 4th 2006***SPECIAL COURSES**

Miscellaneous

- Neuropharmacology
- Psychophysiology of Drugs & Behavior