

Dawn M. Carlstrom, B.S.

EDUCATION

Michigan State University, East Lansing, MI *1991*
B.S. Forensic Science

EXPERIENCE

ChemaTox Laboratory, Inc.

Interim Forensic Toxicology Supervisor *July - November 2019*

Forensic Toxicologist *December 2013 - July 2019*

- Responsible for alcohol analysis in blood samples and other bodily fluids.
- Perform validation and calibration of Gas Chromatograph Flame Ionization Detector (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).
- Perform analysis on blood and other body fluids for the presence of drugs and other toxic substances using 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.
- Train personnel.
- Supervise laboratory operations.

TriMatrix Environmental Laboratory

GC/MS Analytical Chemist IV *September 1993 - June 2012*

- Performed quantitative analysis on environmental samples using GC/MS.
- Responsible for instrument maintenance and trouble-shooting.
- 2nd tier peer data review utilizing the “Element” data system and the updating of 8270C/625 SOP’s.
- Worked as lead chemist in independent laboratory audits.
- Data output was subjected to a rigorous Quality Assurance / Quality Control Program that is NELAC and ISO-compliant.
- TriMatrix is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories.

Analytical MassSpec Laboratory, Inc.

Laboratory Technician / Extraction Chemist *November 1991 - September 1993*

- Worked in wet chemistry laboratory performing extractions on environmental samples.
- Analyzed extractions utilizing GC/MS.

Michigan State Police Forensics Laboratory*June - August 1991*

Internship

- Hands-on experience in all of the laboratory sub-units with the various testing methods and procedures employed.
- Processed casework and accompanied Forensic Chemists to court.

CONTINUING EDUCATION**Arapahoe County Sheriff's Office SFST Training***February 1st 2019*

Centennial, CO

- Participated in training session for junior officers on Standardized Field Sobriety Tests. Volunteers imbibed alcohol at a documented rate or were controls and then were administered Standardized Field Sobriety Tests by junior officers.

Forensic Pharmacology*November 5th-7th 2018*

Taught by Dr. Lionel Raymon, Pharm.D., Ph.D.

Drug Impaired Driving*September 26th 2018*

Fort Collins, CO

- Emerging Drug Trends, Drug Impaired Driving Investigations, Advanced Toxicological Testing Services, Trial Tactics

Annual Society of Forensic Toxicologists meeting*October 17th-21st 2016*

Houston, TX

Workshops

- Alcohol Concentration Extrapolation
- Toxicology of Designer Benzodiazepines and Opioids
- Postmortem Interpretation of Toxic Pharmacodynamic Interactions

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

Annual Society of Forensic Toxicologists meeting*October 20th-24th 2014*

Grand Rapids, MI

Workshops

- Get Excited About Stimulants
- A Pharmacogenomics Primer with Applications to Forensic Toxicology
- Synthetic Cannabinoids - Evolution 2014

The Robert F. Borkestein Course on the Effects of Drugs on Human Performance and Behavior*September 22nd-26th 2014*

Philadelphia, PA

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

Topics: Approaches to Investigation Drug Impaired Driving; Oral Fluid Analysis: Prevalence of Drugs in Drivers CA 2010 and 2012 Surveys; Statement of the Problem: The Canadian Roadside Survey and Drug Involvement in Fatal Traffic Crashes;

The FARS data system potential and limitations; SFSTs: History, Performance and Validation; The DRE Program; Successful administration and governance of a DRE program in 2013: Best practices, resources and outcomes; Strengths and limitation of Per se approaches to DUID enforcement; The special case of the THC Per se law; Pharmacokinetics: Absorption, Distribution, Metabolism, Elimination; Principles of Pharmacology and Drug Effects - Stimulants, Hallucinogens, Dissociative Drugs, Benzodiazepines, CNS Depressants, Opiates, and Cannabinoids; Effects on Human Performance and Behavior - Cocaine, Amphetamines, MDMA, Carisoprodol, Butalbital, Opiates, Cannabis, Synthetic Cannabinoids, Hallucinogens, and Dissociative Drugs; Effects of Drugs on Driving - Benzodiazepines, Zolpidem, and Imidazopyridines; On Road Driving Studies - CNS Depressants - Antidepressants, and Anxiolytics, Cannabis, and MDMA; Calculation of time since last use of Marijuana: Utility and limitations; Case Studies of "Bath Salts" Compounds; DUID Information Resources; Los Angeles Oral Fluid Project; Forensically Defensible Drug and Alcohol Testing in DUID - Laboratory Aspects; A practical approach to preparing and testifying in drug impaired driving cases

The Robert F. Borkenstein Course on Alcohol, and Highway Safety: Testing, Research and Litigation

May 18th-23rd 2014

Bloomington, IN

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

Topics: The Legal Framework for DUI-Constitutional Issues and Case Law; Historical Perspectives on Medico-Legal Alcohol Testing; Chemistry and Biochemistry of Alcohol; Physiology of Alcohol; Pharmacology of Alcohol; Biochemical and Physiological Research on the Disposition and Fate of Alcohol in the Body; Principles and Application of Standardized Field Sobriety Tests; Approaches to Widmark Calculations; Practice and Pitfalls of Retrograde Extrapolation; Cognitive and Psychomotor Domains of Driving; Assessing Alcohol Impairment Through the Use of Driving Simulators; Testifying about Alcohol and Driving Impairment; Forensically Defensible Blood Alcohol Analysis; Breath Alcohol Instrumentation: Theory and Practice; Predicting Impairment: The Role of BAC and Complexity of the Driving Task; Basic Principles of Mathematics and Statistics in Alcohol Toxicology; Analysis of and Response to Defense Challenges in Forensic Alcohol Testing; ISO 17025 Accreditation for Breath Alcohol Calibration Laboratories; Uncertainty of Measurement Determination in Blood and Breath Alcohol Testing; The Confrontation Clause and Scientific Testimony; Expert Testimony: Basic Principles; Expert Testimony: Practical Considerations

Presenting Courtroom Testimony Regarding Drug and Alcohol Lab Test Results

March 4th 2014

Taught by Chris Halsor, TSRP, Colorado District Attorneys' Council

AFFILIATIONS

Society of Forensic Toxicologists

Associate Member

SKILLS

- Proficient in troubleshooting and operating GC/MS.