

Dawn M. Carlstrom, B.S.

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EDUCATION

Michigan State University, East Lansing, MI

1991

B.S. Forensic Science

EXPERIENCE

ChemaTox Laboratory, Inc.

December 2013 - Present

Forensic Toxicologist

- 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.
- Various laboratory tasks as assigned.

TriMatrix Environmental Laboratory

September 1993 - June 2012

GC/MS Analytical Chemist IV

- 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.

November 1991 - September 1993

Laboratory Technician / Extraction Chemist

- 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**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. Borckenstein Course on the Effects of Drugs on Human Performance and Behavior*September 22nd-26th 2014*

Philadelphia, PA

Through the Indiana University Robert F. Borckenstein 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: *May 18th-23rd 2014*
Testing, Research and Litigation
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 *March 4th 2014*
Results

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

SKILLS

- Proficient in troubleshooting and operating GC/MS.