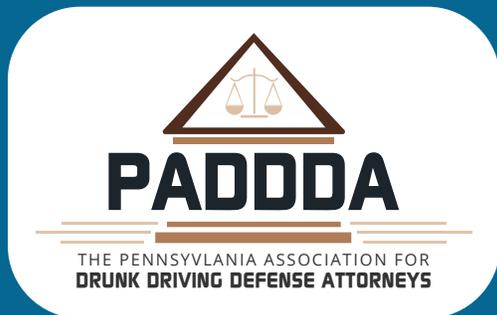


NOVEMBER 16th, 2018

# DUID

**DRIVING UNDER THE INFLUENCE OF DRUGS**

Uncuffing the Commonwealth's  
Impaired Driving Case



**Location:**

**RED LION HOTEL**

Harrisburg Amphitheater Room  
Harrisburg, PA



# DRIVING UNDER THE INFLUENCE OF DRUGS (DUID)

UNCUFFING THE COMMONWEALTH'S IMPAIRED DRIVING CASE

## SEMINAR ITINERARY

8:00 - 8:25

**Continental Breakfast**

8:25 - 8:30

**Welcome Remarks**

*Shawn Dorward, Esq.*

8:30 - 9:30

**Session 1 – 1 hour**  
**Basics of Drug Pharmacokinetics and Pharmacodynamics**

*Dr. Jimmie L. Valentine, B.S., B.S., M.S., Ph.D.*

- Principles of drug and alcohol absorption
- Comparison of various routes for administering drugs – intravenous, oral, insufflation, smoking
- Concepts of drug distribution upon entering the body
- Drug transformation within the body and factors affecting elimination
- Tolerance principles found with therapeutic or compulsive use of drug(s)
- Absorption, distribution, and elimination of drugs compared to alcohol
- Retrograde extrapolation to predict level of alcohol or drug at the time of arrest/accident – can it be done with drugs?
- Precepts of drug half-life and volume of distribution
- Therapeutic drug levels same as per se concentrations?
- Can published tables of therapeutic concentrations be used to predict impairment for driving?

9:30 - 10:30

**Session 2 – 1 hour**  
**Vehicular Accident Risk From Use of Drugs**

*Dr. Carrie R. Valentine, B.A., Ph.D.*

- Guidelines for scientifically measuring crash risk
- Concepts needed to interpret epidemiology studies correlating alcohol and drugs with crash risk
- Drug and alcohol crash risk – Virginia Beach study
- Breakdown of drug classes evaluated in Virginia Beach study
- Alcohol versus marijuana crash risk in Virginia Beach study
- Evaluation of the summary findings in Virginia Beach study
- Governor's Report on DUID
- Executive summaries provided Congress
- Prosecutorial misapplications of NHTSA sponsored studies

10:30 - 10:45

**Break**

10:45 - 12:15

**Session 3 – 1.5 hours**  
**Cannabis – Blood/Urine Concentration Related to Driving Impairment?**

*Dr. Jimmie L. Valentine, B.S., B.S., M.S., Ph.D.*

- Marijuana and its constituents
- Routes of administration; smoking versus oral – how “high”?
- Pharmacokinetics and metabolism of cannabis
- Effects – euphoria and cardiovascular; violence potential?

- Does marijuana use correlate with driving impairment? Science versus prosecution.
- SFSTs a good indicator of marijuana impairment?
- Urine concentration – is interpretation with driving impairment possible?
- Blood concentration of THC and its metabolites; useful in assessing impairment for driving?
- Calculation of Cannabis Influence Factor and its validity
- Recognition of cannabis use by DRE; what scientific studies show

**12:15 - 1:15**

## **Lunch Break**

**1:15 - 2:15**

### **Session 4 – 1-hour Drug Recognition Evaluations – the DRE Program**

*Tim Barrouk, Esq. and Shawn Dorward, Esq.*

- Historical background for the program development
- Training required to become a DRE
- 12-Steps of DRE evaluation
- NHTSA sponsored 1986 field study of Los Angeles Police Department drug detection program
- John Hopkins 1984 study
- Kane criticism of DRE program
- Maryland v. Brightful, et al., decision hailed by DUI defense and attacked by prosecution community as being an aberrant ruling

**2:15 - 3:45**

### **Session 5 – 1.5 hours; Methamphetamine, Cocaine, and Alprazolam – Blood/Urine Concentration Related to Driving Impairment?**

*Dr. Jimmie L. Valentine, B.S., B.S., M.S., Ph.D.*

- Routes of administration and effects on blood and urine concentrations with time Pharmacokinetics of cocaine compared to methamphetamine – half-lives and blood/urine concentrations with time
- Pharmacodynamics of cocaine and methamphetamine abuse – euphoric, CNS stimulation, and cardiovascular effects
- Does methamphetamine or cocaine impair driving?
- Violence associated with methamphetamine and cocaine use?
- Therapeutic uses of alprazolam
- Pharmacokinetics and metabolism of alprazolam
- Alprazolam in the illicit drug arena
- Therapeutic drug concentrations of alprazolam versus impairing concentrations; the same or different?
- DRE detection of alprazolam, cocaine or amphetamine – effective or not?

**3:45 - 4:00**

## **Break**

**4:00 - 5:00**

### **Session 6 – 1 hour Getting to Zero Alcohol/Drug Impaired Fatalities**

*Dr. Carrie R. Valentine, B.A., Ph.D.*

- National Academies of Sciences Engineering Medicine Consensus Report
- Committee recommendations
- Critical examination of the studies relied upon
- Lane drifting as a measurement of impairment
- Moskowitz and Fiorentino review of alcohol impairment of driving skills
- Epidemiology studies of alcohol driving impairment – dose-response relationships
- Should alcohol per se be lowered based upon scientific studies?
- Analysis of the NAS conclusions – applications for the defense community
- Statistical significance – what does it mean?
- More DREs needed since science has failed?
- Examining crime laboratory witness claims as related to DUI and DUID

# SPEAKERS BIOS



## **Dr. Jimmie L. Valentine, B.S., B.S., M.S., Ph.D.**

Dr. Valentine is a pioneer in utilizing gas and liquid chromatography for analysis of human physiological fluids and tissues. Dr. Valentine has published 60 articles in peer-reviewed scientific and medical literature, 12 monographs in forensic newsletters, 16 chapters in books and is co-author of 3 books. He has presented at many scientific meetings on the correlation of drug use and behavioral effects in relationship to levels determined in physiological fluids both in living and post-mortem situations. Dr. Valentine has testified in numerous civil and criminal trials, and administrative hearings concerning drug findings and has been qualified as an expert witness in 28 different states as well as Federal courts and military court martial proceedings. Dr. Valentine now serves as a consultant in medical pharmacology and toxicology. Dr. Valentine is also a commercially rated pilot and a Certified Flight Instructor. On September 21, 2017, Dr. Valentine was honored as a Distinguished Alumnus of the University of Mississippi, School of Pharmacy receiving the Dr. Joseph Sam Award in Medicinal Chemistry.



## **Dr. Carrie R. Valentine, B.A., Ph.D.**

Dr. Carrie R. Valentine obtained a Bachelor of Arts Degree in Chemistry from the Honors College at the University of Oregon in 1968 and a Doctor of Philosophy Degree in Biochemistry from the Massachusetts Institute of Technology in 1975. She took post-doctoral training both at the University of Montana and the University of California-Davis. Dr. Valentine taught microbiology and molecular biology to nursing, medical, and dental students at the Oral Roberts University School of Medicine in Tulsa, Oklahoma from 1979-1990. From 1990-1992 she was a faculty member within the Department of Pediatrics at the University of Arkansas College of Medicine in Little Rock, Arkansas. In 1992 she accepted a position as a Research Microbiologist for the Food and Drug Administration (FDA) at the National Center for Toxicological Research (NCTR) in Jefferson, Arkansas, until retiring in 2008, when she received the FDA Distinguished Career Service Award. She now teaches online undergraduate biology, scientific writing, and graduate medicinal chemistry for Grand Canyon University and works with her husband, Dr. Jimmie Valentine on consultations and scientific writing. Recent chapters written with her husband concern both ante- and post-mortem fermentation of human specimens and the scientific status of alcohol testing.



## **Timothy M. Barrouk, Esq.**

Attorney Barrouk is a graduate of Indiana University of Pennsylvania where he was a member of the Alpha Tau Omega Fraternity. After graduating from Indiana University of Pennsylvania he attended Widener University School of Law focusing his studies in trial advocacy. Highly-trained in DUI blood and breath testing, Standardized Field Sobriety Tests (roadside DUI tests), and forensic science, Tim has the skill to explain these complex issues to a jury in plain language, making him an unequalled trial advocate. Tim has presented in front of organizations such as DUI Defense Lawyers Association (DUIDLA) and the Pennsylvania Bar Institute (PBI). Attorney Barrouk currently works as a Senior Litigation Associate at The McShane Firm in Harrisburg, PA.



## **Shawn M. Dorward, Esq.**

Attorney Dorward earned his undergraduate degree at Temple University where he majored in Sport Management. After graduating from Temple, Attorney Dorward attended Texas Southern University's Thurgood Marshall School of Law in Houston, Texas. With hundreds of hours of advanced DUI and forensic science training, Shawn's combination of knowledge has made him a sought after speaker on topics related to DUI and forensic science. Attorney Dorward currently works as a Litigation Associate Attorney at The McShane Firm in Harrisburg, PA.

## **Location:**

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