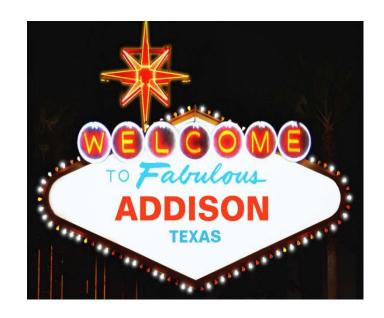# Fall 2018 Meeting

Addison, Texas

Dallas/Addison Marriott

Quorum by the Galleria

November 7-9, 2018

Welcome to Addison, Texas!!

The time has come to raise the stakes at the Fall 2018 Southwestern Association of Toxicologists (SAT) meeting. SAT and the Dallas County Southwestern Institute of Forensic Sciences (SWIFS) would like to thank you for taking the risk to join us for this high rolling conference. May luck be on your side!

We have a number of guests joining us and would like to extend a special thank you to each one:

- *Dr. Kurt Kleinschmidt and team from the UT Southwestern Medical Toxicology group*
- *DPS Trooper Sergeant Gary Brown*
- *Denton County 158th Judicial Criminal Court Assistant District Attorney Lauren Marshall*
- *Defense Attorney Sean Kilgore*
- *Honorable Judge Coby Waddill*
- *Denton County Sheriff's Office Captain Jeff Davis*
- *Texas Alcoholic Beverage Commission Investigator Beth Gray*

We truly appreciate you taking time out of your day to share your knowledge and expertise with us!

A big thank you to all presenters for your time, courage, and hard work not only on your presentations, but also in your lab, our field, and for SAT.

SAT cannot thank our generous sponsors enough for donations and attendance at our conference. Some say gambling is the sure way to get something for nothing, but our vendors are a sure thing. We sincerely thank you for your support.

Your hand has been dealt: two hold cards are awaiting the flop, the turn, and the river. Enjoy the presentations, do not forget to <u>raise</u> your questions, <u>call</u> your doubts, and hopefully not <u>fold</u>. Please let anyone from SWIFS or the hotel staff know if you need anything at any time.

Welcome and enjoy!

Your hosts,

_____   _____

Erin Spargo, PhD   Melissa Giguere, MS

Southwestern Association of Toxicologists

Board of Directors
(2018-2019)

President: Aria McCall

Past President: Tiffany Flowers

President Elect: Open

Secretary: Connie Lewis

Treasurer: Monica Mellon

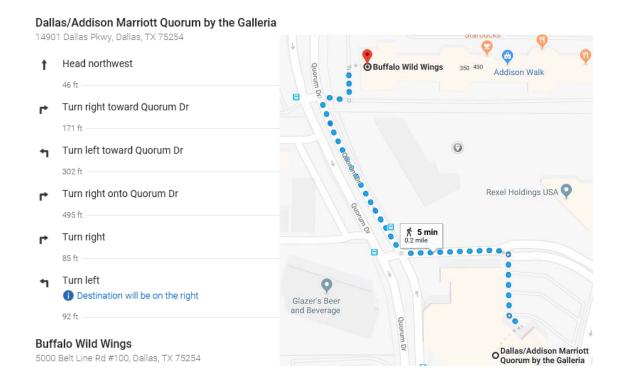Councilor: Sarah Martin (2017-2019)

Councilor: Open

Committee Members

Grants/Scholarship: Melissa Giguere

Vendors: Amy Scarafile

Please join us at

Wednesday Nov 7th 7-9 PM

For a social gathering and snacks

Dallas/Addison Marriott Quorum by the Galleria
14901 Dallas Pkwy, Dallas, TX 75254

↑   Head northwest

     46 ft

↱   Turn right toward Quorum Dr

     171 ft

↰   Turn left toward Quorum Dr

     302 ft

↱   Turn right onto Quorum Dr

     495 ft

↱   Turn right

     85 ft

↰   Turn left

     ⓘ Destination will be on the right

     92 ft

Buffalo Wild Wings
5000 Belt Line Rd #100, Dallas, TX 75254

GOLD SPONSOR

BRONZE SPONSOR

SPONSORS

Waters

THE SCIENCE OF WHAT'S POSSIBLE.®

ThermoFisher
SCIENTIFIC

RESTEK®

NEOGEN®

Wednesday November 7th

1:00 PM -4:00 PM   Board Meeting
4:00 PM - 7:00 PM   Registration
4:00 PM - 7:00 PM   Vendor Set up
7:00 PM - 9:00 PM   President's Reception at Buffalo Wild Wings
                      (5000 Beltline Rd. #100, Dallas, TX 75254; 0.2 mile walk)

Thursday November 8th

7:15 AM - 8:30 AM   Registration
7:30 AM - 8:30 AM   Complimentary breakfast at the hotel
8:30 AM - 8:40 AM   Welcome message from President Aria McCall
8:40 AM - 10:00 AM   **UT Southwestern Medical Toxicology, Dr. Kurt Kleinschmidt and Team**
10:00 AM - 10:30 AM   BREAK   Sponsored by SHIMADZU

10:30 AM - 11:00 AM   **Genes and Drugs: How the Next Generation of Sequences May Change the Landscape of Pharmocogenetic Testing**
                      Eric Crossley, Children's Medical Center
11:00 AM - 11:15 AM   **Expansion of Quantitative LC-MS/MS Methodologies to include Qualitative Designer Drugs**
                      Stephanie Olofson, M.S, D-ABFT-FT, D-ABC, Colorado Bureau of Investigation
11:15 AM - 11:30 AM   **A Qualitative Method for the Screening of 21 Fentanyl Analog Compounds using LC-Q-TOF in Post-Mortem Cases**
                      Chelsea Yacovazzi, Office of the Chief Medical Examiner of Oklahoma
11:30 AM - 11:45 AM   **Drug Screening by LC-QTOF-MS/MS using Protein Precipitation**
                      Amanda Rausch, SWIFS
11:45AM - 12:00 PM   **Predicting Drug Separations for Ionic Liquid Phase Using an Intelligent Decision Tree & the Abraham Model**
                      Katherine Smart, UNT Doctoral Student, Dr. Teresa Golden Research Group
12:00 PM - 12:30 PM   **Membership/business meeting**
12:30 PM - 1:30 PM   LUNCH

1:30 PM - 2:00 PM   **Texas Department of Public Safety**
                      Sergeant Gary Brown
2:00 PM - 2:30 PM   **Denton County District Attorney Office**
                      ADA Lauren Marshall, 158th Judicial District Court
2:30 PM - 3:00 PM   **Kuzmich Law Firm**
                      Sean Kilgore, Defense Attorney
3:00 PM - 3:30 PM   BREAK   Sponsored by SHIMADZU

3:30 PM - 4:00 PM   **Denton County Criminal Court 5**
                      Honorable Judge Coby Waddill

4:00 PM - 4:30 PM **Overdose and Beyond**
　　　　　　　　　Captain Jeff Davis, Denton County Sheriff's Office
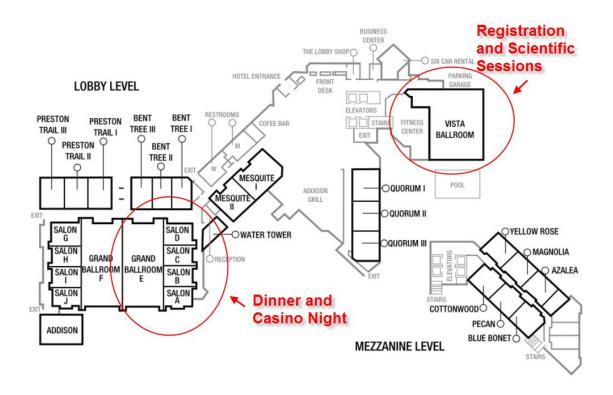4:30 PM - 5:00 PM **TABC Investigations**
　　　　　　　　　Beth Gray, TABC (Texas Alcoholic Beverage Commission)
6:00 PM - 7:15 PM **President's Dinner (held in the Salon)**
7:15 PM - 10:30 PM **Casino Night (held in the Salon)**

Friday November 9th

7:30 AM - 8:30 AM Complimentary breakfast at the hotel
8:30 AM - 8:45 AM **Improved Method for the Analysis of a Pain Management Supplemental Panel in Urine using the eXtreme FV by LC-MS/MS**
　　　　　　　　　Matt Obusek, Thomson Instrument Company
8:45 AM - 9:15 AM **Postmortem Redistribution of Cannabinoids in Rabbits**
　　　　　　　　　Kacey Cliburn, FAA (Federal Aviation Administration)
9:15 AM - 9:30 AM **An Unusual Postmortem Drug Distribution Profile Influenced by Antemortem Conditions**
　　　　　　　　　Byron Curtis, Joshua Lanter, Office of the Chief Medical Examiner of Oklahoma
9:30 AM - 9:45 AM **Sailing the Seas of Forensic Data: A Breath Alcohol Odyssey**
　　　　　　　　　Dane Robertson, SWIFS
9:45 AM - 10:00 AM **Post Mortem Tissue Distribution of Synthetic Cathinones**
　　　　　　　　　Lindsey Glicksberg, SWIFS
10:00 AM - 10:15 AM **Inhalants/Volatiles and their Effects on Human Behavior and Performance**
　　　　　　　　　Renee Hawkins, Texas DPS Crime Laboratory Austin
10:15 AM - 10:45 AM BREAK Sponsored by INDIGO BIOAUTOMATION
10:45 AM – 11:45 AM **The Lone Star State: Trends for Common Drugs of Abuse and the Several Drugs Increasing in Popularity**
　　　　　　　　　Renee Hawkins and Sarah Martin Texas DPS Crime Laboratory Austin

LOBBY LEVEL

PRESTON TRAIL III
PRESTON TRAIL I
PRESTON TRAIL II
BENT TREE III
BENT TREE I
BENT TREE II

EXIT

SALON G
SALON H
SALON I
SALON J
GRAND BALLROOM F
GRAND BALLROOM E
SALON D
SALON C
SALON B
SALON A

ADDISON

EXIT

RESTROOMS
M
W
EXIT

COFEE BAR

MESQUITE I
MESQUITE II

WATER TOWER

RECEPTION

Dinner and Casino Night

BUSINESS CENTER
THE LOBBY SHOP
HOTEL ENTRANCE
FRONT DESK

SIX CAR RENTAL
PARKING GARAGE

ELEVATORS
STAIRS
EXIT

FITNESS CENTER

VISTA BALLROOM

POOL

Registration and Scientific Sessions

ADDISON GRILL

QUORUM I
QUORUM II
QUORUM III

EXIT

ELEVATORS
STAIRS
COTTONWOOD
PECAN
BLUE BONET

YELLOW ROSE
MAGNOLIA
AZALEA

STAIRS

MEZZANINE LEVEL

Dr. Kurt C. Kleinschmidt

University of Texas Southwestern Medical Center, Dallas, TX

Kurt C. Kleinschmidt, M.D., FACMT, DABAM is a Professor of Emergency Medicine at the University of Texas Southwestern Medical Center in Dallas, Texas. He is the Division Chief and Program Director for Medical Toxicology. He also works with Parkland Health and Hospital System Maternal Fetal Medicine in optimizing the care of pregnant women who have substance use disorders. His areas of interest include drugs of abuse and addiction and withdrawal issues. He graduated from the University of South Florida College of Medicine in 1986, completed his Emergency Medicine residency at Madigan Army Medical Center in 1990, and finished a clinical fellowship in Toxicology at the University of Texas Southwestern Medical Center in 1999. He is board certified in Emergency Medicine, Medical Toxicology, and Addiction Medicine. In 2016, he became the Medical Director of the Perinatal Intervention Program with the Department of Obstetrics and Gynecology; providing addiction care to pregnant patients who have substance use disorders.

Genes and Drugs: How the next generation of sequencers may change the landscape of pharmacogenetic testing

Eric Crossley, Children's Medical Center, Dallas, TX

Since the completion of the human genome project 20 years ago, sequencing costs have declined rapidly, and capacity grows exponentially. This increase in sequencing capacity is allowing for the expansion of DNA sequencing into new fields, including toxicology. Pharmacogenetic testing has benefited from this increased capacity, and its use in the clinical setting is growing. However the use of pharmacogenetics in forensics has remained limited due to the targeted nature of most tests. Advances in next-generation sequencing technology can provide a low cost, wide-scale screening tool that may be more beneficial to the forensic toxicologist than current gen assays.

Expansion of Quantitative LC-MS/MS Methodologies to include qualitative designer drugs

Stephanie Olofson, M.S., D-ABFT-FT, D-ABC
Colorado Bureau of Investigation, 6000 W. 54th Avenue, Arvada, CO 80002
Stephanie.Olofson@state.co.us

The Colorado Bureau of Investigation recently expanded the designer drug panels to qualitatively include (24) benzodiazepine/Z-drugs as well as (11) fentanyl/opioid drugs. These panels were expanded in order to stay on top of emerging drugs as well as answer questions left by positive ELISA screens that did not confirm. The qualitative expansion was possible in four (4) steps that included three (3) analytical batches. This streamlined approach allowed the laboratory system to rapidly add new drugs to the current methodology while maintaining full casework output. The presentation will highlight: drug transition selection, extraction verification, batch plan for three (3) analytical batches and the ELISA cross reactivities. Lastly, the prevalence of drugs and case studies that benefited from these qualitative method expansions will be explored.

A Qualitative Method for the Screening of 21 Fentanyl Analog Compounds using LC-Q-TOF in Post-Mortem Cases

Chelsea Yacovazzi, M.S.
Office of the Chief Medical Examiner of Oklahoma

Due to the ever-growing opioid crisis, fentanyl analogs emerged as a street-level illicit compound. Our laboratory has screened suspected cases of fentanyl analogs for years previously using GC-MS methodology. Recently our laboratory developed a validated, highly sensitive (LOD 0.25 ng/mL) screening method for the identification of 21 different fentanyl analogs, in conjunction with a library database for unknown analog accurate mass comparison. Due to the introduction of LC-Q-TOF instrumentation, we are able to use high resolution full scan MS and "All Ions Fragmentation" for both enhanced sensitivity and specificity. We present this method, as well as case data for two cases assessed following the completion of the method validation.

Drug Screening by LC-QTOF-MS/MS using Protein Precipitation

Amanda J. Rausch*, Brittany K. Casey, Erin A. Spargo
Dallas County Southwestern Institute of Forensic Sciences, Dallas, TX

Dallas County Southwestern Institute of Forensic Sciences (SWIFS) recently updated the Laboratory's drug screening process to a new, highly sensitive LC-QTOF-MS/MS method. The previous method targeted primarily alkaline analytes via a liquid/liquid extraction of a 3mL aliquot of sample and GC/MS analysis. The LC-QTOF-MS/MS method targets alkaline and neutral analytes and their metabolites via protein precipitation, using only 200μL of sample. In addition to the relatively small sample volume, another advantage to this new method is that the data can be retrospectively analyzed if more information about the case becomes available or as the in-house library is updated. SWIFS is currently using the new method for targeted semi-quantitation and qualitative analysis for over 300 compounds with an analytical run time of 12 minutes per sample. The method was validated for all semi-quantitative analytes following SWGTOX guidelines for recommended standard practice. A linear range of 0-1000ng/mL is established using a 1-point calibration curve. Although this has higher variability, this method is used for identification and dilution guidance for confirmation assays. A positive and negative quality control are included in every batch and analytes must meet reportability criteria, including mass error, peak asymmetry, retention time, signal:noise, and library match. The library used for comparison was created in-house using certified reference materials. This method is currently utilized by SWIFS as part of a routine drug screen. By using this method, analysis time and sample volume are decreased, while sensitivity, selectivity, and the scope of analytes identified are increased.

Predicting Drug Separations for Ionic Liquid Phases Using an Intelligent Decision Tree & the Abraham Model

Katherine Smart, Doctoral student
University of North Texas, Denton, TX

A new predictive method will be developed that can predict gas-ionic liquid chromatographic separations for various drug analogues. By combining a decision tree process and the Abraham model which is a solute property predictor model, method development techniques can be narrowed for toxicological compounds and different type of analogues. This new method relies on obtaining experimental ionic liquid-gas partition coefficients to (1) expand the applicability of the Abraham model for larger compounds and (2) demonstrate that predictions can be made for new ionic liquid combinations. Abraham model correlations allow predictions, such as partitioning, to be made using experimentally determined or predicted solute descriptors. Abraham model solute property correlations are founded on five solute molecular descriptors (E, S, A, B, and L) to describe the interaction ability of the solute and six complementary solvent process coefficients (c, e, s, a, b, and l). These correlations could help determine the best chromatographic phases and temperatures as well as predict adjusted retention times.

Improved Method for the Analysis of a Pain Management Supplemental Panel in Urine using the eXtreme|FV® by LC-MS/MS

Thomson Instrument Company

This improved sample preparation method allows for the quantitative measurement of the following pain management drugs in urine. The urine samples were diluted and filtered using Thompson eXtreme|FV®, followed by LC/MS/MS analysis. The most critical aspects of reliable urine analysis are the reduction of interferences from the sample matrix and analyte recovery. Traditionally, SPE, SLE and centrifugation have been used to reduce matrix interference prior to MS analysis. However, these techniques are time consuming, adversely impact recovery, require expensive consumables, lab equipment and use large amounts of solvent. Thomson eXtreme|FV® offer multi-layer filtration for viscous samples and samples containing up to 30% solid particulates. The filter vial consists of two parts: a filter vial outer shell and a plunger, which includes the multilayer filter on one end and a vial cap on the other end.

Postmortem Redistribution of Cannabinoids in Rabbits

Kacey D. Cliburn, MS
Oklahoma State University
Stillwater, OK

Postmortem redistribution (PMR) refers to the drug concentration changes that may occur after death. PMR can cause significant differences in concentration from two anatomical sites with higher concentrations found in blood from a central site than a peripheral site.   PMR is dependent on a number of factors, such as the lipophilicity, charge, pKa value, and volume of distribution of the drug.   Δ9-tetrahydrocannabinol (THC) is the main psychoactive component of cannabis sativa, commonly known as marijuana. THC is a highly lipophilic drug with a large volume of distribution making it a good candidate for PMR; however, little research exists that evaluates the PMR of THC, its metabolites, and other cannabinoids in an animal model or in humans. It is imperative that forensic toxicologists understand the concept of PMR so that accurate interpretation of postmortem drug results can be determined. The research proposal is to examine PMR of THC and other cannabinoids in a rabbit model after administration of marijuana. The experimental design includes two groups of rabbits being treated with cannabis, then sacrificed and stored at two different temperature conditions - refrigerated and ambient. Necropsies will be conducted at various times postmortem intervals. The specific aims of the proposed study are (1) to evaluate when and to what extent postmortem changes in THC concentration occurs, (2) to determine if there is a postmortem change in the concentration of two metabolites 11-OH-THC and THCCOOH, (3) to determine if postmortem redistribution occurs in other cannabinoids - CBD, CBN, and CBG, and (4) to determine if storage conditions affect the postmortem changes in drug concentration.

An Unusual Postmortem Drug Distribution Profile influenced by Antemortem Conditions

Byron Curtis, Joshua Lanter
Office of the Chief Medical Examiner, Oklahoma City, OK

We present a case study showing unexpected opioid drug concentration ratios between central and peripherally acquired blood samples. The femoral blood (fb) showed two times or greater concentrations of morphine, oxycodone and oxymorphone than the heart blood (hb). While it is not unknown for occasional cases to demonstrate higher concentrations in femoral blood over heart blood for some drugs, the magnitude of the differences initiated concern and a deeper investigation into case background.

The case results were as follows; morphine – positive less than 0.03 mcg/mL (hb) / 0.21 mcg/mL (fb), oxycodone - 0.38 mcg/mL (hb) / 0.68 mcg/mL (fb), oxymorphone - 470 ng/mL (hb) / greater than 800 ng/mL (fb) (~ 920 ng/mL). Vitreous humor result were; oxycodone – 0.69 mcg/mL / oxymorphone 38 ng/mL.

Sailing the Seas of Forensic Data: A Breath Alcohol Odyssey

Dane Robertson, M.S.
Dallas County Southwestern Institute of Forensic Sciences, Dallas, TX

From evidence registration to sample analysis, toxicology laboratories generate titanic amounts of data. While some information is monitored for quality control or other formal purposes, a closer look into the spyglass may reveal undiscovered trends lurking down below. This presentation of Texas statewide breath alcohol data demonstrates the utility of exploring statistics and charts a course for navigating your own laboratory's murky depths.

The Texas Department of Public Safety Toxicology Program: How Do They Manage All Those Cases?

Renee Hawkins, D-ABFT-FT
Texas DPS Crime Laboratory, Austin, TX

The Texas DPS analyzed approximately 65,000 breath and blood alcohol cases in 2017. Since Texas handles an enormous amount of alcohol DWI cases, many people may not realize that Texas also received over 9,000 drug content toxicology cases in 2017 for DWI, sexual assault, homicide, and questioned death investigations. In this presentation, forensic toxicologists will explain the process, workflow, and backlog that only 21 employees are working through each day.

The Lone Star State: Trends for Common Drugs of Abuse and the Several Drugs Increasing in Popularity

Renee Hawkins, D-ABFT-FT
Texas DPS Crime Laboratory, Austin, TX

The Texas Department of Public Safety Crime Laboratory Toxicology section analyzes biological specimens for drug content for a variety of criminal investigations, including DWI, homicide, and sexual assaults. As a toxicology laboratory that services all 254 counties in Texas, the laboratory can collect and report statistics for the entire state. In this presentation, three years of data will be described that includes the number of cases submitted and the classes of drugs reported. Regional data will be reported to show how 269,000 square miles may contrast from one side of the state to the other. The data presented will also disclose which drugs appear to be on the rise and which may be decreasing. Emphasis will be on several drugs in which abuse appears to have increased in the state of Texas.

Post Mortem Tissue Distribution of Synthetic Cathinones

Lindsay Glicksberg, BS*,[1], Ruth Winecker, PhD[2], Caitlin Miller, MS[3] and Sarah Kerrigan, PhD[1]

[1]Department of Forensic Science, Sam Houston State University, 1003 Bowers Blvd, Huntsville, TX 77340; [2]Division of Public Health, Office of the Chief Medical Examiner, North Carolina Department of Health and Human Services, 4312 District Drive, Raleigh, NC 27699; [3]LA County Dept. of ME-Coroner, 1104 N. Mission Road, Los Angeles, CA 90033

Post-mortem toxicology results can provide crucial information in death investigations regarding the cause and manner of death. However, post-mortem drug concentrations may not always reflect ante-mortem concentrations. Drugs may also undergo post-mortem redistribution (PMR), resulting in significant differences between central and peripheral blood. To assess post-mortem redistribution, central to peripheral (C/P) blood ratios can be calculated. Post-mortem redistribution can be somewhat predicted using drug properties including volume of distribution, lipophilicity, and pKa. Blood and tissue distributions have been studied for many common illicit drugs, but this information is still limited for synthetic cathinones, a class of designer drugs that has been increasing in popularity over the last decade. In this presentation, we present post-mortem tissue distributions and C/P ratios for select synthetic cathinones from cathinone positive fatalities.

Post-mortem samples from 60 cathinone positive cases were included in the study. A total of 210 specimens were evaluated, including liver, urine, vitreous humor and blood collected from the aorta, inferior vena cava, iliac, subclavian and femoral vessels. Quantitative analysis was performed using blood or urine calibrators with matrix matched controls. Samples were analyzed using a previously published and validated procedure for the determination of twenty-two synthetic cathinones in urine and blood using liquid chromatography-quadrupole/time of flight-mass spectrometry (LC-Q/TOF-MS). A total of nine isotopically labelled internal standards were used. The principal compounds of interest were methcathinone, 3-fluoromethcathinone (3-FMC), 4-fluoromethcathinone (4-FMC), ethcathinone, ethylone, methedrone, buphedrone, butylone, mephedrone, eutylone, 4-methylethcathinone (4-MEC), 3,4-methylenedioxy-α-pyrrolidinobutyrophenone (MDPBP), pentedrone, pentylone, 3,4-dimethylmethcathinone (3,4-DMMC), α-pyrrolidinopentiophenone (α-PVP), 4-ethylmethcathinone (4-EMC), 4-methyl-α-pyrrolidinobutiophenone (MPBP), methylenedioxypyrovalerone (MDPV), pyrovalerone, and naphyrone.

Of the twenty-two cathinones in the assay, nine were identified in at least one case: α-PVP (n=18), methylone (n=17), ethylone (n=15), MDPV (n=6), pentylone (n=3), methedrone (n=2), 4-MEC (n=1), butylone (n=1), and MDPBP (n=1). Concentration ranges in blood, urine and liver, respectively were <2 to 1,090 ng/mL, 33 to 7,580 ng/mL and 14 to 663 ng/g for α-PVP; <2 to 202 ng/mL, 2 to 38,064 ng/mL and 28 to 5,731 ng/g for methylone; <2 to 2,743 ng/mL, 32 to >20,000 ng/mL and 10 to 18,893 ng/g for ethylone; 3 to 80 ng/mL, 4 to 5,210 ng/mL and 64 to 840 ng/g for MDPV; <5 to 322 ng/mL in blood and 122 to >5,000 in urine for pentylone. Where possible, average C/P ratios were determined as follows: methylone (4.0, range 2.39-6.0, n=4), ethylone (2.9, range 0.5-9.2, n=6), pentylone (2.0, n=1), α-PVP (1.2, range 0.5-1.9, n=8), methedrone (1.1, n=1), MDPV (1.0, n=1), butylone (0.7, n=1). Although C/P ratios were highly variable, some cathinones appeared to have significant potential for redistribution. Generally, the highest C/P ratios were observed in methyenedioxy-type cathinones bearing secondary amines. Although the pyrrolidine-type cathinones are less polar and subsequently more lipophilic, they are less basic than their secondary amine counterparts. Vitreous humor was only available in a small number of cases, but concentrations in vitreous were comparable to peripheral blood within this limited population. Although the concentration range of forensic interest was wide, the results also highlight the need for low limits of detection and quantification.

Tissue distributions and C/P ratios are presented and compared with existing literature. Variability of C/P ratios and the potential for cathinones to degrade in-situ and during storage, significantly complicates their interpretation. Of the 60 cases submitted, 50 cases had at least one specimen test positive for a synthetic cathinone. The results highlight the potential for some cathinones to exhibit PMR, the importance of collecting multiple specimens, and the interpretation of results within the full context of investigative information.

Inhalants/Volatiles and their Effects on Human Behavior and Performance

Renee Hawkins, D-ABFT-FT
Texas DPS Crime Laboratory, Austin, TX

Many volatiles are detected and reported in routine alcohol analysis. This presentation discusses what those volatiles are, where they may have come from, and what possible effects they may create in the subject. Case examples that occurred in the state of Texas will also be presented.

Lauren Marshall
Denton County Criminal District Attorney's Office

RELEVANT EXPERIENCE
Denton County Criminal District Attorney's Office, *Denton, Texas*
Felony Prosecutor—I have tried over 100 cases, including Intoxication Assault and Intoxication Manslaughter, to a jury and/or judge; reviewed both felony and misdemeanor intoxication and drug crimes for filing and presentation to the Grand Jury; reviewed thousands of misdemeanor and felony intoxication cases for plea negotiation and case evaluation purposes.
September 2010—Present
Brazos County Attorney's Office, *Bryan, Texas*
Family Violence and Mental Health Prosecutor
September 2009—May 2010
EDUCATION
Baylor University School of Law, *Waco, Texas*
Juris Doctor, August 2008
Arkansas State University, *Jonesboro, Arkansas*
Bachelor of Arts Degree English, cum laude
Minor in Spanish and Management
May 2005
DWI/INTOXICATION OFFENSE TRAINING COURSES
Advanced DWI Investigation/Prosecution and Intoxication Manslaughter
Speaker/Presenter
Denton County, Texas
October 2013, February 2015, October 2017
DWI and the 4th Amendment
Speaker/Presenter University of North Texas Police Department
April 2013
Effective Courtroom Demeanor
Panel Member
Fondren Forensics
February 2013, April 2015
Intoxication Manslaughter
Attendee
Texas District & County Attorney's Association