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SOFT 2014 GRAND RAPIDS UPDATE

Submitted by hosts Ben Kuslikis and Michael Smith

As hosts for the SOFT 2014 scientific meeting we would like to encourage everyone interested in science to attend our GRAND forensic toxicology event. This year's meeting will be held in Grand Rapids, Michigan from October 20th, through the 24th. With only four months until the conference, it is important to make note of certain important deadlines: **The meeting registration deadline is September 1, 2014.** All registrations received after this date will be subject to an additional \$150 late fee.

To register for the conference, begin at the online Web Login tab. The registration fee is \$349 for SOFT members and \$499 for non-members. The student rate is \$149. Non-Members must create an account, save, and then re-enter to follow the registration prompts. In addition to accompanying person registrations, additional tickets for the Welcome Reception, the Museum Event, and the Presidential Banquet can all be purchased separately, or a complete registration can be purchased for \$299 that will include **all** event tickets and privileges. The registration fee for children under the age of 2 years will be waived. A Registration Worksheet is available for download at the website for planning use and includes a summary description of

the 13 workshops offered. For registration support, please call the SOFT Office 888-866-7638.

Also, please **reserve your hotel room early.** Find hotel information and online registration, again on the SOFT web-site - under Annual Meeting - then click on the Hotel tab. Reservations can also be made by phone. The dedicated phone reservation line is (800) 253-3590. Email or call the SOFT Office for Hotel or Registration assistance (bonnie_soft@yahoo.com / 888-866-7638). (Continued on p. 3)



INSIDE THIS ISSUE:

President's Message	2
2014 SOFT Meeting News	3-13
New Drugs	14-16
Technical Articles	16-18
From the Tox. Literature	19
With Regrets	19



PRESIDENT'S MESSAGE

Submitted by Peter Stout, Ph.D., DABFT

Welcome to spring (OK nearly summer)! Hopefully, the tumultuous weather in parts of the country have not impacted too many.

The past few months have seen significant activity for the board and for SOFT.

First we are pleased to announce that for the SOFT 2019 meeting in San Antonio, Texas, **Veronica Hargrove** and **Brad Hall** will be our hosts. Thank you for your willingness to serve SOFT in this important capacity. Please consider what you can do to help support them for the 2019 meeting.

There has been considerable activity surrounding the forensically related bills in the US Senate. The bill offered by Sen. Rockefeller (S. 2022) in the Senate Committee on Commerce, Science and Transportation was introduced in February and reported out of committee in April. The bill offered by Sen. Leahy with co-sponsor Sen. Cornyn (S. 2177) was introduced in March. S. 2177, with some revisions, is the same bill that has been in consideration in past congresses.

SOFT and ABFT provided letters to several Senators supporting the efforts of both bills. These letters can be found on the website [http://www.soft-tox.org/files/SOFT_Rockefeller_Letter.pdf http://www.soft-tox.org/files/SOFT_Leahy_Cornyn_Letter.pdf]. Particularly, we offered support for efforts in accreditation and certification along with

the joint efforts of the US Department of Justice and the National Institute on Standards and Technology (NIST) in forming the National Forensic Science Commission and the Organization of Scientific Area Committees.

SOFT and ABFT have also been following the status of funding of the Coverdell funding program. Coverdell money has been an ongoing Federal support effort for publically funded forensic institutions and is particularly important to Medical Examiner and Coroner offices. There have been significant threats of this program not being funded. We will continue to watch this and provide comment as we are able.

The National Forensic Science Commission had its second meeting earlier in May. I attended this meeting representing SOFT and by way of our joint membership in the Consortium of Forensic Science Organizations, ABFT. There was considerable discussion of issues of accreditation, certification and training for forensic practitioners. A lot of the discussion also centered on "human factors" and issues of cognitive bias.

The parallel structure and effort of the Organization of Scientific Area Committees has also progressed. NIST solicited applications for participants. There were more than 50 applications from SOFT members to participate. There will likely be additional opportunities in the future so keep an eye out. SOFT also provided several nominees for partici-

pation at the Forensic Science Standards Board (FSSB) that has oversight functions of the Scientific Area Committees.

So there has been a lot of activity moving toward standards and legislation possibilities. This is occurring in an environment of continued press scrutiny of forensic sciences. It is important for all of us to stay aware of issues and also help others in our organizations understand why it is so important for quality programs, standard procedures and current and continued training be a constant part of the work product. Please, stay informed and stay involved!

The October meeting approaches and the planning committee has been hard at work assembling and organizing another marvelous meeting. Please take a few moments to consider your plans for attending and think about registrations and reservations.

I look forward to seeing everyone in Grand Rapids, MI.



SOFT 2014 Grand Rapids Update *(Continued)*

This year's **meeting hotel is the Amway Grand Plaza**. The hotel is situated next to the DeVos convention center for convenient access to meeting rooms and exhibitors booths. The resort is located within walking distance of many museums, restaurants, charming boutiques and art galleries. The accommodations at the Amway Grand Plaza come complete with the following amenities: the "Grand Bed" with pillow top mattress, down pillows, and plush sheets, luxurious bath products, complimentary high speed wireless Internet access, 42-inch high definition televisions, iron and ironing board, make-up mirror, hair dryer, and Ethernet cable. The room rate is \$144 per night (single and double).

This year's **workshop schedule** includes three full-day workshops and nine half-day workshops all taking place on Monday and Tuesday. In addition, there will be over 150 abstracts presented during the **Scientific Sessions** starting Wednesday morning. The deadline for submissions of Scientific Abstracts is now closed. Submitted abstracts are currently in the "review process" and authors should expect to hear from the Scientific Committee before the end of June.

This will be an exciting meeting for the **Young Forensic Toxicologists (YFT)**, with many planned activities. The YFT kicks off the week on Sunday evening with the **Young Forensic Toxicologists Symposium**. The symposium will include a social hour with hors d'oeuvres and an opportunity to network, followed by research updates from the 2013 YFT awards

winners, a keynote speaker and opportunities to ask questions of fellow toxicologists. The YFT slate continues on Monday with the **Student Enrichment Program (SEP)**. The SEP is a daylong workshop targeting undergraduate and graduate students who are interested in forensic toxicology. The students will learn about the field, and the knowledge and skills necessary to find success. The program is free, but space is limited. Interested students must apply BEFORE September 5, 2014. The YFT will also be hosting a **Professional Development Fair** on Tuesday evening, coinciding with the **Welcome Reception**. This event is open to all ages and career stages. Organizations offering professional development opportunities are encouraged to reserve a booth at no cost. Last but not least, qualifying posters presented Wednesday through Friday will be eligible for the **Leo Dal Corvivo Award**. The award is a \$1000 cash prize in addition to free registration at a future SOFT meeting. Further details and **eligibility information** for all YFT activities can be found on [page 6](#) or contact the YFT committee at softyft@gmail.com or SOFT Office at 888-866-7638.

Once again, this year's meeting promises to be very enjoyable. More than 80 pubs and restaurants are within walking distance of the meeting hotel, and the Gerald R. Ford Presidential Museum, the Van Andel Museum and the Frederik Meijer Garden and Sculptor Park are nearby attractions for your free time exploration. Planned evening events include the Welcome Reception, President's Banquet and Museum Event.

The Wednesday "special evening event" is an adventure at the **Grand Rapids Public Museum**. The entire facility has been reserved exclusively for our group. All 3 floors are "ours" to enjoy and explore. The museum is located an easy walk (one block) away. A live band will entertain, food & beverage will be aplenty, and a newly opened "Pirate Exhibit" is a **MUST SEE!**

Meeting attendees may consider arriving a few days early or stay a few days after the meeting to enjoy other points of interest in the West Michigan Area. World class guided fly fishing is available just an hour or two north of Grand Rapids. Also, autumn color tours are very popular along the Lake Michigan coast during this time of year.

The **Exhibit Hall** will host the Welcome Reception Tuesday evening and also be open for sharing Wednesday and Thursday. Exhibitors and sponsors continue to make our meeting a success, year after year. Their support provides SOFT members remarkable opportunities for networking and to learn about emerging developments in forensic toxicology. Please let all of our sponsors and exhibitors know you appreciate their support.

It is certain that the SOFT 2014 Annual Meeting will be a valuable educational and memorable social experience for all. Please plan on joining your friends and colleagues this fall in Grand Rapids, aglow in autumn splendor.

FAA's First Postmortem Aviation Toxicology Colloquium Held

Submitted by Phil Kemp, Ph.D.

The Federal Aviation Administration's (FAA's) Civil Aerospace Medical Institute (CAMI) held its first three-day (April 1-3, 2014) colloquium on Postmortem Forensic Toxicology in Aviation. Those attending were aerospace medicine scientists, accident investigators, educators, medical examiners, forensic toxicologists, and students. Included were representatives from the Department of Justice, National Aeronautics and Space Administration, National Transportation Safety Board, CAMI, and the private sector. Geographically, they came from Brazil, Canada, Spain, Turkey, and a cross-section of America.

Topics

Topics covered included sample processing; importance of chain of custody; analyses of samples for combustion gases, ethanol, and drugs; analytical results interpretation; significance of quality control/quality assurance; new exponential technologies in forensics; and litigation and expert testimony issues. Two panel discussion sessions highlighted the conference's important focal points, which were on "Interpretation of Analytical Results and Interesting Cases" and "Litigation and Expert Court Testimony." In these sessions, the participants actively shared their deep interests and expertise in these highly technical subjects.

The contact person for this colloquium was **Arvind K. Chaturvedi**, PhD, Biochemistry Research Team Coordinator in CAMI's Aerospace Medical Research Division.

Next Time: CME Planned

The Civil Aerospace Medical Institute plans to host a similar colloquium in 2017 and will offer Continuing Medical Education credit through its Aerospace Medical Education Division.

CAMI is located at the Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma.

American Academy of Forensic Sciences Meeting Preparations Underway

Submitted by Dwain Fuller – Toxicology Section Chair

The upcoming AAFS annual meeting will take place **February 16-21, 2015 in Orlando Florida**. There is no doubt that this meeting will be a great success, not to mention a lot of fun. Mark your calendars now and if you have not already begun to work on your abstracts, workshop proposals or other submissions – now is the time to do so. **The deadline to submit proposals is fast approaching – August 1, 2014.**

The 2015 Program Chairs **Becky Jufer** and **Dan Anderson** are eager to assemble a spectacular scientific program, but they can only do this with your help. Abstracts for all papers, posters and special sessions must be submitted online. Don't leave this until the last minute and please remember that the deadline is strictly enforced. If you have ideas or suggestions for workshops, topics you'd like to see covered or gen-

eral suggestions for the program in Orlando, please let the Program Chairs know. You can reach them by email at:

rphipps@phipps.ws and **DAnder-son@coroner.lacounty.gov**.

If you are planning to submit a workshop proposal, please contact Becky Jufer and Dan Anderson as soon as possible. These proposals take some time to put together and they can guide you through the process so that things run smoothly.

Please also remember that nominations for **section awards are due August 1**. These awards are a great way to recognize outstanding members of the forensic toxicology community for their contributions as new investigators, practitioners, analytical achievements or career-long service. Contact **John Wyman, Chair of the Awards and Scholarship Committee** at

jfwyman@cuyahogacounty.us to nominate a deserving member.

Finally, I would be remiss as Section Chair if I did not address membership. As of May 2014 the Toxicology Section membership stands at 520. Please encourage your co-workers and especially new employees, colleagues and students to apply for student, trainee affiliate or associate membership before the **October 1 deadline**. Requests to upgrade membership must also be received by this date. Please don't forget that service to the organization is a consideration for promotion. If you would like to volunteer for activities or become more involved with the 2015 meeting, now is your chance to let one of the Section Officers or Program Chairs know.

Mark your calendars and we look forward to seeing you in Orlando!

Congratulations 2014 ERA / YSMA Awardees

The SOFT Award Committee, Chaired by Erin Spargo, has announced the following ERA (Educational Research Award) and YSMA (Young Scientist Meeting Award) winners for 2014. These five Awardees (listed below) will present their research during one of the Scientific Sessions at the October annual meeting in Grand Rapids, MI.

The ERA was established in 1980 to encourage academic training and research in areas of forensic toxicology. The YSMA was established in 2003 to recognize bench level scientists. Both awards allow for a complimentary registration to the annual meeting, PLUS a financial stipend of \$2,000 each. These five awardees will each be presented with an honorary plaque during the annual SOFT Business Meeting on October 23, 2014.

The SOFT website (www.soft-tox.org) has a link for eligibility and application information. ALL SOFT MEMBERS are urged to “encourage” co-workers, interns, or students to apply for these prestigious recognition awards.

Committee Chair, Erin Spargo sends a special “welcome” to the newest member of the committee, Jessica Smith. Other current members of this Awards Committee are Matt Lambing, Don Kippenberger, Michele Merves, and the 2014 Scientific Program Chairs, Michele Glinn and Laureen Marinetti. A special “thank you” is also sent to exiting long time committee members Phil Kemp, Vina Spiehler, and Tom Kupiec, who have served on this committee since 2003.

2014 ERA Winner

Marisol Castaneto

Mentor: Dr. Marilyn Huestis

Affiliation: National Institute on Drug Abuse

Research Title: Urinary Markers for AB-FUBINACA Intake Determined by Human Hepatocytes Incubation and High-Resolution Mass Spectrometry



2014 ERA Winner

Sara Dempsey

Mentor: Dr. Alphonse Poklis

University: Virginia Commonwealth University

Research Title: The Identification of Primary Metabolites of the Designer Hallucinogen 25I-NBOMe (4-Iodo-2,5-Dimethoxy-N-(2-Methoxybenzyl)-Phenylethylamine)



2014 ERA Winner

Kayla Ellefsen

Mentor: Dr. Marilyn Huestis

Affiliation: National Institute on Drug Abuse

Research Title: Quantification of Cocaine and Metabolites in Exhaled Breath by Liquid Chromatography High Resolution Mass Spectrometry Following Controlled Administration of Intravenous Cocaine



2014 ERA Winner

Eva Reichardt

Mentor: Dr. M. David Osselton

University: Bournemouth University

Research Title: Application of an Immunohistochemical Staining Method to Detect and Visualise the Presence of Opiates in Mice Following Peritoneal Injection of Morphine



2014 YSMA Winner

Fenyun Liu

Supervisor: Dr. David Moody

Company: Center for Human Toxicology

Research Title: In Vitro Reversible Inhibition of Oxycodone Cytochrome P450-Dependent Metabolism by Azole Antifungal Agents



About the Young Forensic Toxicologists Committee

Submitted by Jayne Thatcher, Ph.D.

The YFT Committee was founded in 2009 to promote education, networking and interaction among young forensic toxicology practitioners. The YFT Committee will host four activities at the SOFT 2014 annual meeting in Grand Rapids, Michigan (October 19-24, 2014).

The Young Forensic Toxicologists (YFT) Symposium, Sunday Evening (October 19) 5pm – 9pm.

The YFT Symposium begins with a social hour where hors d'oeuvres will be served and networking will be encouraged. Next in the agenda are research updates from winners of the 2013 YFT awards and a keynote speaker (TBD). Following the presentations the floor will be open to the audience for a friendly discussion of professional experiences and an opportunity to ask questions of fellow toxicologists.

We invite all young forensic toxicologists to participate and extend a special welcome to those who may be attending their first SOFT meeting. The YFT Symposium is free to those pre-registering to attend this event during their meeting registration on-line. All attendees to the YFT Symposium must be 41 years of age or under.

Questions or comments regarding the SOFT YFT Symposium can be emailed to softyft@gmail.com or by visiting our Facebook page.

The Student Enrichment Program (SEP), Monday (October 20) 8am – 5pm.

The YFT Committee hosts a day

long Student Enrichment Program (SEP) targeting undergraduates and graduate students interested in forensic toxicology. Students will learn about various disciplines within forensic toxicology and what knowledge and skills are necessary for this career path from practicing forensic toxicologists. The program is free of charge, but space is limited. Interested students must apply BEFORE September 5, 2014. Download application at http://www.soft-tox.org/files/SEP/SEP_Application_%282014%29.pdf. Applicants will be notified of acceptance by September 19, 2014.

Questions or comments regarding the SOFT SEP program can be emailed to softyft@gmail.com or by visiting our Facebook page.

Second Annual Professional Development Fair, Tuesday (October 21) 6:30pm-8pm in Exhibit Hall during the Welcome Reception.

This 28 booth gathering will have representatives of various accreditation and certifying agencies, graduate programs and laboratories providing information about:

- Board Certification
- Continuing Education
- Professional Training
- Academic Programs
- Advanced Degree Programs
- Career Opportunities

All meeting attendees are encouraged to attend the Professional Development Fair to learn more about the professional development opportunities available to forensic

toxicologists. Organizations representing programs offering professional development opportunities may reserve a “no cost” booth for this one night fair by contacting the YFT Committee (softyft@gmail.com) or calling the SOFT Office at 480-839-9106.

The Leo Dal Cortivo Award, Wednesday thru Friday (October 22-24).

The Leo Dal Cortivo Memorial Fund allows the YFT committee to present two awards, each with a cash prize of \$1000 in addition to free registration at a future SOFT meeting. One award will be presented to the best poster presentation and the other for the best oral presentation. To be considered for these awards, the presenting author should mark the box on the abstract submission form that they are eligible for the YFT Award. The eligible abstracts with the highest scores, as determined by the YFT committee, will be chosen as candidates for the awards. Questions regarding the award completion should be directed to softyft@gmail.com. For additional information on Dr. Leo Dal Cortivo, please visit the following website created and updated by his nephew Vincent Fusaro (<http://www.leodalcortivo.com>).



2014 SOFT STUDENT ENRICHMENT PROGRAM

at the 44th Annual Meeting of the
Society of Forensic Toxicologists (SOFT)

Monday, October 20th 2014 from 8am-5pm
Amway Grand Plaza Hotel

87 Monroe Avenue North West, Grand Rapids, Michigan

Learn about a Career as a Forensic Toxicologist

Forensic toxicology applies the principles of analytical chemistry, pharmacology and toxicology to determine the presence of drugs in biological samples and interpret analytical findings within the context of a legal investigation. Applications of forensic toxicology include (but are not limited to):

Medicolegal Death Investigation

Workplace Drug Testing

Drug Facilitated Crimes

Driving Under the Influence of Alcohol or Drugs

Sports Doping

Student Enrichment Program (SEP)

Undergraduate and graduate students interested in forensic toxicology are invited to participate in a one-day educational outreach program as part of the 2014 Annual Society of Forensic Toxicologists (SOFT) Meeting. The SEP will take place on Monday, October 20th 2014 from 8am-5pm at the Amway Grand Plaza Hotel in Grand Rapids, Michigan. Students will learn about various disciplines within forensic toxicology and what knowledge and skills are necessary for this exciting career path from practicing forensic toxicologists.

To sign up, please fill out an application. If more individuals sign up that can be accommodated, SEP participants will be selected on the basis of the application.

Application Process

Students interested in forensic toxicology should apply. The SEP, including continental breakfast and lunch, are provided to accepted applicants at no cost; however, students are responsible for their own transportation and lodging, if needed. Interested students should download an Application Form from the 2014 SOFT meeting website <http://www.soft-tox.org> (under the Young Forensic Toxicologists link on the main menu).

The completed application, including a one-page interest statement, is due by 5 September 2014.

Applicants will be notified of acceptance by 19 September 2014.

For questions or additional information, visit the SOFT website <http://www.soft-tox.org> (under the Young Forensic Toxicologists link on the main menu), check out our Facebook page, www.facebook.com/SOFTYFT, or contact us at softyft@gmail.com.

Quick Facts

Student Enrichment Program

Monday, October 20th 2014 8am-5pm

Amway Grand Plaza Hotel, Grand Rapids, Michigan

Continental breakfast and lunch provided

Applications due by 5 September 2014

<http://www.soft-tox.org> (Young Forensic Tox)

www.facebook.com/SOFTYFT

softyft@gmail.com



2014 SOFT STUDENT ENRICHMENT PROGRAM

at the 44th Annual Meeting of the
Society of Forensic Toxicologists (SOFT)

Monday, October 20th 2014 from 8am-5pm
Amway Grand Plaza Hotel
87 Monroe Avenue North West, Grand Rapids, Michigan

APPLICATION

CONTACT INFORMATION

Name: _____
Last First MI

Mailing Address: _____

Email: _____ Phone: _____

EDUCATIONAL INFORMATION

Academic institution attended in the fall semester of 2014: _____

Academic status for fall 2014: Graduate Student Undergraduate Student

If undergraduate, provide class (freshman, sophomore, etc.): _____

PREVIOUS EXPERIENCE

In the space provided, describe your previous experience with forensic science or forensic toxicology.

(Note: Previous experience is **NOT** required.)

INTEREST STATEMENT

On a separate page, please describe your interests and goals relating to forensic toxicology and explain how attending this program will help you meet those goals. *Limit interest statements to one page or less.*



E-MAIL COMPLETED APPLICATIONS TO softyft@gmail.com

APPLICATIONS DUE 5 SEPTEMBER 2014

Accepted applicants will be notified by 19 September 2014



SOFT 2014 ANNUAL MEETING
Amway Grand Plaza (\$144 room rate)
Grand Rapids, MI, USA — October 20-24, 2014



REGISTRATION WORKSHEET

On-Line registration will be available on April 15, 2014

Go to www.SOFT-TOX.org TO REGISTER!

For registration assistance, call the SOFT Office, 1-888-866-7638

Name _____ Agency _____

Address _____

City _____ State _____ Zip _____ Country _____

Telephone _____ e-mail address _____

Fleece Jacket Size (Unisex Sizes S,M,L,XL,XXL) Special Dietary Needs? Yes /No Describe _____

Accompanying Person(s) _____

Fleece Jacket Size (Unisex Sizes S,M,L,XL,XXL) Special Dietary Needs? Yes /No Describe _____

I plan to attend the (free) Sunday Young Forensic Toxicologists Forum (5pm-9pm). Yes / No. Attendees must be 40 yrs of age or younger.

REGISTRATION DATES TO NOTE:	FULL MEETING REGISTRATION INCLUDES:	SOFT Mem	Accomp. Person	Non-Mem	Univ. Student	Daily W, Th or F
Apr. 15-Aug. 31	Full Meeting - Includes: ▶ Welcome Reception Tues. Eve ▶ Entrance to Scientific Sessions (W, Th, F) ▶ W, Th, F Breakfasts, Lunches, Refresh Breaks ▶ Tues. Eve "Welcome Reception" ▶ Wed. Eve "Museum Event" ▶ Thurs. Eve "President's Banquet" ▶ SOFT 2014 Meeting Program/Abstract Book ▶ SOFT 2014 Conference Bag / Fleece Jacket	\$349	\$299 Family Member 17+ & younger pay \$149 Includes: Wed. Museum Thurs. Banquet Tickets	\$499	\$149 Picture ID from Univ. Req'd.	\$149 Does NOT Incl. Special Events Tickets
Sep. 1-30	LATE REGISTRATION ----- Added to Reg. Fee	\$150	n/a	\$150	\$150	n/a
After Oct. 1	ON-SITE REGISTRATION ----- Added to Reg. Fee	\$250	n/a	\$250	\$250	n/a
Ind. Event Ticket	▶ Wed. Museum Event. \$110 - <u>Call for assistance</u> Extra Tickets may NOT be available on site.	Incl.	Included	Incl.	Incl.	\$110
Ind. Event Ticket	▶ Thurs. Pres. Banquet \$130 - <u>Call for assistance</u>	Incl.	Included	Incl.	Incl.	\$130
Ind. Event Ticket	▶ Tues. Welcome Reception \$100 - <u>Call for assistance</u>	Incl.	Included	Incl.	Incl.	\$100

WS#	Schedule	Workshop Titles (all workshops provide C.E. credits from the AACC)	Mem / Student	Non-Mem Cost	Late Fee After 9/30
WS#1	Mon Full-Day 8am-5:30pm	Get Excited About Stimulants (SOFT Continuing Education Committee)	\$200	\$250	\$25
WS#2	Mon Full-Day 8am-5:30pm	Oral Fluid Testing: Basic Science and Practical Applications	\$200	\$250	\$25
WS#3	Mon Half-Day 8am-noon	Implementing the DUID Laboratory Recommendations (SOFT/AAFS Drugs and Driving Committee)	\$125	\$175	\$25
WS#4	Mon Half-Day 8am-noon	Laboratory Accreditation: A Look at Accrediting Bodies and the Top 10 Assessment Findings	\$125	\$175	\$25
WS#5	Mon Half-Day 1:30pm-5:30pm	A Practical Approach to Calculating and Reducing Uncertainty of Measurement in the Laboratory (SOFT YFT Committee)	\$125	\$175	\$25
WS#6	Mon Half-Day 1:30pm-5:30pm	Research Collaborations: Getting the Most Out of the Academic-Practitioner Relationship and Playing Well in the Sandbox	\$125	\$175	\$25
WS#7	Tue Full-Day 8am-5:30pm	The Drug Recognition Expert (DRE) Program with Demonstration DRE Evaluation and Mock Court	\$200	\$250	\$25
WS#8	Tue Half-Day 8am-noon	LC for the Forensic Toxicologist: Answers to 101 Questions You Were Afraid to Ask	\$125	\$175	\$25

WS#9	Tue <u>Half-Day</u> 8am-noon	A Pharmacogenomics Primer with Applications to Forensic Toxicology	\$125	\$175	\$25
WS#10	Tue <u>Half-Day</u> 8am-noon	Basic Excel Spreadsheet Design (CLASS SIZE LIMITED to 50.)	\$125	\$175	\$25
WS#11	Tue <u>Half-Day</u> 1:30pm-5:30pm	Advanced Applications of Excel (CLASS SIZE LIMITED to 50.)	\$125	\$175	\$25
WS#12	Tue <u>Half-Day</u> 1:30pm-5:30pm	Rapid Urine Drug Testing by Mass Spectrometry	\$125	\$175	\$25
WS#13	Tue <u>Half-Day</u> 1:30pm-5:30pm	Synthetic Cannabinoids - Evolution 2014 (SOFT Designer Drugs Committee)	\$125	\$175	\$25

YOU MUST WEAR YOUR NAME BADGE DURING ALL MEETING FUNCTIONS

IMPORTANT REFUND POLICY: Refunds for a complete registration will be honored if written request is received prior to 8-31-14 minus a \$100 USD administrative fee. No refunds offered after 9-1-14.

REGISTRATION DESK will be open Sunday - Thursday. Delegates are advised to pick-up badge and materials upon arrival.



SOFT 2014
Workshop Summaries
Workshops October 20 and 21, 2014



FOR MORE INFORMATION CONTACT: Workshop Coordinators: Denice Teem (denice.teem@nmslabs.com) and Erin Spargo (erin.spargo@dallascounty.org)

#	Title	Abstract	Co-Chairs	Date
1	Get Excited About Stimulants (SOFT Continuing Education Committee Workshop)	This Continuing Education Committee sponsored workshop will provide a review of the pharmacology, toxicology, impairing effects, and analytical techniques applicable to stimulant drugs. Topics covered will include methamphetamine, amphetamine, cocaine, ADHD drugs, high caffeine drinks, liquid nicotine, and an introduction to designer stimulants. Toxicologists with several years' experience are the target audience, but more experienced toxicologists looking for a review of stimulant drugs may also find this workshop helpful.	Jennifer M. Colby, Ph.D. Ann Marie Gordon, M.S.	Monday Full Day
2	Oral Fluid Testing: Basic Science and Practical Applications	This workshop will provide an overview of oral fluid testing, including relative disposition of drugs compared to other specimen types, sampling considerations, and analytical methodology including on-site and laboratory testing procedures. The application of oral fluid testing to various modalities will be reviewed. These will encompass workplace testing, including updates to the HHS Federal Regulations and scope of nonfederal testing; forensics, including DUID and the European experience; sports, including disposition of performance-enhancing drugs in oral fluid and the current state of use; and pain management, including analytical and interpretive considerations.	Yale Caplan, Ph.D., D-ABFT Anne DePriest, Pharm.D., BCPS	Monday Full Day
3	Implementing the DUID Laboratory Recommendations (SOFT/AAFS Drugs and Driving Committee Workshop)	Drug impaired driving is a significant traffic safety problem in the United States and around the world. Forensic toxicology laboratories involved in this type of casework have a wide variety of capabilities and resources, and operate under varying local policies, resulting in large variations in the types of drugs being tested for and the sensitivity of the testing employed. This creates inconsistencies and confusion within the criminal justice system while also preventing the collection of accurate and reliable epidemiological data. A consistent approach to the testing of the specimens in DUID investigations will represent a significant advancement in the effort to reduce drug impaired driving and improve public safety. This SOFT/AAFS Drugs & Driving Committee sponsored workshop will present the consensus recommendations developed to provide forensic toxicology laboratories with guidelines for a minimum standard for the analysis of drug impaired driving casework. The hurdles to implementing these recommendations will be discussed with solutions provided. Workflows and analytical methods to meet the scope and sensitivity will be presented. Grant opportunities will also be discussed.	Jennifer F. Limoges, M.S. Amy K. Miles, B.S.	Monday Morning

#	Title	Abstract	Co-Chairs	Date
4	Laboratory Accreditation: A Look at Accrediting Bodies and the Top 10 Assessment Findings	Currently there are approximately 370 laboratories performing forensic toxicology casework, of which just over 50% are accredited. Speakers from recognized and respected accrediting bodies serving forensic toxicology laboratories will present information on their organizations, the scope of their accreditation, and the most common findings of non-conformance. This workshop gives attendees from unaccredited and accredited laboratories the opportunity to learn more about these organizations, some common non-conformances, and the accreditation process.	Sabra R. Botch-Jones, M.S., M.A. Robert D. Johnson, Ph.D.	Monday Morning
5	A Practical Approach to Calculating and Reducing Uncertainty of Measurement in the Laboratory (SOFT YFT Committee Workshop)	This half day workshop on uncertainty of measurement will allow participants to discuss the challenges laboratories encountered and overcame while implementing uncertainty of measurement, develop an understanding of how to incorporate uncertainty of measurement into future validations studies, and identify possible ways to reduce uncertainty in their own laboratories. Specific examples will be presented that will apply to both single and multi-laboratory systems.	Jayne E. Thatcher, Ph.D. Rebecca L. Wagner, Ph.D.	Monday Afternoon
6	Research Collaborations: Getting the Most Out of the Academic-Practitioner Relationship and Playing Well in the Sandbox	The National Academy of Sciences Report "Strengthening Forensic Science in the United States: A Path Forward" recommends and Senator Patrick Leahy's bill "Criminal Justice and the Forensic Science Reform Act" promotes that foundational and innovative peer-reviewed scientific research is needed to strengthen the forensic sciences. The Technical Working Group for Education (TWGED) laid the foundation for the Forensic Science Education Programs Accreditation Commission (FEPAC) to maintain and enhance the quality of forensic science education, which describes that research "shall be conducted in an environment conducive to research and scholarly inquiry" which shall "contribute to the knowledge base of forensic science." To this end, collaborative relationships between academia and forensic science practitioners have been proven to be productive. The goal of this workshop is to encourage and promote partnerships between academia and forensic science practitioners. Faculty will discuss successful collaborative research partnerships, as well as strategies to overcome challenges and develop a consensus for expectations.	Michelle R. Peace, Ph.D. Melissa S. Kennedy, M.F.S.	Monday Afternoon
7	The Drug Recognition Expert (DRE) Program with Demonstration DRE Evaluation and Mock Court	The Drug Evaluation and Classification (DEC) program began in the early 1970s in Los Angeles, California. Three decades later, all 50 states, plus the District of Columbia, are participating in the program. A drug recognition expert (DRE) is a police officer trained to recognize impairment in drivers under the influence of drugs other than, or in addition to, alcohol. A DRE is skilled in detecting and identifying persons under the influence of drugs and in identifying the category or categories of drugs causing the impairment by performing a detailed, 12-step diagnostic examination. DREs classify drugs in one of seven categories: Central Nervous System (CNS) Depressants, CNS Stimulants, Hallucinogens, Dissociative Anesthetics, Narcotic Analgesics, Inhalants, and Cannabis. This workshop will demonstrate the role of a toxicologist, traffic safety resource prosecutor, and DRE in Driving Under the Influence of Drug (DUID) cases. The simulated DRE evaluation will give the audience a unique opportunity to view the 12-step diagnostic examination firsthand. The mock court session will highlight the symbiotic relationship between DRE officers and toxicologists by showing how both can add value to a DUID case.	Curt E. Harper, Ph.D. Amy K. Miles, B.S.	Tuesday Full Day
8	LC for the Forensic Toxicologist-Answers to 101 Questions you were Afraid to Ask	The emergence and affordability of hyphenated LC techniques over the past decade has meant that liquid chromatography has enjoyed a resurgence in use. However, many practitioners are not as familiar with the fundamentals of LC in terms of basic separation science, optimization and troubleshooting. The purpose of this workshop is to serve as a refresher for individuals using a wide variety of LC-MS platforms. Stationary phase selection, selectivity and analytical considerations will be reviewed for forensic toxicology applications. A review of the fundamentals of separation science and the importance of mobile phase composition, pH, additives and ionic strength will help forensic toxicologists develop more robust analytical procedures. The workshop will provide a comprehensive review of LC fundamentals from a practical perspective and improve optimization and troubleshooting in routine casework.	Sarah Kerrigan, Ph.D. John Hughes, Ph.D.	Tuesday Morning

#	Title	Abstract	Co-Chairs	Date
9	A Pharmacogenomics Primer with Applications to Forensic Toxicology	Pharmacogenomics deals with the relationship between an individual's genetic makeup and his/her response to a drug. The term can be extended to include the effects of genetic variation on the metabolic disposition (pharmacokinetics) and biological response (pharmacodynamics) of not only drugs but xenobiotics in general. This workshop is intended to give the participants a general overview of the factors that determine the metabolic disposition, and thus blood levels, of xenobiotics and describe how these factors are influenced by genetic variations (polymorphisms) in enzymes and transporters. Examples will be given of specific drugs where genetic polymorphisms are known to influence blood and tissue levels of the drug and/or its metabolites. Also, a brief discussion of what the future might hold for genetic testing and its potential impact on pharmacology and toxicology will be presented.	James G. Mitroka, Ph.D. Wagdy Wahba, R.Ph., Ph.D.	Tuesday Morning
10	Basic Excel Spreadsheet Design	This workshop is aimed at the user who is acquainted with Microsoft Office software and with general PC commands. The workshop course will provide hands on introduction and activities with basic Excel functions. The user will learn: How to setup Excel spreadsheets in a database format; Master the basic commands including: data entry, categories, sorting/filtering and formatting; Build calculation expressions using function commands; Execute pivot table analysis; Build graphical representations of data Participants need to bring a portable version of MS Excel 2007 or higher. (CLASS SIZE LIMITED TO 50!)	F. Leland McClure, Ph.D., D-ABFT Craig Sutherland, Ph.D.	Tuesday Morning
11	Advanced Applications of Excel	This workshop is intended for those who have taken the Basic Excel Spreadsheet Design workshop or are already very proficient in Microsoft Excel software and who desire to further their application of the software in a laboratory setting. The workshop will provide hands-on training for the following: How to identify data distributions and selecting the correct tool for statistical evaluation; Detect when transformation of data and advanced non-parametric analysis tools are needed; Differentiate between continuous and discrete data; Differentiate parametric from non-parametric data and select appropriate population parameter analysis tools; Paperless transitions – forms, tracking, protection; Control charts – importing/exporting data and charts, customization with control limits; Method validation – importing/exporting data, data streams within a spreadsheet, organization and presentation of resultant data; Curve-fitting – using Excel's built-in functions and adding custom ones as needed. Participants need to bring a portable version of MS Excel 2007 or higher. (CLASS SIZE LIMITED TO 50!)	Sue Pearing, B.S. Jessica L. Gadway, M.S.	Tuesday Afternoon
12	Rapid Urine Drug Testing by Mass Spectrometry	Rapid analysis methods are commercially available and being used in a number of laboratories. This workshop will illustrate the use of several of these technologies in the analysis of both drugs of abuse and pain medications. Qualitative screens as well as quantitative confirmation tests will be discussed. The impact of sample preparation (if any), concentration ranges, and the effect of the mass spectrometer (exact mass vs triple quad vs trap, etc) in enabling these "rapid" test methods will also be discussed.	Gregory L. McIntire, Ph.D. Frank N. Wallace, B.A.	Tuesday Afternoon
13	Synthetic Cannabinoids - Evolution 2014 (SOFT Designer Drugs Committee Workshop)	Synthetic cannabinoids have been around in the US recreational drug market since approximately 2009, but the actual compounds have seen a lot of turnover, with novel classes and compounds within classes appearing almost monthly. The focus in the first few years of this epidemic was on identifying the drugs in street drug material, followed by the introduction of esoteric toxicology tests, and understanding their metabolism. With that information now available to the forensic toxicology community, the focus of this workshop turns to more recent developments in implementing mass screening programs using available immunoassay and mass spectrometry technology. While the market is still in flux, and the analytical targets are changing, resources are available to speed the rate at which laboratories can upgrade their testing scope. The session then turns to what is being learned about the adverse effects of the drug, including presentation of symptoms and effects in chronic users from a physician/treatment provider perspective, and preliminary data on deaths and serious injuries resulting either from the toxic effects of the drugs or from high risk and violent behaviors while under their influence.	Barry K. Logan, Ph.D. Aaron J. Jacobs, Ph.D.	Tuesday Afternoon

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Note the long list of 67 companies that will join the SOFT 2014 Exhibitors at the Annual Meeting in October. They will be prepared to share the latest innovations and product advancements in laboratory instrumentation. Most of these exhibitors have partnered with SOFT for many consecutive years. The financial commitment from our exhibitors is essential in keeping meeting registration fees low for attendees.

Please acknowledge their collective generous contributions and extend your appreciation and business toward these indispensable associates. Those companies who have committed additional financial funding are showing in **BOLDED** print. Sponsorships provide for the social receptions, breakfasts, lunches, refreshments, and special events. THANK YOU ALL!

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Emerging Designer Drug Monograph: AH-7921

Submitted by Mikael Andersson and Robert Kronstrand

For more emerging drug monographs visit the SOFT web-site at:

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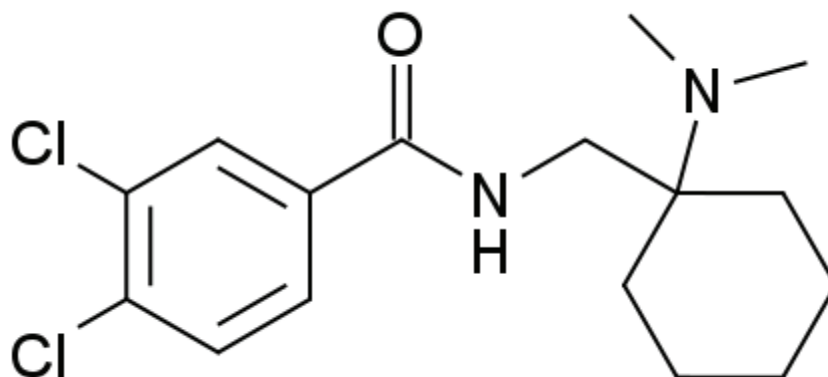
Revision Date: Feb, 2014

Authors: Mikael Andersson and Robert Kronstrand

Drug Name: AH-7921

Synonyms: Doxylam, 3,4-dichloro-N-[(1-dimethylamino)cyclohexylmethyl]benzamide

Structure:



Formula: C₁₆H₂₂Cl₂N₂O

Molecular weight: 329.3

Pharmacological Drug Class: Opioid analog

Metabolism: N-desmethyl and N-didesmethyl metabolites have been tentatively identified in forensic cases (no reference material available).

Dosage: 10-100 mg. Oral, nasal, sublingual and intravenous administration have been reported. (www.flashback.org)

Blood Concentrations: There are no published reports on blood concentrations. Below are data reported by the Swedish National Board of Forensic Medicine to EMCDDA in 2013.

Emerging Designer Drug Monograph: AH-7921 (Continued)

Case	Age Gender	COD	AH-7921 (µg/g)	Matrix	Other findings
1	27 M	Intoxication	0.81	Femoral blood	Gabapentin
2	26 M	Aspiration pneumonia	0.99	Femoral blood	Amphetamine, aripiprazole
3	45 M	Intoxication	0.20	Femoral blood	Alimemazine, tramadol, diazepam, codeine, acetaminophen, pyrazolam
4	26 M	Intoxication	0.30	Femoral blood	Hydroxyzine, acetaminophen, alprazolam, prometazine, zopiclone, pyrazolam
5	34 M	Undetermined	0.08	Femoral blood	N-ethyl norketamine
6	28 M	Intoxication	0.16	Femoral blood	Amphetamine
7	25 M	Intoxication	0.35	Femoral blood	3-methyl methcathinone
8	23 M	Intoxication	0.43	Femoral blood	Bupropion, mirtazapine, diazepam, pregabalin

Effects and Toxicity:

Duration: 4 hours, with a peak after 1.5 hours.

In animal experiments, minimum oral doses for complete pain suppression by AH-7921 were 1.25 mg/kg for canine and 13.8 mg/kg for Rhesus monkey (1). In *in vitro* binding studies in preparations from guinea pig brain, AH-7921 showed selectivity towards the μ -receptor ($K_D=10$ nM) over the κ -receptor ($K_D=150$ nM) (2).

AH-7921 acts as an agonist on the opioid μ -receptor and the potency was shown to be around 80 % of morphine (1). Another study in mice showed that AH-7921 produced antinociceptive effects, decreased respiratory rate and decreased pulse rate and also lowered the body temperature more efficiently than morphine at same dose (3). In addition, AH-7921 suppressed abstinence syndrome during morphine withdrawal (3). The antinociceptive effect of both morphine and AH-7921 was prolonged in mice when serotonin was administered by intracerebro ventricular injection whereas other analgesic drugs with different mechanisms interacted with serotonin differently (4).

Analysis:

There are no published reports on the analysis of AH-7921 in biological specimens. It has been quantified in post mortem blood using protein precipitation of 0.5 g blood with 1 mL of 0.075% formic acid in acetonitrile:ethanol (90:10) and subsequent analysis by LC-MS-MS (calibration range 0.01-1.0 µg/g blood).

AH-7921 has been detected in synthetic cannabinoids products in Japan using GC-MS and LC-MS (5).

Emerging Designer Drug Monograph: AH-7921 (Continued)

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TECHNICAL ARTICLES

On methods for the conversion of serum alcohol level to its whole blood equivalent: A brief look at the scientific literature and other materials.

Submitted by H. Horton McCurdy, Ph.D., DABFT

The forensic toxicologist is often called upon to make reasonable estimations as to what the so-called "legal" or whole blood alcohol concentration (BAC) would likely be based on the results of a serum alcohol concentration (SAC). Most hospital personnel who either order the alcohol test or the individual running the test understandably have little interest in the legal implications of the SAC test since their primary goal is how best to treat the patient. As a result, the hospital records will often have the written admonition that SAC results are not to be used in legal proceedings. This probably has more to do with hospital personnel desiring to stay out of court

than having to do with actual accuracy of the SAC test itself. Nevertheless, SAC test records are often used in a legal proceeding primarily because this is the only evidence that alcohol was in the person's system. Thus, a method for converting SAC to BAC can become critically important. Which method is considered best for this conversion, assuming there is a best method, is a continual source of debate between many forensic and/or clinical toxicologists. In addition, the number of experts who opine that conversion of a serum alcohol to its whole blood equivalent is highly speculative is perhaps equally balanced by those experts who would say that within certain

boundaries and limitations a reasonable estimate is possible.

Fortunately, for courts in the State of Georgia, the conversion of SAC to BAC has perhaps been made easier by a Georgia Court of Appeals decision (1). This case involved a vehicular homicide where a drunk driver struck another vehicle head-on that killed 3 of the 5 members of the family. The drunk driver's SAC was determined to be 158 mg/dL. A motion was filed *in limine* to exclude these results at trial. The defense's expert witness had testified that making any conversion of a SAC to a BAC could not be done with any degree of reliability and no equation could be

Serum Alcohol to Whole Blood Equivalent (Continued)

applied for the conversion of SAC to BAC with certainty. The Court of Appeals cited the Supreme Court decision that “made clear that the trial court need not exclude scientific evidence simply because it bears some possibility of error”. Further, the court disagreed that the conversion of SAC to BAC had not been established with verifiable certainty and held that the state’s expert who used a 1:1.20 conversion factor was prudently performed and therefore was admissible as evidence.

A survey of the relevant scientific literature reveals various methods for the conversion of SAC to BAC. Perhaps the best means of examining these methods is by using a real-world example. This involves a case in which a motorcyclist turned left in front of an oncoming vehicle and the collision resulted in the motorcyclist’s backseat passenger to incur traumatic head injuries. The motorcyclist’s blood sample was collected approximately 1 hour later for a SAC determination, which was determined to be 115 mg/dL. This eventually led to the question *was this SAC over the BAC legal limit of 0.08 g/dL*. This particular case also brought up the question as to alleged inaccuracies of SAC determinations performed by hospital laboratories using enzymatic methods of analysis rather than those that are gas chromatographic in nature. Unless proven otherwise, methods employed by hospital laboratories are generally regarded as being reasonably accurate.

In order to answer the question

does a 115 mg/dL SAC mean the individual is more likely than not over the legal limit for a BAC, a review of the relevant scientific literature revealed the following:

- * Method of Winek & Carfagna (2) indicates the conversion factor varies from 1:1.09 to 1:1.18. A 115 mg/dL SAC would thus equal a BAC of 0.097-0.105 g/dL.
- * First method of Rainey (3) that within 95% Confidence Limits (CL) (which is defined by Rainey as being “within a reasonable degree of medical/scientific certainty”), the ratio range should be 1:0.95 to 1:1.40 representing a BAC of 0.082 - 0.121 g/dL
- * Second method of Rainey (3) that is within 99% CL (stated by Rainey as being “beyond a reasonable doubt”) that the ratio range should be 1:0.90 – 1:1.49 or a BAC of 0.077 - 0.127 g/dL. Note: The extremes of ratios are presented by Rainey apparently for purposes of including wide analytical variability among a variety of laboratories and methods and not necessarily because these can be explained by any actual physiological means or process.
- * Method of Barnhill et al. (4) indicates that a SAC of at least 103 mg/dL corresponds to a BAC of at least 0.08 g/dL at 95% CL and a SAC of 107 mg/dL corresponds to a BAC of at least 0.08 g/dL at 99% CL.
- * In the method of Hodgson & Shajani (5) a SAC: BAC ratio of 1.11 was flatly stated, this giving

a BAC in this case of 0.104 g/dL.

- * Method of Hak, et al. (6) demonstrated a SAC to BAC ratio range of 1.10 – 1.25 with the resultant BAC equivalent of 0.092 – 0.105 g/dL
- * Method of Charlebois, Corbett and & Wigmore (7) reveals a SAC to BAC ratios of 1.04 - 1.26 which thus converts a 115 mg/dL SAC to BAC range of 0.091 – 0.110 g/dL.

A further search for methods for the conversion of SAC to BAC yielded a rather arcane formula (8), which was written as follows:

$$\frac{1}{1-HCT+\frac{70}{93}xHCT}$$

Where HCT is the hematocrit of the individual and 70 is the percent water in red blood cells and 93 is the percent water in serum or plasma (8). However, no actual derivation of this formula was given and appeared at first elusive as to its origin. On closer inspection, however, this formula is just the result of a simple ratio and proportion where:

$$\frac{\% H_2O \text{ Serum}}{\% H_2O \text{ in Patient Blood}} = \frac{SAC}{BAC}$$

Thus, the amount of water in serum (approximately 93%) is to the amount of water in whole blood (approximately equal to the HCT times 70% or the amount water in red blood cells) as the SAC is to the BAC.

Serum Alcohol to Whole Blood Equivalent (Continued)

Thus, the actual equation becomes:

$$\frac{93\%}{93\%(1-HCT)+(70\%)(HCT)} = \frac{SAC}{BAC}$$

Where the hematocrit and SAC are both known quantities and the BAC is the unknown.

From our real-world example of a 115 mg/dL SAC and the HCT equals 45.9%:

$$\frac{0.93}{0.93(1-0.459)+(70\%)(0.459)} = \frac{0.115}{BAC}$$

$$\frac{0.93}{0.93(0.824)} = \frac{0.115}{BAC}$$

$$BAC = \frac{0.115}{1.13} = 0.102 \text{ g / dL}$$

(1.13 = Serum/Whole Blood Ratio)

This formula, while seeming to yield reasonably valid results, remained unproven and its reliability unknown. However, applying the formula to the data of Winek & Carfagna (2) where 50 patients had simultaneous blood alcohol and serum alcohol determinations yielded some interesting results. This data from Winek & Carfagna also had some rather wide ranging HCT results from a low of 20% to a high of 55%. In using the above formula and comparing the calculated SAC to BAC vs the actual BAC in this data yielded a mean for the average percent error of less than 2% (1.88%). No single speci-

men had a margin of error greater than $\pm 10\%$ with the most extreme values being -7.5% to +4.6%. From the above equation, the 0.102 g/dL result with estimated $\pm 10\%$ variability, likely becomes a range of approximately 0.09 g/dL to 0.11 g/dL.

However, these calculations are at odds with Rainey (3) and, oddly enough, the Winek & Carfagna paper itself (2) from which the data and the resultant calculations were drawn. These authors claim poor correlation with the serum: whole-blood alcohol ratios and HCT, but neither had apparently used HCT in context of the above formula. Nevertheless, the 0.102 $\pm 10\%$ g/dL matches reasonably well with the values from the scientific literature above, provided we can exclude the physiological improbabilities, if not impossibilities, presented by ratios < 1.0 and > 1.3 .

Until such time that a conversion of SAC to BAC can ever become an integral part of the DUI laws (much like breath alcohol along with its inherent uncertainties), it would seem prudent to apply all available methods before arriving at a definitive answer. Fortunately, Georgia to some extent has the force of law on the side of the SAC to BAC conversion such that a 1:1.20 ratio for a 115 mg/dL Serum Alcohol would render a BAC equivalent of 0.092 g/dL, which is decidedly above the 0.08 g/dL legal limit.

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FROM THE TOXICOLOGY LITERATURE

Submitted by Barry Levine, Ph.D., DABFT

Toxicology Laboratory, Armed Forces Medical Examiner System

Office of the Chief Medical Examiner, Baltimore, MD

Journal of Forensic Sciences Vol 59, Jan 2014

Kerrigan et al published an LC/MS/MS method for the analysis of 15 designer stimulants in urine specimens. Drugs included were from the dimethoxyphenethylethamine (2C) series and the dimethoxyphenylpropanamine (DO) series. Solid phase extraction was used for specimen cleanup. The limit of quantitation was set at 1.0 ng/mL and the method was linear to 500 ng/mL.

Forensic Toxicology Vol 32, 2014

Zaitso et al reviewed the pharmacology and toxicology of α -pyrrolidinophenone derivatives, a class of designer cathinones.

Lung and Lemos reviewed 20 post-mortem cases involving fentanyl. The data indicated that a peripheral blood fentanyl concentration greater than 25 ng/mL was almost always associated with an intoxication involving fentanyl. A peripheral blood fentanyl concentration

greater than 10 ng/mL was suggestive of a death due to fentanyl intoxication. A fentanyl concentration less than 10 ng/mL indicates that fentanyl is less likely to account for death unless combined with other substances. They also observed that fentanyl-caused deaths from patches had higher postmortem blood concentrations than deaths due to other forms of fentanyl use.

Journal of Analytical Toxicology Vol 38 Jan-Feb 2014

Linnet and Johansen reviewed postmortem femoral blood risperidone (R) and 9-hydroxyrisperidone (HR) concentrations in 38 cases over an eight year period. In only one of these cases was R a contributing cause of death. In that case, the R and HR concentrations were 0.18 and 0.11 mg/kg, respectively. The blood ethanol concentration was 0.16 g/100g and the blood zopiclone concentration was 0.46 mg/kg. In 30 cases, R was considered an incidental finding; the median R and HR concentrations were 0.004 and 0.006 mg/kg,

respectively. In 12 non-fatal traffic cases, the median R and HR concentrations were 0.0035 and 0.006 mg/kg, respectively. The similarity in concentrations between the latter two groups suggests that risperidone may not be vulnerable to postmortem redistribution.

Jones and Holmgren compared blood concentrations of cocaine and benzoylecgonine (BE) between fatalities and impaired drivers. The median blood cocaine and BE concentrations in fatalities were 0.10 and 0.30 mg/L respectively. Only BE was present in about one-half of the fatal cases. In 25 intoxication deaths, the median cocaine concentration was 0.13 mg/L, which was not significantly different than the median of 0.09 mg/L in non-intoxication deaths. The median blood cocaine and BE concentrations in traffic cases were 0.06 and 0.20 mg/L, respectively. The data indicated an overlap between cocaine concentrations in intoxication deaths and non-intoxication deaths and DUID cases.

With Regrets

It has been learned that Joan Bidanset, devoted wife to Jesse Bidanset (one of our founding members of SOFT) passed away in her sleep May 29, 2014. Jesse and Joanie were "regulars" at the early SOFT meetings. She will be fondly remembered for her easy smile and friendliness to all. A card has been mailed from "the SOFT family", however friends may wish to extend additional comfort by writing to Dr. Jesse Bidanset at 165 Ridge Rd., Jupiter, FL 33477-9659.

Robert Eberhardt, also one of our founding members, recently lost his wonderful wife, Betty, of 58 years (and sole romantic interest of 65 years). Hopefully the sweet memories of many wonderful years together will bring comfort and fill the big void left in her absence. Friends may wish to send a note to Bob at 11385 W. Rawson Ave., Franklin, WI 53132.

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TOXTALK® Deadlines for Contributions:

February 1 for March Issue

May 1 for June Issue

August 1 for September Issue

November 1 for December Issue

Future S.O.F.T. Meeting Destinations:

- 2014:** Grand Rapids, MI.....Oct. 18-25th, 2014.....Ben Kuslikis/Michael Smith
- 2015:** Atlanta, GA.....Oct. 17-25th, 2015.....Robert Sears
- 2016:** Dallas, TX.....Oct. 15-23rd, 2016.....Chris Heartsill/Erin Spargo
- 2017:** Boca Raton, FL.....Sept. 10-15th, 2017.....Ruth Winecker/Dan Anderson
- 2018:** Minneapolis, MN.....Oct. 15-12th, 2018.....Loralie Langman
- 2019:** San Antonio, TX.....Oct. 11-18th, 2019.....Veronica Hargrove/Brad Hall

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