Society of Forensic Toxicologists, Inc.

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# TOXTALK





## WELCOME TO BOSTON!

## SOFT 2012
## JULY 1ST –6TH 2012

***Michael Wagner**, Ph.D., Meeting Host*
micawagn@iupui.edu

The SOFT 2012 Host Committee extends a warm welcome to all attending the Greater Boston area this July 1st – 6th. This unique scheduling celebrates science with Boston's spirit of independence. The 42nd Annual Meeting will be hosted in Marriott Copley Place located in the beautiful historic Back Bay area. Classic coastal summer weather will be the order of the day with average temperatures ranging between 65°F - 82°F. The city pulses with excitement and activity throughout the summer and this year will be especially energetic. During the week of June 30th – July 7th the city will be in celebration mode as two major events will be occurring during our conference week. As you may be aware, SOFT 2012's signature event is scheduled on July 4th. The Museum of Science has made their facility available to SOFT in this inaugural celebration of the 4th of July with front row fireworks viewing along the Charles River!

The Harbor Fest (www.bostonharborfest.com) is a preamble celebration beginning June 28th and ending on July 4th. This festival will provide free admission to over half of the 200 events scheduled that week, making it very accessible to attendees and their family members. On Saturday June 30th, the annual "Party on the Plaza" will feature dance music from the Disco Inferno. Anyone need a "Carwash"? There ain't no "Shame" in asking. Sunday July 1st will be the 31st Annual Chowderfest, that's "chowdah" for you New Englanders! The second major celebratory event occurring during our conference week will be Boston's Navy Week. This Bicentennial celebration is in honor of the War of 1812 with the USS Constitution as the featured attraction. Warships and military tall ships from Brazil, Columbia, Romania and the US will (Continued on next page)

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be part of a parade of ships (15-20) in the Boston Harbor (Saturday June 30th). On July 4th the Blue Angels as well as 50 other aircraft will conduct Air demonstrations over the harbor, the city and along the Charles River (estimated time 12:00pm to 1:15pm).

If touring the Boston area peaks your interest then you will find plenty of sites to see. One may wish to tour some of the world's leading educational institutions and medical facilities. MIT and Harvard campuses are just a short drive from the conference hotel, across the Charles River. Other highly regarded institutions are represented as well; Northeastern University, Tufts University and Boston College to name a few. Boston is referred to as a "city within a city" and these featured attractions support the title: Theater District, Boston Commons, Boston Public Gardens, Beacon Hill, Fleet center, Harvard Square, Copley Place Mall, Freedom Trail, Newbury Street (eclectic shops and restaurants), Charles Street Pubs and dining, Old Town Trolley Tours, Fenway park (home of the Boston Red Socks), Museum of Fine Arts, New England Aquarium and Museum of Science.

Boston's rich history is displayed in its architecture and its citizens. Historical landmarks like the "Old North Church" where Paul Revere took his signal and made the infamous midnight ride (forever known as Patriot's day – April 19th 1775); the Trinity Church with a congregational history dating back to 1733 and the reconstructed church that began in 1872; Faneuil Hall 1700 – 1743 the city's first central market and thriving tourist attraction today; the Old South Meeting House 1729 was the rally point before the Boston Tea Party and a commemoratory place for The Boston Massacre. It is the first U.S. building ever preserved for its historical and architectural importance; the Massachusetts State House and Beacon Hill undergoing massive land reclamations to prepare the site for this structure are but only a few must see structures. Boston is the home of our 2nd, 6th, 30th and 35th presidents John Adams, John Quincy Adams Calvin Coolidge and John F. Kennedy respectively. The John F. Kennedy Presidential Library and Museum are a must see (http://www.jfklibrary.org/).

Due to the Meeting Schedule the deadline for Submissions for the June Issue will be April 1, 2012

## HAVE YOU PAID YOUR ANNUAL DUES ?

The deadline date for the annual SOFT membership dues for 2012 was February 29. There are still many SOFT members with remaining unpaid dues. Those with unpaid dues or those who are unsure if their annual dues are paid should call the SOFT Office (toll free 888-866-7638) for a confirmation of how to proceed.

## PRESIDENT'S MESSAGE

*Submitted by **Marc LeBeau**, Ph.D., DABFT*

*Kindness is a language which the deaf can hear and the blind can see. – Mark Twain*

Kindness is found throughout the SOFT organization. We can see it when we interact with our colleagues at meetings, as we collaborate on projects or research together, when we call our SOFT friends for a quick chat, and when we send an email to the SOFT office for assistance with dues payments or meeting registration. Kindness is also present in spouses and significant others that become part of the SOFT family.

Earlier this year, we learned that one of the founding members of SOFT, Leo Dal Cortivo, had passed away. The news of the loss of Leo is accompanied with sadness. But losing one of our charter members, the sadness is accompanied with a sense of gratitude for his efforts to help start SOFT. As one of our "pioneers", Leo had the foresight and recognized the importance that this group would have on the field of forensic toxicology.

I first met Leo and his wife, Patty, about 10 years ago at a Welcoming Reception at a SOFT Annual Meeting. I remember being struck by his open, outgoing nature and how comfortable I felt in chatting with the two of them for the very first time.

Patty Dal Cortivo knows how much SOFT meant to Leo and how much Leo meant to SOFT. So she made a generous donation to the organization in Leo's memory. The donation was a very kind gesture. Patty's wishes are for the donation to be used to help young toxicologists. At the Board of Director's meeting in Atlanta last month, it was decided that the most appropriate use of the donation would be to fund awards for the Young Forensic Toxicologists (YFT) Committee.

While the YFT is one of our newest committees, it is also among the most active committees. It's goal is to encourage attendance by junior toxicologists at our annual meeting and making them feel comfortable among the more-established scientists. They achieve this goal by hosting a half-day series of lectures prior to the start of the annual meeting so that by the time the scientific program actually begins, these young toxicologists have already developed new friendships.

The new YFT awards will be named in honor of Leo Dal Cortivo and distributed at each year's annual SOFT meeting. They will be for the best poster presentation and best platform presentation by a young forensic toxicologist or student. Like the Education Research Award and Young Scientist Meeting Award, these awards will be based on the quality of the awardees' research. In contrast, however, their presentation skills will also be a factor in deciding the award winners. As such, the awards will be a contest occurring during the Annual Meeting with winners announced at the President's Banquet or a Closing Ceremony.

Award winners will be presented with a check for $1,000 and, to encourage their attendance at future meetings, each award winner will also receive a free registration for an upcoming annual meeting. The money for these awards will come from the newly established Leo Dal Cortivo Memorial Fund and the first of these awards will be presented at the 2012 SOFT Annual Meeting in Boston this July. It is the hope of both the SOFT Board of Directors and Patty Dal Cortivo that the use of the funds in this manner will ensure that Leo's legacy endures within SOFT for many years to come.

Other important items discussed at the recent Board of Directors meeting included the preparation of Committee Handbooks. These handbooks will provide the chairs and members straightforward, clear instructions as to the mission and operation of their committee. While a simple concept, the handbooks will help ensure continuity as committee memberships change. Of course, we all know that ethics is vital in our day-to-day work, so it is fitting that the first of the handbooks developed last year was for the Ethics Committee and it has already been distributed (Continued on next page)

## President's Message *(Continued)*

to this year's committee members. The Membership Committee has also produced it's handbook and the final draft of the ToxTalk Committee Handbook is under review. Using these three handbooks as examples, all committee chairs have been asked to prepare a draft handbook for their committee by the SOFT Meeting in July.

Speaking of ethics, I would also like to draw your attention to the SOFT *Code of Ethics* and the *Guiding Principles of Professional Responsibility,* following this message and on the SOFT website (**www.soft-tox.org**). These documents are very important to understand in our daily professional activities.

And finally, I would like to remind you of the great work that Michael Wagner and his team of volunteers are doing to prepare for the 2012 SOFT Annual Meeting. It is going to be a very special event, as we get the chance to celebrate the July 4th holiday in Boston with our SOFT family. The organizing team is working very hard to ensure that our families can join us at the meeting this year by providing specially-priced alternatives for family members. SOFT never stops being "kind", so I hope that you all can join us for a wonderful week in Boston!

***Marc LeBeau, Ph.D., DABFT***

***President***

## SOCIETY OF FORENSIC TOXICOLOGISTS (SOFT)

## *Code of Ethics*

***As a Member of the Society of Forensic Toxicologists (SOFT) I agree to conduct myself in a professional manner, in accordance with the following ethical principles of the SOFT. I understand if I behave in a manner detrimental to the organization or the profession of forensic toxicology in general, I may be censured or expelled from membership.***

**Members agree to:**

1. Perform professional activities with honesty, integrity and objectivity.
2. Refrain from knowingly misrepresenting professional qualifications including, but not limited to: education, training, experience, certification, area of expertise, and professional memberships.
3. Hold in confidence and refrain from misuse of information obtained or received in the course of professional activities.
4. Provide expert advice and opinions within the limits of individual competence and generally accepted scientific principles.
5. Render testimony in a truthful manner without bias or misrepresentation.

# SOCIETY OF FORENSIC TOXICOLOGISTS (SOFT)

## *Guiding Principles of Professional Responsibility*

**Preamble**

The Guiding Principles are intended to create a culture of ethical behavior and professional responsibility among SOFT members and/or affiliates. The concepts presented here have been drawn from other professional codes and suggestions made by leaders in the forensic community. The Guiding Principles have been vetted and adopted by the Society of Forensic Toxicologists (SOFT) Board of Directors with the expectation that forensic toxicologists and forensic toxicology laboratory personnel and management will use them in training sessions, performance evaluations, disciplinary decisions, and as guides in other professional and management decisions. It is important that all individuals engaged in forensic toxicology are equally aware of these Guiding Principles and incorporate the principles into their daily work. These Guiding Principles provide a framework for describing ethical and professional responsibilities in the forensic community. While not all inclusive, they describe key areas and provide some specific rules to supplement the existing Code of Ethics adopted by SOFT.

**Professionalism**

The ethical and professionally responsible forensic toxicologist and forensic toxicology laboratory manager:

1. Are independent, impartial, detached, and objective, approaching all examinations with due diligence and an open mind.

2. Conduct full and fair examinations. Conclusions are based on the evidence and reference material relevant to the evidence, not on extraneous information, political pressure, or other outside influences.


3. Are aware of their limitations and only render conclusions that are within their area of expertise and about matters which they have given formal consideration.

4. Honestly communicate with all parties (the investigator, prosecutor, defense, and other expert witnesses) about all information relating to their analyses, when communications are permitted by law and agency practice.

5. Report to the appropriate legal or administrative authorities unethical, illegal, scientifically questionable conduct or impaired competence.

6. Take appropriate action if there is potential for, or there has been, a miscarriage of justice due to circumstances that have come to light, incompetent practice or malpractice.

7. Report conflicts between their ethical/professional responsibilities and applicable agency policy, law, regulation, or other legal authority, and attempt to resolve them.

8. Do not accept or participate in any case on a contingency fee basis or in which they have any other personal or financial conflict of interest or an appearance of such a conflict.

**Competency and Proficiency**

The ethical and professionally responsible forensic toxicologist and forensic toxicology laboratory manager:

1. Are committed to career-long learning in the forensic disciplines in which they practice and staying abreast of new technologies and techniques. Conclusions and opinions are based on generally accepted tests and procedures.

2. Are properly trained and determined to be competent through testing prior to undertaking the examination of the evidence.

3. Give utmost care to the treatment of any samples or items of potential evidentiary value to avoid tampering, adulteration, loss or unnecessary consumption.

**Clear Communications**

The ethical and professionally responsible forensic toxicologist and forensic toxicology laboratory manager:

(Continued on next page)

## *Guiding Principles of Professional Responsibility (Continued)*

1. Accurately represent their education, training, experience, and area of expertise.

2. Present accurate and complete data in reports, testimony, publications and oral presentations.

3. Make and retain full, contemporaneous, clear and accurate records of all examinations and tests conducted, and conclusions drawn, in sufficient detail to allow meaningful review and assessment of the conclusions by an independent person competent in the field.

4. Prepare reports in which facts, opinions and interpretations are clearly distinguishable, and which clearly describe limitations on the methods, interpretations and opinions presented.

5. Do not alter reports or other records, or withhold information from reports for strategic or tactical litigation advantage.

6. Support sound scientific techniques and practices and do not use their positions to pressure an examiner or technician to arrive at conclusions or results that are not supported by data.

7. Testify to results obtained and conclusions reached only when they have confidence that the opinions are based on good scientific principles and methods. Opinions are to be stated so as to be clear in their meaning.

## SOFT 2012 EXTRAORDINARY EXHIBITOR SUPPORT "THANK YOU" TO MEETING EXHIBITORS / SPONSORS

Each year the list of exhibiting companies and financial sponsorships of the SOFT annual meeting becomes more impressive. The financial commitment from exhibitors is absolutely essential in keeping meeting registration fees low for attendees. The following exhibiting companies will partner with SOFT in Boston. Please acknowledge their collective generous contributions and extend your appreciation and business toward these indispensable associates in business.

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|---|---|---|---|---|
| **ABSciex** | Caymen Chemical | JusticeTrax | Perkin Elmer | Therapak Corp. |
| Advanced Chemistry | **Cerilliant** | LabMedia Partners | Phytronix Tech. | **Thermo** |
| Development ( ACD) | Chemware | LGC | **Randox** | Toronto Research |
| **Agilent** | DPX | **Lin-Zhi** | Restek | Chemicals (TRC) |
| American Solutions | Express | **Lipomed** | **Roche** | UTAK |
| **Apollo LIMS** | Forensic Magazine | Microliter | RTI International | **Venture Lab** |
| **Axiom** | GERSTEL | **Neogen** | Rudolph Research | **Waters** |
| Biochemical Diagnostics | Greiner Bio One | **NMS-National Medical** | Sciteck | X-LINK |
| **Biophor** | Hummingbird Research | **Services** | SGE | |
| Biotage | iChrom | **OraSure** | **Shamrock Glass** | |
| Bruker | **Immunalysis** | Oxford University Press | **Shimadzu** | |
| **Campbell Science** | JEOL | Peak Scientific | SpeWare | |

Those companies who have committed additional financial sponsorship funding for "SOFT 2012" are in bolded print. The 72 booth exhibit floor is now "sold out", and will be the designated venue for the Tuesday Welcome Reception, the Wed. - Thurs. lunches, multiple poster presentation sessions, and the Sunshine/ Rieders Silent Auction.

# SOCIETY OF FORENSIC TOXICOLOGISTS, INC.

## BUSINESS MEETING MINUTES

***September 28, 2011***

***San Francisco, CA***

*Submitted by **Dan Anderson**, M.S., FTS-ABFT, DABC*

**Call to order.** The 41st SOFT Annual Business meeting was called to order at 1500 hours by President Sarah Kerrigan and Secretary Dan Anderson verified a quorum was present by requesting all voting members stand and be counted to ensure 100 members were present. It was later substantiated with 10 pages of meeting sign-in sheets; 110 out of 127 meeting attendees were Full members.

**Approval of Agenda.** President Kerrigan proposed approval of the agenda; motion to approve, no objections were made and the agenda was approved.

**Approval of Annual Business Meeting Minutes (Richmond, VA-Oct 2010) -** President Kerrigan stated that the 2010 Annual Business Meeting Minutes were published in the March edition of Tox-Talk and asked for any corrections. With no corrections suggested, the minutes were approved as published.

**President's Report – Sarah Kerrigan** acknowledged the meeting host, the many volunteers, and Bonnie Fulmer, SOFT's Administrative Assistant, for the wonderful San Francisco meeting. Because time was of a concern, Kerrigan indicated that all will be formally recognized at the President's reception. In Kerrigan's final presidential speech, she mentioned the ever changing landscape of toxicology, new guidelines, improved standards, increased oversight, and the exciting times that lie ahead as well as potential challenges. She also indicated that with increased demands and standards, it would take more resources, nor fewer. She expressed concerns about the financial state of public laboratories in general, with so many debilitated by staffing shortages, offering limited services, reduced scope of work, and even outright laboratory closures. President Kerrigan said this gap has to be addressed because it is not in the best interest of the science. She highlighted the fact that many toxicology services were essential, not discretionary-and should be viewed as such. She reminded members that they have an ethical and moral obligation to speak up about changes that will compromise the science and criminal justice system. Lastly, she indicated the need for individual members and the Society to be willing to possibly lose by taking risks to accomplish their goals. President Kerrigan concluded by stating that it was a distinct privilege to serve as the President of SOFT. She thanked the Board and the membership for allowing her to serve.

**Secretary's Report – Dan Anderson** thanked the three Reviewcommittee members, Jeri Ropero-Miller, Patrick Harding, and Robert Johnson for their dedication and hard work. He further stated that since AAFS February 2011, Bonnie Fulmer had thoroughly evaluated the membership roster and because of unpaid dues, 58 members were eliminated. The committee reviewed 67 new applications since February and the current membership of SOFT was 1,024 members.

**Treasurer's Report – Peter Stout** indicated in a PowerPoint presentation there was a total of $1,454,641 in the account and there was a budgeted operating loss of about $21,000 with the standard $35,000 as expected revenue from each meeting. Stout further stated the 2011 annual budget included line items for continuing education without reimbursement (not utilized), money for seven ERA/YMSA awards (six were awarded), and $15,000 for the CFSO annual membership (only $10,000 spent) because ABFT paid their portion of the CFSO shared membership. Lastly, Stout reported that the financial activities had undergone a certified review by Osborne, Parsons, and Rosacker, LLP.

**Vice President's (Committee) Reports – Marc LeBeau** called for committee reports as follows:

**Bylaws** (Yale Caplan)- Caplan reported no activity.

**Budget, Finance, and Audit** (Robert Turk)- Turk reported the committee was comprised of Diana Garside, Michael Schaffer, George Jackson, Joseph Saady, and Dean Fritch. Turk stated the 2010 and 2011 budget and finance

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## 2011 SOFT BUSINESS MEETING MINUTES *(Continued)*

reports were reviewed and everything was in order.

**Membership** (Dan Anderson)- Anderson stated this report was provided earlier in the Secretary's report.

**ToxTalk** (Yale Caplan)- Caplan reported ToxTalk had been in an electronic form for the past year and more recently has resided on the public side of the website. The elimination of the printed version has reduced production costs of about $10,000 and has allowed unlimited pages to be published. He concluded by encouraging the membership to continue to submit subject material including case notes to maintain the quality of the publication.

**Publication-JAT** (Jarrad Wagner)- Wagner reported that serving as the SOFT Special Editor of JAT was a privilege and honor. He further stated there were a total of 25 formal submissions with 15 full articles and 4 case notes being accepted. The EDIT award committee, comprised of Christine Moore, Ed Cone, and Hans Maurer, selected a single article and the announcement will be made at the end of the business meeting. Lastly, it was announced that JAT ownership was transferred to Oxford University Press and the deadlines for the next SOFT Special Issue will be moved forward to accommodate the July meeting.

**Education Research Award** (Phil Kemp)- Kemp reported the deadlines for the ERA/YMSA awards will be moved to February 1, 2012 to accommodate the July meeting. He further reported there were a total of nine applications with six being selected to receive the awards. Kemp read the names of the award recipients and stated that they would be formally recognized at the President's reception.

**Meeting Resource Committee** (Marc LeBeau)

**2011 – San Francisco, CA** (Nikolas Lemos)- Lemos was brief and thanked the attendees for their participation, stated the weather was excellent, had tremendous exhibitor hall space, and had over 1,300 registered delegates for this meeting

**2012 – Boston, MA** (Michael Wagner)- Wagner thanked the BOD, stated the Annual meeting in Boston will occur over July 4th (July 1-6, 2012) at the Boston Copley Marriott and will be a very exciting event. The schedule had been tailored with workshops on Monday and Tuesday, Wednesday morning will include a plenary speaker, ERA/YSMA presentations, and posters with exhibitors and then break to spend the later part of the day at the Museum of Science and viewing of fireworks over the Charles River. Wagner showed a video of Boston and acknowledged the many people assisting with the hosting the meeting. Lastly, on average, the Boston weather during meeting time averages a high 82 and low 65 and encouraged attendance at this family-friendly event.

**2013 – Orlando, FL** (Bruce Goldberger)- Goldberger stated to mark your calendar as the meeting will occur the last week of October 2013 at Buena Vista Hotel and Spa, a large resort convenient to downtown Disney.

**2014 – Grand Rapids, MI (Benjamin Kuslikis/Michael Smith)** Kuslikis reported the 2014 annual meeting will occur at the Amway grand in October 2014 and the fall colors should be spectacular.

**2015 – Atlanta, GA (Robert Sears):** LeBeau explained the new approach the Board of Directors took about the selection of future meeting sites. Working with Helms Briscoe, the concept was to select a region, identify a possible city and request competitive bids from hotels. Therefore, for 2015, Atlanta, GA was selected, a site visit was conducted and the site was chosen. An active member of SOFT in the geographic location was asked to host the meeting. Robert Sears graciously accepted the opportunity.

**Drugs and Driving** (Jennifer Limoges)- Limoges reported there was a great Drugs and Driving special session earlier in the week and it was coordinated by Michelle Spirk. Further, Ashraf Mozayani will be coordinating the special session at AAFS, and Amy Miles for SOFT 2012. Lastly, the website has an area with a lot of drug specific information as a membership resource.

**Policies and Procedures** (William Anderson)- Anderson reported the Policies and Procedures manual was updated and the Board of Directors was in the process of reviewing it.

**Web Site** (Bruce Goldberger)- Goldberger acknowledged Matthew Juhascik for his efforts on the website and they are continuing to work on the website and combine the two logins into one.

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## 2011 SOFT BUSINESS MEETING MINUTES *(Continued)*

He further stated that one of the most valuable areas of the website was the employment opportunities section.

**Continuing Education** (Ann Marie Gordon)- Gordon reported the ConEd committee did not have any requests for Regional workshops and that one additional responsibility had been requested of the committee. The Board of Directors requested the responsibilities of continuing education credits be transitioned from Don Frederick to this committee.

**Young Forensic Toxicologists (YFT)** (Jane Thatcher) – Jane Thatcher provided the committee activity with hosting of the 2nd annual lunch and symposium, as well as the happy hour afterwards. Further, she reported that a smaller version of the SEP took place on Monday, the committee hosted a half day workshop about courtroom testimony, and YFT posters were being competitively evaluated for a winner of 2012 registration. Lastly, she announced the Chair of the committee, Teresa Gray, had stepped down and Thatcher was appointed as the new chair and the committee was actively soliciting another member for the committee.

**Drug-Facilitated Sexual Assault** (Laureen Marinetti)- Marinetti reported the committee was updating most of the documents and they will be hosting a survey or proficiency sample for willing laboratories.

**Ethics** (Aaron Jacobs)- Jacobs reported there was nothing referred to the ethics committee for review and there had been a thorough legal review of the guidelines.

**Nominating** (Brad Hepler)- Hepler stated the purpose of the committee, thanked the committee members, and announced the 2012 slate of candidates.

**Strategic Planning Committee** (Peter Stout)- Stout reported the Strategic Planning Committee as an adhoc committee has been dormant but feels the activity of the committee will be increasing.

**Vendor Liaison Committee** (Peter Stout): Stout reported the transition of Vendor Liaison duties from Stout/Jeri Ropero-Miller to Julia Pearson was taking place at this meeting and for Boston 2012. However, Stout will remain active and Pearson will be the lead contact.

**CSFO** (Laurel Farrell)- Farrell reported that CFSO was comprised of AAFS, NAME, ASCLD, ASCLD-LAB, IAI, and that SOFT shares a membership with ABFT. She stated the purpose of the membership was to educate and advocate for the discipline of Forensic Toxicology on Capitol Hill. She believed the lobbyists/advocates were performing their duties well. They were successful in reinstating some Coverdell funding, as well as revising language in DNA grants to allow for funding other forensic disciplines. Lastly, she stated that Senator Leahy's bill was not dead and further information will be coming.

**Advocacy Committee** (Bruce Goldberger): Goldberger stated the purpose of the committee was to serve as a rapid response resource committee for the Board. There was no activity this year.

**SWGTOX Update** – Bruce Goldberger commented on SWGTOX functions and a poster was assembled for ASCLD-LAB that was provided to all meeting attendees. He further encouraged all to participate with SWGTOX by reviewing and commenting on the public distributed documents.

LeBeau concluded the Committee Reports at 1552 hours.

**Announcements/Liaison Reports**

**AAFS**- Loralie Langman reported the 2012 AAFS meeting will be in Atlanta, GA and there will be a lecture by Dr. John Barr (CDC scientist), a Drugs and Driving session, and the annual Rob Middleberg facilitated Pediatric Lectureship.

**TIAFT**- No report given.

**Mid-West Association of Toxicology and TDM**- Don Frederick announced the meeting for May 3-4, 2012.

**IATDMCT**- Loralie Langman stated this meeting starts this Sunday in Germany.

**CAT**- Nadina Giorgi, CAT President, provided information about the next meeting occurring on November 4-5, 2011 in Glendale CA and it will be about Forensic Alcohol. A meeting agenda can be obtained from the Association's website.

**ABFT-** Marina Stajic reported there were 10 new certificates, 9 FTS and one diplomate. There will be two additional certification areas offered by ABFT, Forensic Alcohol Specialist and Forensic Toxicology Analyst ("bench analysts"). ABFT anticipates offering the new certification exams at the Boston 2012 meeting.

**FTCB**- Robert Sears reported 22 new diplomates were added with

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## 2011 SOFT BUSINESS MEETING MINUTES *(Continued)*

8 in Alcohol and 14 in Forensic Drug Testing.

**Hair testing**: Christine Moore reported Society of Hair Testing meeting will occur in June 28-29, 2012 in Toronto, Canada.

**Unfinished Business –** Kerrigan asked the membership if there was any unfinished business and there was none.

**New Business**

**EDIT recipient:** Kerrigan announced the EDIT award recipient as Jason Sklerov coauthored by Fiona Cooper, for their paper published in the Journal of Analytical Toxicology Special Issue titled the "Calculation and Verification of Blood Ethanol Measurement Uncertainty for Headspace Gas Chromatography." Both authors were recognized. Kerrigan reminded the membership that ERA/YMSA awardees, outgoing Officers, and the Meeting host and Committee would be formally recognized at the President's Banquet.

**Elections**

Nominees: Kerrigan asked if there were additional nominations from the floor. There being none, she requested and received from the membership a motion to accept the slate as proposed by the Nominating Committee:

President: Marc LeBeau

Vice President: Dan Anderson

Secretary: Ruth Winecker

Board of Directors:

Michelle Peace and Laurel Farrell

All nominees were accepted unanimously by the membership.

**Incoming President's Remarks-** LeBeau thanked President Kerrigan and the nominating committee for the opportunity to serve as the 40th different person at the helm. LeBeau recalled his first meeting in Baltimore, MD in 1995 and the number of friends gained in attending those meetings. He stated he always tried to encourage the young membership to come to the meetings and interact with the experienced toxicologists. He believes that SOFT goes out of the way to make members feel special similar to TIAFT welcoming members in their organization. LeBeau thanked SOFT for continuing his professional development and reminisced about historical events of the past; natural disasters, gas prices, bed bugs, election of an African-American President. Membership of SOFT has grown from 603 in 2001 to 1024 in 2011 and how the attendance continues to grow at the SOFT meeting demonstrating the dedication shown by its members. LeBeau indicated that SOFT needs to be treated as a business entity not just a social event—we need to get the house in order. Committee Chairs will work on putting together Committee Handbooks in order to have accountability of the Chairs. We need to heighten SOFT Members knowledge regarding SWGTOX and the influence they will have on the process. LeBeau explained SWGTOX Members are selected based on experience and where they work and needs to be limited due to budget. The purpose of SWGTOX is to provide minimal standards for the field of Forensic Toxicology and it is setting the bar with the hope and desire that established standards will be embraced by all laboratories, accrediting bodies, and the courts. LeBeau also stated involvement is important as democracy provides a voice to be heard and volunteering is a way to be heard. He indicated that many of the same people wear many hats that ultimately impacts efficiency. He encouraged the membership to volunteer and become active. LeBeau concluded with the announcement of the Special Editor of JAT as Dimitri Gerostamoulos from Australia.

Meeting adjourned at 1614 hours

*"All those in favor of saying 'It's a wrap' instead of 'Meeting adjourned' say 'Aye.'"*

DRUGS IN THE NEWS

Send interesting ***"Drugs In The News"*** articles to Section Editor

**Dwain Fuller, B.S., D-FTCB, TC-NRCC**

**Dwain.Fuller@va.gov**

## ARSENIC: *An Old Nemesis Returns*

*Submitted by Section Editor,* ***Dwain C. Fuller****, B.S., D-FTCB, TC-NRCC*

When was the last time you investigated an arsenic death? Yeah, I thought so. If you are like me, you can count on one hand the number of arsenic cases you have investigated in your career and have a few fingers left over. Reaching way back to my days as a fledgling toxicologist, as I remember it, rarely was it necessary to even quantitate the arsenic level in the deceased; the circumstances of the death were so straightforward. The deceased typically had a container of arsenic-containing pesticide, a glass with pesticide residue, and often a note. Typically, one just had to perform the Reinsch test on the urine and/or liver to demonstrate the presence of arsenic. Done!

It seems a bit ironic that the poison that is almost universally named when the general public thinks about homicidal poisoning is rarely encountered anymore by the forensic toxicologist. Perhaps the chief reason for this is the effective removal of arsenic-based pesticides from the market by agencies charged with protecting of the environment, and rightly so.

As a kid, my family had a small herd of cattle. I remember my father using lead arsenate, also known as arsenate of lead, or as he called it, "arsenic lead", for fly control. He would walk among the cattle throwing handfuls of lead arsenate powder onto their backs. Sometime in the mid 60's lead arsenate was replaced by another, undoubtedly safer, product, but up until that time he used it just like all the other cattlemen did.


These days arsenic is gone from pesticides and pressure-treated wood as well. However it has recently reappeared in the news due to the legacy of our past indiscriminate use of arsenic-based pesticides.

I'm sure that by now you are aware of the furor over arsenic in apple and grape juice. The first I heard of it was when I came home from work one day and my wife was watching Dr. Oz as he decried this fact. Not being a big fan of media-darling doctors, my first reaction was, "Whoa, wait a minute…are we talking organic or inorganic arsenic?" It actually sort of made me angry. I was thinking, "You can't just yell arsenic in a crowded theater!"… wait… that is something else… I mean, "You can't just start talking about arsenic in apple juice to a populous that has no concept of the relative toxicities of the different forms of arsenic." That's better.

So what of these different forms of arsenic? I'm sure that most of you are aware that arsenic in environmental exposure occurs in two forms, organic and inorganic. Organic arsenic being arsenic bound to carbon-containing groups, like a methyl group, and inorganic being arsenic or arsenic compounds not so bound. In the death investigations of arsenic, described above, there was little reason to try to "speciate" or determine the type of arsenic exposure; the origin of the arsenic was quite evident, and of course, the person is dead, which is always an important and obvious clue to consider in assessing the potential lethality of an ingestion. However in environmental exposures in still-living individuals the arsenic species is a very important

(Continued on next page)

## DRUGS IN THE NEWS ARSENIC: *An Old Nemesis Returns* (Continued)

consideration.

According to the literature the relative toxicity of arsenic species as expressed by oral administration $LD_{50}$ in mice is as follows: 3 mg/kg for arsine [$AsH_3$]; 14 mg/kg for arsenite [As(III)]; 20 mg/kg for arsenate [As(V)]; 700-1800 mg/kg for monomethylarsonic acid (MMA); 700-2600 mg/kg for dimethylarsenic acid (DMA); and > 10,000 mg/kg for arsenobetaine and arsenocholine. Thus, it can be plainly seen that the inorganic species of arsenic are orders of magnitude more toxic than are the methylated forms, MMA and DMA, and arsenobetaine and arsenocholine are considered essentially non-toxic.

Initially the Food and Drug Administration (FDA) claimed that the most of the arsenic in juices and other foods was of the organic type and was "essentially harmless", and I felt vindicated in my anger. However, an investigation by Consumer Reports magazine appears to show otherwise. Consumer Reports commissioned the testing of 88 samples of apple and grape juice, purchased in August and September of 2011 in Connecticut, New Jersey, and New York. Roughly 10% of the juice samples tested exceeded the 10 ppb federal drinking water standard and most of that arsenic was inorganic. Total arsenic concentrations in apple juice ranged from 1.1 to 13.9 ppb and in grape juice from 5.9 to 24.7 ppb. So why do I quote the federal drinking water standard? Because, believe it or not, there is no federal standard for juice.

Why apples and where did it come from? That brings us back to the widespread use of arsenic-based pesticides in the past. The use of lead arsenate was terminated in the early 1950's in Massachusetts, in New York and other states in the mid 1960's, but not until 1984 in Washington State, a large apple growing region. It wasn't until 1988 that the Environmental Protection Agency (EPA) banned lead arsenate as a pesticide. Although lead arsenate-based pesticides haven't theoretically been used since 1988, over 20 years ago, the arsenic is now likely being introduced into apples from the tainted soil of the orchards.


Additionally, it should be noted that although inorganic arsenic-containing compounds are largely off the market, organic arsenic containing feed additives are still being fed to poultry and swine to increase growth rate by the controlling parasitic diseases. While these compounds apparently pass through the animal without contaminating the meat, often the arsenic-bearing wastes of these animals are used to fertilize nearby croplands. The concern is the potential for organic arsenic to be converted to inorganic arsenic in the environment.

Should we be concerned about drinking apple and grape juice? Obviously, I can't decide for anyone but myself, but let's examine the risks. To me, the fact that apple or grape juice may have somewhat over 10 ppb of arsenic, the federal standard for drinking water, is not a huge concern, because I only have an occasional glass of apple or grape juice compared to the amount of water I consume. However, a number of children drink significant quantities of apple and grape juice in comparison to their water intake, not to mention their lower body weight. Furthermore, children who are actively growing and developing, are likely to be at greater risk for arsenic toxicity.

Studies show that childhood exposure to arsenic in drinking water is associated with reduced intellectual function, poorer scores in language, visuospatial skills, executive function, and increased mortality from lung cancer and bronchiectasis as young adults, as well as an increased prevalence of Type 2 diabetes in adults.

So what will come of this? I suspect we will be seeing federal standards for arsenic in fruit juices very soon. And that is

(Continued on next page)

## DRUGS IN THE NEWS ARSENIC: *An Old Nemesis Returns (Continued)*

good. Obviously, none of us want to be ingesting large quantities of arsenic, especially inorganic arsenic, much less allowing our children to do so. Perhaps this is another reason to drink Scotch instead of wine.

**References and Further Reading**


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## GENEROUS ERA/YMSA CONTRIBUTORS

SOFT's long sponsored mentoring programs, ERA & YSMA, are funded by generous donations by SOFT members. Both awards encourage students and young scientists to excel in the Forensic Toxicology field. More information about the Educational Research Award (ERA) and the Young Scientist Meeting Award (YSMA), (eligibility and application instructions), can be found at the SOFT website (www.soft-tox.org). Consider "coaching" a talented co-worker or a worthy student to apply for one of these prestigious recognition awards, now worth $2,000. Thank you 2012 Contributors:

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## NEW DRUGS AND TECHNOLOGY TIDBITS

Send interesting *"New Drugs and Tech-IN Tidbit"* articles to Section Editor ***Dan Anderson**, M.S., FTS-ABFT, DABC*

**DAnderson@coroner.lacounty.gov**

Let's begin the 2012 New Year off right with a change and allow me to introduce TECH-IN Tidbits or the 'Technology and Innovation' Tidbits section of ToxTalk. The New Drugs section of ToxTalk has been a stand-alone section since 2001 and has been difficult to produce and contribute a new drug that is pertinent to the Forensic Toxicology community four times a year, or basically the publishing schedule of ToxTalk. Therefore, the New Drugs section will be expanded in order to introduce an area where SOFT members can contribute technology and innovation concerns, problems, and/or solutions related to the field of Forensic Toxicology. With that brief introduction, the first TECH-IN tidbit will be an interesting mass spectra discrepancy with Duloxetine (Cymbalta®).

## NEW DRUGS and TECH-IN Tidbits: Duloxetine (Cymbalta®)

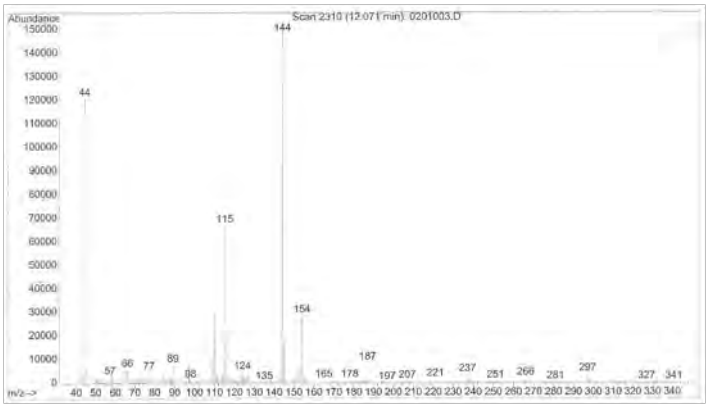
*Submitted by*

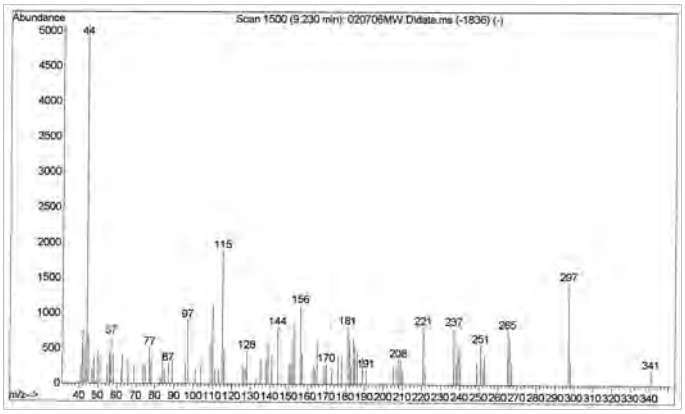
***Dan Anderson**, M.S., FTS-ABFT, DABC*

Los Angeles County Department of Coroner, Los Angeles, CA

*and **Denise Lyons;** Solano County District Attorney, Fairfield, CA*

If you analyze for Duloxetine by LC/MS/MS, go away because after you read this you'll state, that's why you analyze by LC/MS/MS. However, if you resemble the rest of the nation and analyze by GC/MS and have not moved your entire methodology repertoire over to LC/MS/MS, please read on as you will find this tidbit very interesting. So…..what mass spectra does your laboratory see on a routine basis? The left 'A' spectra or the right one, 'B'?




Actually, both mass spectra's are produced from the same make of mass spectrometer as well as from the same methanolic drug solution of duloxetine. Why then, would spectra 'A' be produced in one lab in Southern California and spectra 'B' be produced in another lab in Northern California. The discrepancy of spectra arose because spectrum 'A' is searchable in the AAFS library and has been published in JAT in 2006 whereas spectrum 'B' is searchable in the SWGDRUG library.

So you have to ask yourself, which one is truly correct, why is there a difference, and can it be reproduced in the opposing laboratories? Simple answers are that both appear to be right for the instrument that they were injected on. As of yet we have not been able to discover the reason for the difference, and neither lab has been able to reproduce the results of the other lab. Briefly,

(Continued on next page)

## NEW DRUGS and TECH-IN Tidbits: Duloxetine (Cymbalta®) *(Continued)*

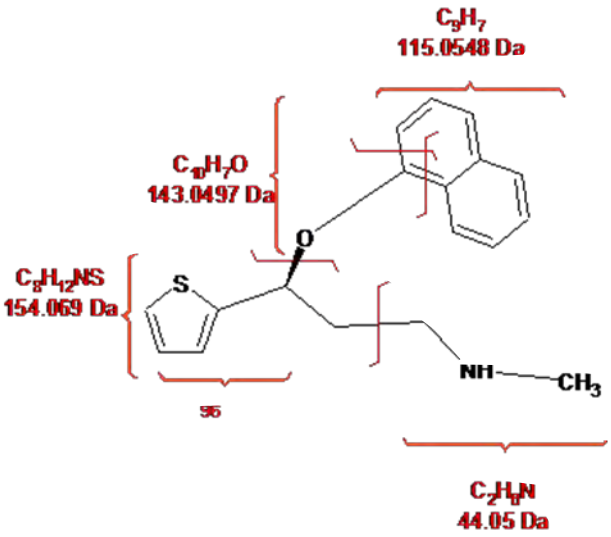
Duloxetine, also known as Cymbalta, is still a relatively new antidepressant heavily advertised on television and in print, and is commonly detected in a multitude of cases. The chemical formula of Duloxetine is $C_{18}H_{19}NOS$ with a molecular mass of 297.4 g/mol.

A simple query from various laboratories around the nation indicates that if achieving spectrum 'A', there is a sharp chromatographable peak on the GC with the major ions of 44, 144, & 297. Whereas if a spectrum 'B' is what your laboratory is seeing, then the peak is less than desirable chromatographically as it appears more like a camel hump than anything else and you are achieving the ions of 44 and 297 with no 144.

Experimentation ensued at the two laboratories as well as later eliciting the assistance of the analytical standard supplier, Cerilliant Corporation technical assistance center. A Duloxetine methanolic solution (1 mg/mL), made from Eli Lilly powder and a methanolic solution (1 mg/mL, D-044) from Cerilliant was exchanged by the two laboratories and injected into their respective Agilent 6890/5973 and 5975 GC/MS instruments with the following duplicate parameters:

| | |
|---|---|
| Injection port temperature | 260 |
| Auxiliary temperature | 300 |
| MS temperature (as shown on the tune) | 230 |
| Quadrapole temperature (as shown on the tune) | 150 |

The end result was the other spectra could not be duplicated by the opposing laboratories. Further experimentation included lowering the injection port temperature from 260 to 200 and then 150 as well as lowering the auxiliary temperature from 300 to 200. Any and all temperature changes resulted in neither laboratory being able to reproduce what the other was seeing. Cerilliant Corporation was then consulted and they were able to verify their source material was also from the manufacturer, Eli Lilly, rather than purified from a pill form. The Cerilliant Technical Center offered their assistance along with mass spectra and interpretation which was more representative of spectra 'B'. It appears Duloxetine in spectra 'A' has the common 44 and molecular weight ion 297, but the major ion of 144 exists possibly from it fragmenting further somewhere on the instrument. Whereas spectra 'B', with the 44 and 297 ions and without the major 144 ion, appears to not be fragmenting as much on the instrument.




Overall, spectra 'B' appears to be consistent with the parent drug duloxetine and spectra 'A' appears to be more consistent with a breakdown product or instrument anomaly. However, both spectra are correct for the instrument and conditions under which they are acquired. Spectra 'A' has been used to reproducibly and accurately quantitate duloxetine many times over the course of the past several years. The spectra also demonstrate the danger of blindly relying on published spectra or libraries generated on another instrument. Moreover, unknowns should always be compared to spectra gathered on the same instrument if it is at all possible. Further work is underway and will be presented at a later time that delves more into the differences in the spectra. But in the meantime, if anyone has suggestions, please let us know by email.

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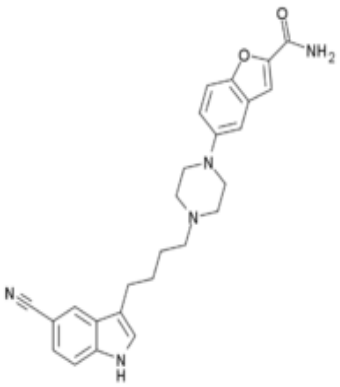
# NEW DRUG: Vilazodone (Viibryd®)

*Submitted by **Dan Anderson**, M.S., FTS-ABFT, DABC*
*DAnderson@coroner.lacounty.gov*

Vilazodone (Viibyrd®) is a new antidepressant approved by the FDA in January 2011 for use in the United States to treat major depressive disorder. The drug is classified as a Selective Serotonin Reuptake Inhibitor (SSRI) and is manufactured by Forest Laboratories, Inc. in 10, 20, and 40 mg tablets. In contrast to other SSRIs, Vilazodone did not cause significant weight gain or decreased sexual desire or function as with many other antidepressants.

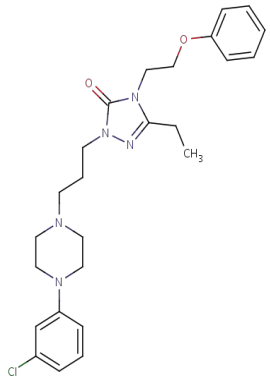
***General Information***

| | |
|---|---|
| IUPAC Name: | 5-(4-[4-(5-cyano-1*H*-indol-3-yl)butyl]piperazin-1-yl)benzofuran-2-carboxamide |
| Chemical Formula: | $C_{26}H_{27}N_5O_2$ |
| Molecular Weight: | 441.54 g/mol |
| Available: | Vilazodone HCl analytical powder from Forrest Research Institute by request<br>$C_{26}H_{27}N_5O_2 \cdot HCl$, FW=477.99 g/mol |
| CAS Number: | 163521-12-8, 163521-08-2 (HCl) |
| Physical State: | Solid, White to pale cream in color |
| Solubility: | Ethanol 31%, Methanol >100% |
| Stability: | Not sensitive to light, stable at up to 65°C for 4 weeks |



***Pharmacology***

| | |
|---|---|
| Half-Life | ~25 hours |
| Absorption | 4-5 hours |
| Cmax | 156 ng/ml steady state (3 days) after daily doses of 40 mg |
| $V_d$ | Large, specific number not known |
| Bioavailability | 72% |
| Protein Bound | ~96-99% |
| Metabolism | Extensively in the liver by P450 3A4 |
| Elimination | 1% of the dose was recovered in the urine and 2% in feces |
| Drug Interactions | Serious to fatal if co-administered with MAO. |



***Toxicology***

| | |
|---|---|
| Extraction: | Unknown |
| Detection: | LC/MS/MS: NMS Labs[3]: Calibration range 0.10-15 ng/mL and since April 2010, 15 cases have been analyzed with a measured concentration range of 0.71-5.6 ng/mL (n=9) in serum/plasma and urine.<br><br>Although Vilazodone sounds similar to Nefazodone ($C_{25}H_{32}ClN_5O_2$) with a comparable MW 470 g/mol, it appears to not chromatograph on either the GC/NPD & GC/MS. |

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## CASE NOTES

Send interesting *"Case Notes"* to Section Editor

***Matthew Barnhill, Ph.D., DABFT***

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# CASE NOTE: Abuse of Zolpidem in Racing Cyclists: A New Type of *Addiction Demonstrated by Hair Analysis*

*Submitted by **Pascal Kintz**, Ph.D., PharmD*

*X-Pertise Consulting, Oberhausbergen, France*

*pkintz@x-pertise.com*

## Introduction

During several trials in France in the past years, it has been claimed that cyclists can abuse zolpidem (Ambien, Stilnox), an hypnotic, for sedation during periods of time off. To document the abuse of benzodiazepines and hypnotics, particularly zolpidem, we have analyzed hair collected from cyclists from the same team.

## Sample collection

Hair was collected in one day from 29 cyclists during a medical survey and stored at ambient temperature until analysis. The laboratory was requested to test for anabolic steroids, drugs of abuse, corticoids, b-adrenergic compounds (e.g. salbutamol, clenbuterol) and if sufficient specimen is available, for benzodiazepines and hypnotics. Enough material remained for 12 cyclists.

## Analytical procedure

The method included decontamination of hair with methylene chloride, cutting the hair into small pieces followed by incubation of 20 mg in phosphate buffer (pH 8.4). Liquid-liquid extraction, with 1 ng diazepam-$d_5$ as the internal standard, was performed with diethyl ether/methylene chloride (80/20). Separation was performed by LC using a XTerra C18 column with detection by MS/MS. The limits of quantification for all benzodiazepines and hypnotics ranged from 0.5 to 5 pg/mg using a 20-mg hair sample (1).


## Results

From the 12 cyclists tested, 10 were positive for zolpidem (0.3 to 1918 pg/mg), 6 for bromazepam (3.6 to 58 pg/mg), 5 for zopiclone (5.3 to 142 pg/mg), 3 for tetrazepam (7.0 to 139 pg/mg), 2 for diazepam (1.0 and 1.9 pg/mg) and finally 1 for 7-aminoflunitrazepam (79 pg/mg). This clearly demonstrates multi-drug use. Only one single cyclist was found negative.

No doping agent (anabolics, drugs of abuse, corticoids, stimulants) was detected during the general investigations. Z-drugs, such as zolpidem, zopiclone or zaleplon, and benzodiazepines are not considered as doping agents, according to the most recent list of the World Anti-Doping Agency (2).

## Discussion

After a single 10 mg dose, zolpidem concentration found in hair is in the range 1 to 10 pg/mg, generally lower than 5 pg/mg (3). Daily exposure to the drug will result in concentrations in the range 300 to 2000 pg/mg (4).

It is well known that many athletes experience some form of stress that may result in insomnia during the night before the competition. According to cyclists, as regards the performance capacity, there is no risk to use sleep inducers the night

(Continued on next page)

## CASE NOTE: Abuse of Zolpidem in Racing Cyclists: A New Type of Addiction Demonstrated by Hair Analysis *(Continued)*

before a race, particularly when the drugs have a short half-life. The "toxicology of victory" has promoted new behaviors, where performance is the key point, even after the competition, during social life, for example. As athletes are sometimes subject to having their biological clock in disarray, they can develop over-consumption and dependence to active molecules.

Conclusion

Many cases of drug addiction in athletes have been revealed in recent years (5). The stress of competitive sports often leads to a specific vulnerability of sportsmen to addiction (6). In cyclists, zolpidem was the most frequently detected drug with a broad spectrum of exposure, ranging from one-time use (low pg/mg) to long-term use (> 1 ng/mg).

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## CASE NOTE: Detection of JWH-18 Metabolite in Case Submissions using ELISA with Confirmation by Solid Phase Extraction and LC/MS

*Submitted by **John Wetstein**, B.S.*
*Toxicology Training Coordinator, Illinois State Police*

Synthetic cannabinoids have presented a challenge to the forensic toxicology community since their emergence in the drug abuse culture. Prior to the increased awareness and popularity of this family of drugs, little was known about the existence of these compounds; less was known about the metabolites.

JWH-18 is one of the more potent of the first generation synthetic cannabinoids. This compound, along with JWH-73 can be considered one of the prototypical naphthoyl-indole compounds.

A group of toxicology case submissions were analyzed by a combination of ELISA and LC/MS. These cases involved suspected use various forms of synthetic cannabinoids. In most cases, subjects admitted use of herbal preparations they believed contained synthetic cannabinoids.

ELISA Testing

The urine specimens were first analyzed on a Dynex DSX ELISA instrument using a synthetic can-

(Continued on next page)

# CASE NOTE Detection of JWH-18 Metabolite in Case Submissions using ELISA with Confirmation by Solid Phase Extraction and LC/MS *(Continued)*

nabinoid assay kit from Randox Corporation. Sample prep consisted of a simple centrifugation step. All reagents were prepared following the manufacturers instructions. The package insert from the manufacturer indicates that the assay displays cross-reactivity with other JWH compounds. A positive control was prepared from blank urine fortified with JWH-18 N-(4-hydroxylpentyl) metabolite and JWH-73 N-(3-hydroxylpentyl) metabolite at 20 ug/L (Cayman Chemical). This positive control was analyzed along with blank urine. Both the positive and negative controls gave the appropriate response in relation to the standards prepared from the Randox kit.

## Extraction

The JWH metabolites were extracted from urine using conventional mixed-mode solid phase extraction cartridges. Samples were pre-treated overnight at 40° C using beta glucuronidase in pH 6 100 mM phosphate buffer. The samples were run through the cartridges at approximately 1-2 mL/min. The cartridges were washed with 1x3 mL distilled water followed by 1 x 3 mL of 100mM phosphate buffer containing 20% acetonitrile. Columns were dried for 5 minutes at > 10 inches Hg followed by elution using 2 x 3 mL ethyl acetate containing 10% methanol. The Eluate was brought to dryness under nitrogen then reconstituted with mobile phase.

## LC/MS Analysis

An Agilent 1100 Series LC equipped with a 100 by 4.6 mm Eclipse XDB -18 column was used. The mobile phase consisted of an

isocratic 70:30 mix of methanol : acetonitrile (1:1) with 1% formic acid in water. Mobile phase flow was set at 0.5 mL/min at 35° C .

The MSD spray chamber conditions include a gas temperature at 350° C flowing at 10 L/min. with the nebulizer pressure was set at 40 psig. The MSD was run in positive electrospray ionization mode. The capillary voltage was set at 3000 and fragmentor voltages were set at 100, 200, and 300 V on separate data channels to simultaneously capture different spectral patterns for each analyte The mass range for collection of spectral data was set at a range of 200 to 450 amu.

## Results

Testing by the ELISA method indicated that 10 of 12 cases were positive for the presence of JWH-18 metabolite. Confirmatory testing by LC/MS confirmed the presence of JWH 18 metabolite in the same 10 cases which were positive by ELISA testing.

The ELISA technique involves minimal sample prep and displays the sensitivity necessary for routine casework. The LC/MS analysis provides a relatively simple avenue for confirmatory testing that provides spectral confirmation of JWH-18 metabolite.

## Acknowledgements

Method development was made possible through the Illinois State Police Research and Development Laboratory under project 2011-14.

Melissa Byrne of Neogen Corporation for her assistance in programming the ELISA assay on the Dynex Instrument.

Extraction technique was adapted from a protocol provided by United Chemical Technologies on their website.

# SOFT 2012 ANNUAL MEETING

**Boston, Massachusetts**

**July 1 – 6, 2012**

Host: Michael Wagner, Ph.D.

micawagn@iupui.edu

## PRELIMINARY PROGRAM

**Sunday, July 1, 2012**
- ▶Registration Opens (9am-6pm)
- ▶NSC-CAOD Meeting (8:30am-12pm)
- ▶NLCP Inspector Training (2pm-6pm)
- ▶FTCB Meeting (4pm-6pm)
- ▶Young For. Tox. Meeting (5pm-9pm)
- ▶Dinner on your own

**Monday, July 2, 2012**
- ▶Continental Breakfast (7am-8:30am)
- ▶Registration (7am-6pm)
- ▶ABFT Exam Committee (7am-12pm)
- ▶SOFT Workshops (8am-5:30pm)
- ▶SOFT Student Enrichment Program (8am-5pm)
- ▶FTCB Examinations (9am-12pm)
- ▶Lunch On Your Own
- ▶FTCB Board Meeting (2pm-6pm)
- ▶SOFT-AAFS Drugs and Driving (5:30pm-7pm)
- ▶Dinner on your own

**Tuesday, July 3, 2012**
- ▶Continental Breakfast (7am-8:30am)
- ▶Registration (7am-6pm)
- ▶SOFT Board Meeting (7am-12pm)
- ▶SOFT Workshops (8am-5:30pm)
- ▶ABFT Exam (8am-12pm)
- ▶ABFT Accreditation Comm. (8am-12pm)
- ▶ABFT Board Meeting (12pm-6pm)
- ▶Exhibits Setup (12pm-5pm)
- ▶Lunch On Your Own
- ▶Welcome Recep. w/Exhibitors (6:30pm-8pm)
- ▶Sunshine/Rieders Silent Auction Opens 6:30pm
- ▶Elmer Gordon Forum (8pm-9:30pm)
- ▶Night Owl Event (10pm-12am)

**Wednesday, July 4, 2012**
- ▶Continental Breakfast (7:30am-9am)
- ▶Registration (7:30am-1pm)
- ▶Exhibits open (7:30am-1pm)
- ▶Sunshine/Rieders Silent Auction (7:30am-1pm)

**Wednesday, July 4, 2012 (continued)**
- ▶Opening Ceremony Plenary Session (8am-9am)
- ▶Scientific Session #1 - ERA/YSMA (9am-10am)
- ▶Poster Session #1 (10:15am-11:30am)
- ▶Lunch with Exhibitors (11:30am-1pm)
- ▶SOFT "on the town" July 4th (1pm-6:30pm)
- ▶Bus Transport to "Museum of Science" (7pm)
- ▶MOS – Interactive Exhibits / Music / BBQ / Dessert Stations (7:30pm-10pm)
- ▶To outdoor Pavilion to experience "Firework Extravaganza" on Charles River (10pm-11pm)
- ▶Bus Transport back to Marriott (11:30pm)

**Thursday, July 5, 2012**
- ▶SOFT Karla Moore Fun Run/Walk (6:30am-8am)
- ▶Continental Breakfast (7:30am-9am)
- ▶Registration (7:30am-5pm)
- ▶Exhibits open (7:30am-1:30pm)
- ▶Silent Auction Last Day (7:30am-12:30pm)
- ▶Exhibitor Feedback Meeting (8am-9:30am)
- ▶Scientific Session #2 (8am-9:45am)
- ▶Poster Session #2 (9:45am-10:30am)
- ▶Scientific Session #3 (10:30am-12pm)
- ▶Lunch with Exhibitors (12pm-1pm)
- ▶DFSA Committee (12-1pm)
- ▶Exhibits breakdown (1:30pm-4pm)
- ▶Scientific Session #4 (1pm-3:45pm)
- ▶SOFT Business Meeting (4pm-5:30pm)
- ▶ABFT Certificant Recep. (5:30pm-6:30pm)
- ▶President's Cocktail Hr & Banquet (6pm-12am)

**Friday, July 6, 2012**
- ▶Continental Breakfast (7:30am-9am)
- ▶Scientific Session #5 (8am-9:45pm)
- ▶AAFS Steering Committee (9am-11am)
- ▶Scientific Session #6 (10:30am-12pm)
- ▶Lunch (12pm-1pm)
- ▶Scientific Session #7 (1pm-2:30pm)
- ▶Scientific Session #8 (3pm-4pm)

There are many opportunities and a great need for **volunteers** to assist with the 2012 SOFT Meeting. Those interested may contact volunteer coordinators:
Colleen Scarneo colleen.scarneo@dos.nh.gov or Deborah Denson ddenson1@nc.rr.com

# SOFT 2012 ANNUAL MEETING

**Boston, Massachusetts**

**July 1 – 6, 2012**

## 2012 SOFT WORKSHOPS

### Monday July 2, 2012

W1 Opioid Drugs: 21st Century Killers
Co-Chairs: Ann Marie Gordon, MS & Christine Moore, PhD

W2 Laboratory Management For Dummies…and Smarties, Too! It's A Generational Thing!
Co-Chairs: Marc LeBeau, PhD & Dan Anderson, MS

W3 Drug Screening Using Liquid Chromatography Time-of-Flight Mass Spectrometry
Co-Chairs: Stephanie J. Marin, PhD & John M. Hughes, PhD

W4 Approaches to Anabolic Androgenic Steroids Analysis in Oral Fluid and Urine
Co-Chairs: Erica A. Guice, MS & Veronica I. Luzzi, PhD

W5 Great Toxic Catastrophes
Co-Chairs: Maria A. Martinez, PhD & David M. Benjamin, PhD

W6 LC/MS/MS Method Development and Validation for Forensic Toxicology Applications
Co-Chairs: Jarrad R. Wagner, PhD & Bart L. Gray, BS

### Tuesday July 3, 2012

W7 Contemporary Issues in Drunk Driving and Driving Under the Effects of Drugs
Co-Chairs: David M. Benjamin, PhD & Teri L. Stockham, PhD

W8 Polypharmacy & Human Performance in Antipsychotic Cases: Interpretation of Impairment or Impaired Interpretations?
Co-Chairs: Michelle A. Spirk, MS & Jarrad R. Wagner, PhD

W9 Strategies for Expanding DUID Testing: Is Oral Fluid the Way Ahead?
Co-Chairs: Christine Moore, PhD & Barry K. Logan , PhD

W10 Advances & Interpretation Challenges in Hair Testing
Co-Chairs: Gail A. A. Cooper, PhD & Pascal Kintz, PhD

W11 Strategies for Detection & Control of Alcohol Consumption in Clinical and Forensic Cases
Co-Chairs: Alberto Salomone, PhD & Christine Moore, PhD

W12 Uncertainty of Measurement—Reporting for the Forensic Community
Co-Chairs: Carrie A. Kirkton, MS & Melissa S. Kennedy, MS

2012 Workshop Program Chair:
Jen Limoges (518-457-9612)
jennifer.limoges@troopers.ny.gov

# SOFT 2012 Annual Meeting

*Submitted by **Michael Wagner**, Ph.D., Meeting Host*

micawagn@iupui.edu

**SOFT 2012 at the Boston Marriott Copley Place - July 1, 2012 thru July 6, 2012**

**Meeting Registration Costs:**

| | |
|---|---|
| Members | $499.00 |
| Non-Members | $675.00 |
| Students | $175.00 |
| Daily | $275.00 |
| Additional Person *(16 + )* | $399.00 |
| Additional Person *(< 16)* Free | |
| Exhibitor | $499.00 |

**Workshop Cost:**

| | |
|---|---|
| Members ½ Day | $150.00 |
| Full Day | $200.00 |
| Non-Members ½ Day | $200.00 |
| Full Day | $250.00 |

**Individual Event Ticket(s) may be purchased from the Registration Desk for the following events:**

Wed., July 4th, 2012
"Mus. of Science" Event
(16+) - $118

Thurs., July 5th, 2012
"President's Banquet"
(16+) - $110

**Hotel Registration**

Boston Marriott Copley Place
110 Huntington Avenue
Boston, MA 02116 USA

**Phone Reservations (available now):**
**1-800-266-9432** (toll-free) and
**1-506-474-2009** (Int'l)

**Rate: $183/night** (not including tax)

**Online Reservations (available):**

**Reserve Rooms at the Marriot Copley Place Online**

**Overflow rooms are available at:**
Sheraton Boston Hotel
39 Dalton Street
Boston , MA 02199

**617.236.2000**

RATES not including tax and fees:

| | |
|---|---|
| **Singles & Doubles** | **$189.00** |
| **Triples** | **$229.00** |
| **Quads** | **$269.00** |

**Reserve Rooms at the Sheraton Online**

SOFT 2012
www.soft2012.org

## Celebrate The 4th in Boston!

NOTE:

It is imperative to only reserve the true number of nights needed at the hotel, as opposed to simply reserving the whole week. Booking extra nights puts SOFT at financial risk as well as eliminates rooms from our discounted room block that are needed by other participating attendees.

# SOFT 2012 ANNUAL MEETING WORKSHEET
## The Boston Marriott Copley Place
## Boston, Massachusetts, USA
## July 1-July 6, 2012

## REGISTRATION WORKSHEET

Registrations will be available online after March 9, 2012
from the meeting website www.SOFT2012.org

Name_____ Degree_____
Title_____ Agency_____
Address_____
City_____ State_____ Zip_____ Country_____
Telephone _____ Email_____
Shirt Size Preferred - Men: _____ Women: _____ Special Dietary Needs? Yes / No Describe _____
Accompanying Person (s) _____
Shirt Size Preferred - Men: _____ Women: _____ Special Dietary Needs? Yes / No Describe _____

**Go to www.SOFT2012.org TO REGISTER!**

| FULL MEETING REGISTRATION | | *SOFT Mem* | *Accom. Person* | *Non Mem* | *Student* | *Daily* |
|---|---|---|---|---|---|---|
| **March 9 - May 1, 2012 (EARLY REGISTRATION)** | Full Meeting – includes:<br>►Welcome Reception Tuesday eve.<br>►Entrance to Scientific Sessions W, Th, F<br>►Daily Breakfasts, Break (am/pm) Refreshments, Lunches<br>►Wednesday, 4th of July "Museum of Science" tour, outdoor BBQ and "Firework Extravaganza"<br>►Thursday "President's Banquet"<br>►SOFT 2012 Meeting Program / Abstract Book<br>►JAT (Journal of Analytical Tox.) Spec. Issue<br>►SOFT 2012 Meeting Bag / Shirt | **$499** | (family = 16 and older) **$399**<br>Addtl. person younger than 16 is FREE | **$675** | picture ID from Univ. required **$175** | Does NOT include special event tickets for Wed./ Thurs. eve. **$275** |
| **May 1 – June 24** | As Above | **$699** | **$599** | **$875** | **$375** | **$275** |
| **After June 24, 2012 (ON-SITE REG)** | Depending upon supply, on-site registrants may not receive "meeting give-aways" (bag, program, JAT) | **$799** | **$699** | **$975** | **$475** | **$275** |
| **Individual Event Ticket**<br>**Individual Event Ticket** | ►Wed., 4th of July "Mus. of Science" Event (16+)<br>►Thurs., "President's Banquet" (16+)<br>Can be purchased from Registration Desk | **$118**<br>**$110** | **$118**<br>**$110** | **$118**<br>**$110** | **$118**<br>**$110** | **$118**<br>**$110** |

| | | | **Workshop Selection (subject to capacity limitations) Details of each are posted at website (www.soft2012.org)** | **SOFT Mem** | **Non-Mem** | |
|---|---|---|---|---|---|---|
| **WS #1** | Mon | Full Day 8a-5:30p | Opioid Drugs: 21st Century Killers | $200 | $250 | |
| **WS #2** | Mon | Half 8a-noon | Laboratory Management for Dummies . . . and Smarties too! | $150 | $200 | |
| **WS #3** | Mon | Half 8a-noon | Drug Screening Using Liquid Chromatography (LC-TOF/MS) | $150 | $200 | |
| **WS #4** | Mon | Half 8a-noon | Approaches to Anabolic Androgenic Steroids Analysis in Oral Fluids and Urine | $150 | $200 | |
| **WS #5** | Mon | Half 1:30p-5:30p | Great Toxic Catastrophes | $150 | $200 | |
| **WS #6** | Mon | Half 1:30p-5:30p | LC/MS/MS Method Development & Validation for For. Tox. | $150 | $200 | |
| **WS #7** | Tues | Full Day 8a-5:30p | Issues in Drunk Driving & Driving Under Effects of Drugs | $200 | $250 | |
| **WS #8** | Tues | Full Day 8a-5:30p | Polypharmacy & Human Performance in Antipsychotic Cases | $200 | $250 | |
| **WS #9** | Tues | Half 8a-noon | Strategies for Expanding DUID Testing: Is Oral Fluid the Way? | $150 | $200 | |
| **WS #10** | Tues | Half 8a-noon | Advances & Interpretation Challenges in Hair Testing | $150 | $200 | |
| **WS #11** | Tues | Half 1:30p-5:30p | Strategies for Detection & Control of Alcohol Consumption In Clinical & Forensic Cases | $150 | $200 | |
| **WS #12** | Tues | Half 1:30p-5:30p | Uncertainty of Measurement – Reporting for Forensics | $150 | $200 | |

**WEARING NAME BADGE IS MANDATORY AND REQUIRED FOR ALL MEETING FUNCTIONS.**
**IMPORTANT REFUND POLICY:** Refunds for a completed registration of an individual will be honored if written request is received prior to 5-1-12 minus a $100 USD administrative fee. No refunds offered after 5-1-12.
**REGISTRATION DESK will be open Sunday - Friday. Delegates are advised to pick-up badge & materials upon arrival.**

# FROM THE TOXICOLOGY LITERATURE

*Submitted by Barry Levine, Ph.D., DABFT*

OCME, Baltimore, MD

**Forensic Science Review**

**Vol 23 July 2011**

In this issue, there are 2 review articles of interest to the forensic toxicologist. Bortolotti and Tagliaro review markers of alcohol use and abuse. They review 4 groups of substances that have been or proposed to be used as markers for alcohol use and abuse: non-oxidative metabolites of ethanol, acetaldehyde products, markers of alcohol-related metabolic changes and markers of alcohol related organ damage. In another article in the issue, Jones reviews the forensic aspects of alcohol pharmacokinetics. The manuscript begins with an overview of the historical development of our knowledge on the subject. This is followed by a summary of absorption, distribution, metabolism and excretion of alcohol. Issues related to the use of the Widmark equation are then discussed. There is also a section on other pharmacokinetic models and pharmacokinetic software

**Canadian Society of Forensic Science Journal**

**Vol 44 June 2011**

The period of time required between calibration checks for alcohol preliminary breath testing devices was investigated by Rosland and Pon. Using data from 36 AlcoSensor IV DWF devices, they found that these instruments maintained their calibration over a 5 week period. This confirmed the validity of the decision by the Alcohol Testing Committee of the Canadian Society of Forensic Sciences to change the calibration check interval requirement from 2 weeks to 31 days.

**Journal of Forensic Sciences**

**Vol 56 Sep. 2011**

One of the explanations offered for poor performance on standardized field sobriety tests (SFSTs) in suspected drunk driving cases is that the individual was drowsy due to sleep deprivation. Citek et al studied the effect of sleep deprivation on SFSTs in 29 individuals in the presence and absence of ethanol. Subjects were evaluated in two sessions, one after a full night's sleep and one after not sleeping in for the previous 24 hours. In both sessions, following base line evaluations, the subjects ingested ethanol; the highest breath ethanol concentration achieved was 0.11 g/210L. The authors found that there was no evidence sleep deprivation increased the number of clues indicating impairment from SSFT performance.

**Journal of Analytical Toxicology**

**Vol 35 Sep 2011**

Kacinko et al developed a LC/MS/MS method for the quantitation of 3 synthetic cannabinoids (JWH-018, JWH-073 and JWH-250) and the qualitative identification of a fourth (JWH-019) in blood specimens. A single step slightly alkaline extraction was the extent of the sample preparation. Two transition ions were monitored for each compound except JWH-250. The assay was linear from 0.1 to 20 µg/L. Once the validation was completed, the method was used to quantitate JWH-018 and JWH-073 in an individual known to have used the product. At 19 minutes after use, JWH-018 and JWH-073 concentrations were 4.8 and 4.2 µg/L, respectively. These concentrations decreased to 0.2 µg/L at 199 minutes after use.

**Forensic Science International**

**Vol 212 Oct 2011**

Holland et al investigated the postmortem redistribution of cannabinoids. Specifically, 19 paired heart and iliac blood specimens were tested for THC, hydroxy-THC and carboxy-THC. The heart blood to iliac blood ratios for the 3 compounds were 1.5, 1.6 and 1.8, respectively. The highest ratios were 3.1, 2.7, and 3.0, respectively. A trend of increased ratios as postmortem interval increased was also observed.

Broecker et al described a combined system of LC-quadrupole time of flight MS and LC-DAD for screening blood specimens from 77 postmortem cases. Sample preparation involved either an acid or alkaline extraction into methylene chloride or protein precipitation with acetonitrile. Two different chromatographic systems were used because of the specific requirements of each detector. Libraries of accurate mass collision induced dissociation spectra and diode array UV spectra were used to identify substances in case specimens. As expected, the QTOF-MS identified over twice as many substances as the DAD system. (Continued on next page)

## FROM THE TOXICOLOGY LITERATURE *(Continued)*

**Journal of Analytical Toxicology Vol 35 Oct. 2011**

Beck et al examined the potential use of exhaled breath as a specimen to identify use of marijuana. Exhaled breath specimens from 10 cannabis users and 8 controls were collected for 10 minutes onto $C_{18}$ disks by suction using a membrane pump. The disks were cut into small pieces, moistened with isopropanol and extracted twice with hexane:ethyl acetate (4:1) for 1 hour at 37°C. 10% aqueous formic acid was added to the extracts and evaporated to dryness. Residues were reconstituted in hexane:ethyl acetate (1:1) and injected into the LC/MS/MS. In samples collected 1-12 hours after smoking, THC was detected in all smokers.

## NEW SOFT MEMBERS

A "WELCOME" is sent to SOFT's newest members listed below. The SOFT organization has rigorous standards of qualifications that must be met by new applicants, and a Congratulations is extended to each new member attaining the privilege of membership.

The very busy Membership Committee also deserves praise and acknowledgement for their personal time devoted to ensuring a successful future membership for SOFT. A very sincere THANK YOU is extended to the 2011 Membership Committee: Dan Anderson, M.S. (Chair), Robert Johnson, Ph.D., DABFT, Jeri Ropero-Miller, Ph.D., DABFT, Pat Harding, B.S. and the new 2012 Membership Committee which has already reviewed and accepted 9 new members in 2012. The 2012 Membership Committee consists of: Ruth Winecker, Ph.D., DABFT (Chair), Robert Johnson, Ph.D., DABFT, Pat Harding, B.S., Diane Boland, Ph.D., DABFT

**2011 New Members**

Aknouche, Fredric
Alessandrini, Laura
Anderson, Jaime
Auth, Hak
Ayala, Jessica
Bailey, Kristen
Baldwin, Jacquelyn
Baluka, Alexandra
Beard, Ashlyn
Bello-Martin, Aminatu
Bergamaschi, Mateus
Bessett, Shane
Betit, Caroline
Brady-Mellon, Monica
Braseth, Sarah
Carter, Jerry
Casey, Lynn
Castaneto, Marisol
Crawley, Lindsey
Cross, Nathan
DeCaprio, Anthony
Duffus, Michelle
Dunmore, Kerry
Elbogen, Julie
Engle, Kathryn
Gabbard, Katie
Garnier, Margaux
Geller, Richard
Golz, David
Gorman, Mike
Guice, Erica
Halphen, Aimee
Harris, Jocelyn
Howard, Joseph
Johnson-Davis, Kamisha
Kahl, Joseph
Kennedy, Melissa
Knowles, Hanna
Kosinska, Aleksandra
Le, Hung
Lee, Dayong
Lehman, Sean
Liebhart, Rosa
Lilly, Jessica
Lobo Vicente, Joana
Mackowsky, Danielle
Marin, Stephanie
Massiello, Autumn
Mata, Danielle
Mercer, Jennifer
Merrick, Troy
Morjana, Nihmat
Mundy, Lisa
Nicar, Michael
O'Hehir, Catherine
Owens, Davina
Perella, Laura
Placido, Jessica
Platteborze, Peter
Rice, Christopher
Rodrigues, Warren
Rooney, Alice
Rumpler, Marc
Saini, Ajai
Sawyer, Marie
Scheidweiler, Karl
Schneider, Kevin
Schuldies, Kelli
Scott, Frances
Shipkowski, Kelly
Smalley, Elizabeth
Soni, Chetan
Sroka, Robert
Starks, Norman
Stephenson, Jon
Stewart, Lashanda
Sukta, Andre
Swortwood, Madeleine
Thompson, Vanessa
VanAmburg, Darby
Venegas, Ivan
Wareing, Celeste
Welsh, Eric
Whiteman, Cynthia
Wightman, Scott
Withers, Karly
Wood, Michelle
Woodall, Karen

**2012 New Members**

D'Alessandro, Debbie
Kyle, Patrick
Nanco, Carrol
Neuder, Heather
Salomone, Alberto
Simmons, Vanessa
Sparks, Christina
Stephens, Kimberly
Valenzuela, Marcella

# MEMBER NEWS

## *In Memoriam:* Leo A. Dal Cortivo, Ph.D, DABFT (September 16, 1928 - December 15, 2011)

Leo Dal Cortivo was born and raised in New York City and received his early education in NYC public schools. He received a B.S. Degree at Fordham College, a M.S. Degree in biochemistry at Adelphi University and earned the Doctorate in Toxicology at Fordham University. He served in the US Army at the First Army Area Medical Laboratories in New York City. He was a Senior Toxicologist in the Office of Chief Medical Examiner, City of New York, until 1960. He accepted the position of Chief Toxicologist and Director of Forensic Science Laboratories in Suffolk County on Long Island, New York. He was a consultant for the Department of Defense and for the Department of Health and Human Services, inspecting drug testing laboratories throughout the country and abroad. He appeared as an expert witness in numerous court cases, many of them of national significance.

Leo was one of the first Diplomates (certificate 009) of the American Board of Forensic Toxicology (ABFT). He served on the ABFT Board of Directors from its inception to 1980 and he was the first secretary of the Board. He was granted the Emeritus status in 2003.

Leo was a Fellow of the American Academy of Forensic Sciences (AAFS) and past chairman of its Toxicology Section, a co-founder of the Society of Forensic Toxicologists (SOFT) and its second President, a former Treasurer and Trustee of the Forensic Science Foundation, a member of The International Association of Forensic Toxicologists (TIAFT) and various other professional societies and associations. He authored and co-authored many peer reviewed papers in the scientific literature as well as several book chapters. In 1990, the Toxicology Section of the AAFS honored Dr. Dal Cortivo with the Alexander O. Gettler Award for his contributions to the field of forensic toxicology.

Later that year Leo retired from Suffolk County and made Venice, Florida, his permanent home. As much as he enjoyed the sandy beaches of the Florida coast, he always remained a New Yorker at heart.

Dr. Dal Cortivo is survived by his loving wife of 48 years, Patricia, his sister Thelma Fusaro, his brother Robert and many nieces, nephews, grand nieces and grand nephews.

He will be greatly missed by his toxicology family.

## *A Tribute to Leo from Jesse Bidanset, Ph.D., DABFT*

I was asked to address the passing of our friend and colleague Dr. Leo Dal Cortivo. Our professional careers led to our being physically close, Leo worked in the NYC office of the Chief Medical Examiner and with the Suffolk County Office of the Medical Examiner, while my position was with the Nassau County Office of the Medical Examiner. When SOFT was in it's formative stages, Nassau and then Suffolk Counties were the initial hosts. Subsequent to the Suffolk meeting small groups met at individual colleagues' homes. I'd like to share one adventure that involved Leo and myself.

Tully and Jane Speaker hosted one of the interim meetings at their home in Philadelphia in February. The New York Group consisted of Leo, myself, Abe Freireich and Don Hoffman. Leo had the most comfortable wheels so that was our transportation for the trip. After a good meeting (and a wonderful dinner) we set out for our return to NYC and Long Island. The weather man failed to cooperate. The Jersey Turnpike was a "sheet of ice". We rarely got the car above idling speed. They kept closing the turnpike behind us. By the time we dropped Don at the subway and Abe at his home, daylight was breaking.

How many remember the spectrofluorimetric procedure for morphine in bile (Dal Cortivo and Matusiak). What was that fluorofore anyway? Was that excitation and emission wavelength that close?

When most of us were concerned about procedures for new drugs and challenges, Leo made us aware of "politics" and the impact that "outside agencies" would have on our function.

One of our founders and charter members, he will be sorely missed.

## TOXICOLOGY - BITS & PIECES

Send interesting *"News and Notes"* to Section Editor

***J. Robert Zettl, MPA***

**jrzettl1@msn.com**

## NATIONAL SAFETY COUNCIL'S COMMITTEE ON ALCOHOL & OTHER DRUGS

*SUBMITTED BY* ***LAURA LIDDICOAT***

The Executive Board of the National Safety Council's Committee on Alcohol and Other Drugs met Sunday afternoon, February 19, 2012 at the American Academy of Forensic Sciences annual meeting in Atlanta. The full committee convened Monday morning February 20, 2012. Committee officers for 2012 are:

Dennis Canfield – Chair

Randall Beaty – Vice Chair

Alka Lohmann – Secretary

Mack Cowan –Immediate Past Chair

The 21st Robert F. Borkenstein Award was conferred on Boris Moczula, Monday evening. Following past tradition, Dr. Dubowski presented the award and provided insights into the various aspects of Boris' professional career. To quote Dr. Dubowski, "Put briefly, Boris is one of the best lawyers in America. He is also one of the most dedicated, accomplished, and experienced criminal justice practitioners now active in the profession."

The Center for Forensic Science Research and Education is assisting the National Safety Council (NSC) and the National Highway Traffic Safety Administration (NHTSA) in gathering information about the needs and capabilities of forensic toxicology laboratories who provide testing in DUID and DRE cases through an online survey. The project is designed to identify current practices, capabilities and needs, identify needs for training and research, and make recommendations for standardizing the scope and sensitivity of testing most appropriate to these kinds of investigations. More information about the project can be found here

**http://forensicscienceeducation.org/duid-survey/.**

This survey should take approximately 40 minutes to complete, and should be completed by only one person from each laboratory. Once you begin the survey, you will not be able to save and come back to it at a later time. The survey asks questions pertaining to the screening and confirmation cut-offs for blood, urine and oral fluids in your laboratory. Having this data available prior to beginning the survey will make it easier to complete quickly.

**The survey can be found at the following link:**

**https://www.surveymonkey.com/s/DUIDSurveyToxicologyLaboratories**

All respondents will receive a summary of the data once all the survey results have been tabulated. Please note that when draft and final reports are prepared, the data compiled will not be be linked to any individual, State or laboratory. If you have any questions about how to complete the survey or if you are not the correct person, please contact me at **duidsurvey@gmail.com** or **(215) 366-1589.** We hope we can count on your assistance with this opportunity to attract attention to the needs and capabilities of toxicology laboratories.

To access CAOD policies, previous Borkenstein Award recipients or learn more about the committee go to **www.nsc.org** and type in "CAOD" under the NSC search engine or link to the CAOD home page directly at

**http://www.nsc.org/get_involved/divisions/Pages/CAODwebpage.aspx.**

## AAFS Toxicology Section News

*Submitted by **Phil Kemp**, Ph.D., DABFT, Toxicology Section Chair, AAFS*

The theme for the AAFS 64th Annual Scientific Meeting was Global Research: The Forensic Science Edge". Program Chair, Dr. Loralie Langman, and her Co-Chair for workshops, Dr. Ashraf Mozayani, organized an excellent program that demonstrated both national and international collaboration that has moved forensic toxicology forward into 2012. Our thanks go out to all the presenters that made the program a great success, and while all of the registration numbers have not been compiled, as of the Wednesday afternoon business meeting, there were 130 people registered for the meeting from the Toxicology Section. A huge thank you goes out to all the abstract reviewers, moderators and volunteers. Your dedication helped make this meeting the scientific success it was. And I would also like to extend a big thank-you and acknowledgements to the Sponsors NMS Labs, Agilent Technologies, Shamrock Glass, Immunalysis, and Aegis Sciences.

The week got off to a great start with two workshops on Monday: Preparation and Strategic Planning for Accreditation of Forensic Laboratories Based on the ISO/IEC 17025 International Standard (Chair: Ashraf Mozayani; Co-Chair: Laurel J. Farrell); and Using Pharmacokinetics to Analyze Forensic Toxicology Cases [Chair: David M. Benjamin; Co-Chair: Dwain C. Fuller). Tuesday also had two offerings from the Toxicology Section: one workshop entitled "Deadly by Design: Forensic Toxicology, Adverse Effects of Synthetic Cannabinoids, and Novel Designer Drugs ("Bath Salts")", (Chair: Brianna Peterson, Co-Chair: Barry K. Logan); and we had the rare offering of a Breakfast Seminar, "The Cleveland Cyanide Murder Case: A Multidisciplinary Approach to Crime Investigation Including Chemical Identification, Cause of Death, Capture, and Court Proceedings". These events were well attended and generated a great deal of productive discussion among the participants.

There were 27 posters and 18 oral presentations. Special Sessions included Postmortem Pediatric Toxicology, and a Multidisciplinary Session with Pathology/Biology. The Drugs and Driving Special Session titled "Driving Under the Influence of Drugs" was coordinated by Ashraf Mozayani and featured guest lecturer William C. Head, JD speaking on "DUI Defense", in addition to 6 platform presentations. During the Toxicology Open Forum on Thursday night Mr. Chip Walls did an outstanding job of keeping the discussion lively and on point. The Annual Lectureship was presented by John R. Barr, PhD, the Chief of Biological Mass Spectrometry Laboratory at the Center for Disease Control and Prevention (CDC). His talk was "Combating Ancient Diseases with Modern Technology: Forensic Chemistry in a Public Health Laboratory", showing that there is more to mass spec and toxicology than drugs, and how sometime it's the old issues that are still challenging.

At the Toxicology Section Business Meeting the 2011 Section Chair reported on the Toxicology Section with respect to finances and membership. In addition, it was clear from the committee reports that members of the section are actively engaged in their groups, working to improve both the section and the field of forensic toxicology as a whole. Awards were presented, new officers were elected, and new committee members were appointed. The new officers for 2012 are: Chair Dr Ruth Winecker, Secretary Dr. Loralie Langman. In addition, Dr. Winecker (2013 Section Chair) appointed Dr. Ashraf Mozayani and Dwain Fuller as 2013 Section Program Chair and Co-Chair, respectively. Congratulations to these new officers and appointees! Please provide assistance to them throughout 2012.

Dr. Marilyn Huestis took the podium at the business meeting to present the Irving Sunshine Award for Outstanding Student Research in Forensic Toxicology. Congratulations to Dr. Teresa Gray for a well deserved honor from the Toxicology Section. Finally, the section rose to say farewell to three colleagues who passed this last year: Charlie Cresalia, BS, Ferrin B Moreland, PhD, and Leo A Dal Cortivo, PhD. They will be missed.

Preparations for next year's meeting are already underway. Please contact Dr. Mozayani and Mr. Fuller, or the 2013 Program Chair and Co-chair, with your scientific program suggestions, workshop ideas, or if you would be willing to help in any way. They will be happy to hear from you.

## The International Assocation for Chemical Testing (IACT)

*Submitted by **Melissa Kennedy***

The International Association for Chemical Testing (IACT) will be hosting it's 25th annual conference in April. The conference is scheduled for April 16-19, 2012 at the Loews Vanderbilt Hotel in Nashville, Tennessee. Sessions will include expert witness testimony, designer drugs in society, and the implications of Bullcoming and Melendez-Diaz Supreme Court decisions on the right to confrontation. Many activities have been planned to celebrate the 25th anniversary and the contributions made by many in the field of Toxicology and advances in technology. The conference will host an awards banquet to honor Dr. Dubowski as the first recipient of the Lifetime Achievement Award. Dr. Dubowski's efforts in Toxicology have been tremendous to the field of breath alcohol testing and IACT is proud to be conferring this award on him. Two workshops have been planned in conjunction with the conference:

April 13-15, 2012

Measurement Confidence: Traceability, Measurement Assurance, and the use of Statistics to Estimate the Uncertainty of Measurement.

This 3 day workshop will be taught by Dr. Suzanne Bell of West Virginia University and Laurel Farrell of ASCLD/LAB. The workshop will begin with a statistics refresher and progress through measurement assurance and is appropriate for all staff in a forensic testing or calibration laboratory. The final day of the workshop is analogous to the Level 100 Measurement Confidence webinar courses offered by ASCLD/LAB and upon completion, participants will be eligible to attend the Level 200 Measurement Uncertainty Courses.

April 14, 2012

Forensic Ethanol Analysis and Interpretation

This 8 hour workshop is offered by the Forensic Toxicology Certification Board (FTCB). Topics include pharmacokinetics and pharmacodynamics of ethanol, analysis of biological specimens, and analytical methodologies. The participant can expect to gain knowledge which will assist in the interpretation of analytical findings and will provide basic knowledge and/or supplement existing knowledge in the analysis of biological specimens for ethanol and related alcohols. This workshop is a good primer for those participants who will be taking the FTCB exam but will not replace the knowledge and skills gained through continuing education and self study.

More information regarding the conference and workshops can be obtained via IACT's website at: http://www.iactonline.org/

## 2012 Annual MATT Meeting

*Submitted by **Don Frederick**,*

*Vice President, MATT*

The Midwest Association for Toxicology and Therapeutic Drug Monitoring (MATT) is having its annual meeting at the "McDonald University" campus in Oakbrook, IL on May 3&4. The program and registration forms can be found on the website.
http://www.midwesttox.org/annualMeeting.html

Join MATT for a great meeting and a fun activity on Thursday evening

## SOFT/AAFS Drugs and Driving Committee

*Submitted by **Jennifer Limoges***

The SOFT/AAFS Drugs & Driving Committee held an excellent Special Session at the AAFS conference, coordinated by Ashraf Mozayani. The Special Session for the SOFT meeting in Boston in July will be coordinated by Amy Miles.

Please check out the committee's area on the SOFT website, located under "SOFT Activities" - "Drugs and Driving". Member feedback and suggestions are welcome and appreciated.

# TIAFT News

*Submitted by **Alain Verstraete**, MD.; TIAFT President*

*"To Protect Society From Drug Abuse and Chemical Terrorism"*

*June 2-8th, 2012*

*Hamamatsu, Japan*

After the very successful joint SOFT-TIAFT meeting in San Francisco, the 50th annual meeting of TIAFT will take place on June 2-8th, 2012 in Hamamatsu, Japan under the motto: "To protect society from drug abuse and chemical terrorism." Prof. Osamu Suzuki, M.D., Ph.D. Of the Department of Legal Medicine, Hamamatsu University School of Medicine, Hamamatsu, Japan is chair of the meeting.

We will have the TIAFT 2012 meeting jointly with Japanese Association of Forensic Toxicology and also Japanese Society of Legal Medicine, and are expecting that more than 700 people will gather at TIAFT2 012.

Especially for young TIAFT members, who have never visited Japan, it will be a good chance to come into contact with a unique culture of Japan, its people and sophisticated industries. We assure you that you will enjoy them in Hamamatsu. Hamamatsu is located more than 400 km (250 miles) from the damaged Fukushima power plant. There is no radioactivity contamination nor damage from the earthquake in Hamamatsu.

The deadline or abstracts has been moved to March 16. The deadline for early registration is April 10, 2012.

The social program will be a good chance to contact Japanese culture, people and their lives. There are five to choose from: a visit to the YAMAHA grand piano factory and KAMO iris garden, a little tour of Japanese gardens near Hamamatsu, a cruise on Lake Hamana and Hamamatsu Flower Park, an experience of tea ceremony at a traditional Japanesey house Shointei or a visit to a mall and sushi-go-round.

I look forward to meet many SOFT members in Hamamatsu. More information can be found through the link on the TIAFT website or at

**http://www.secretariat.ne.jp/tiaft2012/welcome.html**

Prof. Alain Verstraete
TIAFT president

Act City Congress Center
111-1 Itaya-machi, Naka-ku,
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TIAFT 2012

# SAMSHA Recommends Oral Fluids and Additional Schedule II Drugs

*Submitted by **Eugene D. Hayes,** M.B.A., LCDR, USPHS and **Courtney J. Bannister**, B.S.*

***"Based on review of the science, DTAB recommends that SAMHSA include oral fluid as an alternative specimen in the Mandatory Guidelines for Federal Workplace Drug Testing Programs*; and 2) *DTAB recommends the inclusion of additional Schedule II prescription medications (e.g., oxycodone, oxymorphone, hydrocodone and hydromorphone) in the Mandatory Guidelines for Federal Workplace Drug Testing Programs*."**

**Background**

The purpose of this article is to share with the public how the direction of the Mandatory Guidelines for Federal Workplace Drug Testing Programs are impacted by the DTAB recommendations. At the January 31, 2012 DTAB meeting, Administrator Pamela Hyde of the Substance Abuse and Mental Health Services Administration (SAMHSA) announced the approval of the following two DTAB recommendations: 1) *Based on review of the science, DTAB recommends that SAMHSA include oral fluid as an alternative specimen in the Mandatory Guidelines for Federal Workplace Drug Testing Programs*; and 2) *DTAB recommends the inclusion of additional Schedule II prescription medications (e.g., oxycodone, oxymorphone, hydrocodone and hydromorphone) in the Mandatory Guidelines for Federal Workplace Drug Testing Programs*."

Prior to these recommendations, the Division of Workplace Programs (DWP) initiated a review of the literature on the current state of the science of oral fluid, convened consensus meetings across federal and industry stakeholders, sponsored presentations by subject matter experts on the historical and current perspective of the oral fluid specimens in drug testing in open public DTAB meetings, reviewed the non-regulated industry use of the oral fluid specimen, reviewed the analytical instrumentation options for performing oral fluid testing, and developed a timeline which is expected to culminate in a Federal Register Notice of the Proposed Mandatory Guidelines.

**DTAB Mission**

One of the purposes of DTAB is to assess the science and technology used in workplace drug testing analyses, including alternate specimens. The Board advises SAMHSA in areas of new or emerging workplace drug testing directions and reviews the specific science areas on new drugs of abuse and the methods necessary to detect their presence. In the 2008 Mandatory Guidelines (73 FR 71858), the U.S. Department of Health and Human Services (HHS) position was that the addition of alternative specimens to the Federal Workplace Drug Testing Program would complement urine drug testing.

The DTAB open session meeting held in January 2011 shared with the Board and the public the most current information on the oral fluid specimen. During this meeting, experts presented on topic areas concerning oral fluid specimens in workplace drug testing that included: physiological composition of oral fluid, drug analytes and cutoffs, collection devices, and best practice laboratory methodologies (screening and confirmatory testing). Many questions arose from DTAB members concerning the specific topic areas mentioned above. The Designated Federal Official for the DTAB compiled and categorized these questions for the next scheduled meeting to address these concerns.

**Laboratory Standardization Inter-Agency Agreement**

SAMHSA/DWP entered into an Interagency Agreement (IAA) and received funding from the ONDCP in an effort to update and expand the Federal forensic drug testing laboratory standards for abused drugs. The overall goal of this effort was to research the current state of the science in oral fluid specimen testing/collection devices and develop proposed Mandatory Guidelines to include the use of the oral fluid specimen for publication in the Federal Register and solicitation of public comments. Additionally, this agree-

(Continued on next page)

## SAMSHA RECOMMENDATIONS (CONTINUED)

ment required identification of the best candidates of additional drugs of abuse to be added to the existing urine specimen analyte panel in the Mandatory Guidelines, including selected prescription drugs with high abuse and impairment potential. Subsequent to this agreement, several working group meetings were held with the purpose of addressing the questions and concerns from the January 2011 DTAB meeting and exploring the science related to developing the proposed Mandatory Guidelines to include the oral fluid specimen. These meetings included federal partners, subject matter experts, industry leaders, stakeholders, and representatives from the National Laboratory Certification Program (NLCP).

**Public Request for Information**
DWP solicited written comments via a Federal Register Notice (FRN) Request for Information (RFI). The notice requested statements from the general public and industry stakeholders regarding a variety of issues related to oral fluid specimen drug testing, including analytes, cutoffs, specimen validity, collection, collection devices, and testing. The FRN was an effort to provide the public and industry stakeholders with an opportunity to comment and offer input related to oral fluid specimen drug testing. A variety of responses were received and presented at the July and August 2011 DTAB meetings.

**Drafting Mandatory Guidelines**
The DTAB deliberated on the aforementioned recommendations and voted unanimously to advise SAMHSA on these new directions at the July 2011 meeting. The DWP staff crafted the Proposed Mandatory Guidelines for the inclusion of oral fluid drug testing. DWP consulted with various individuals on the current state of the science in laboratory testing, manufacturing, research, and current practice. These individuals specialized in analytes and cutoffs, validity testing, collections, collection devices, drug testing, law, and policy.

DWP worked independently and within workgroups to ensure the systematic review of each section within the proposed rule. DWP provided data from current research and NLCP laboratory testing to support discussion and evaluation of the inclusion, exclusion, or explanation or various items within the proposed Guidelines draft shared with the DTAB. Working with RTI International, DWP authorized two research projects to determine current NLCP laboratory capabilities in the oral fluid drug testing through proficiency testing and to evaluate biomarkers for specimen validity through a pilot study. In October 2011, DWP reviewed with the DTAB a draft of the Proposed Mandatory Guidelines. Throughout this process, the DWP staff diligently sought collaborations with federal partners, the exploration of the supportive sciences for the new matrices, and open communication with the public. In January 2012, after the announcement of the signed recommendations, DWP shared with DTAB the draft final version of the guidance portion of the Proposed Mandatory Guidelines. Concurrently, the staff is drafting the preamble section of the document.

**Next Steps**
The SAMHSA-approved recommendations allow for the exploration of the science related to oral fluid drug testing. As a direct result of the Administrator accepting the DTAB recommendation on oral fluid testing, SAMHSA/DWP entered into an agreement in February 2012 with the National Institute on Drug Abuse (NIDA) to further the scientific basis for the performance requirements of oral fluid collection devices. The DWP goal is to work toward the Federal Register publication for public comment of the Proposed Mandatory Guidelines for oral fluid. Due to the complexities inherent to each specimen the proposed Mandatory Guidelines for oral fluid and the Mandatory Guidelines for urine will remain separate documents.

**Conclusion**
The DWP staff is working diligently to act on the recommendations approved by the SAMHSA Administrator. DWP staff are your most important resource for any questions you may have regarding federal workplace drug testing. Our contact information is located on our website

http://workplace.samhsa.gov/.

Please call or email us with any of your questions or concerns. We are here to help.

# DFSA WORKSHOP

***April 16-17, 2012***

**SOFT Continuing Education Committee and**

**SOFT Drug-Facilitated Sexual Assault Committee Seminar**

***Sponsored by:***

***Oklahoma State Bureau of Investigation***

**LOCATION:**

**OSBI Forensic Science Center**

800 East 2nd Street

Edmond, OK 73034

## WORKSHOP FORMAT

Classroom lectures will be provided on the sexual assault exam, DFSA investigation, DFSA prosecution, ethanol, various drugs used to facilitate sexual assault, and reaching the SOFT recommended detection limits. Additionally, students will break into groups to evaluate a mock case scenario and will participate in a mock trial based on the case.

## REGISTRATION

(INCLUDES CONFERENCE HANDOUTS AND BREAKFAST AND LUNCH DAILY)

**SOFT Member $100.00**

**Non-SOFT Member $150.00**

**Student $75.00**

***Deadline March 30, 2012***

For more information or to register for the workshop

Email **Madeline Montgomery** at **Madeline.Montgomery@ic.fbi.gov**

## WORKSHOP FACULTY

**Andrea LaFleur, RN**
YWCA SANE Program
Oklahoma City, OK

**Laureen Marinetti, PhD**
Montgomery County Coroner's Office and
Miami Valley Regional Crime Lab ; Dayron, OH

**Madeline Montgomery, BS**
Federal Bureau of Investigation Laboratory
Quantico, VA

**Timothy Rohrig, PhD**
Regional Forensic Science Center
Wichita, KS

**Matthew Stillwell, MS**
Oklahoma State Bureau of Investigation
Edmond, OK

**Jarrad Wagner, PhD**
Oklahoma State University
Tulsa, OK

**Additional faculty will include a sex crimes investigator and an attorney.**

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## 2012 S.O.F.T. Committee Chairs

| Committee | Committee Chair |
|---|---|
| Advocacy | Bruce Goldberger, Ph.D., DABFT |
| ByLaws | Yale Caplan, Ph.D., DABFT |
| Budget, Finance, and Audit | Rod McCucheon, Ph.D., DABFT |
| Membership | Ruth Winecker, Ph.D., DABFT |
| ToxTalk Editor | Yale Caplan, Ph.D., DABFT |
| Publications (JAT Special Issue) | Demitri Gerostamoulos, Ph.D. |
| Awards | Philip Kemp, Ph.D., DABFT |
| Meeting Resource | Dan Anderson, M.S., FTS-ABFT, DABC |
| Drugs & Driving | Jennifer Limoges, M.S., DABC |
| Policy and Procedure | Ruth Winecker, Ph.D., DABFT |
| SOFT Internet Web-Site | Bruce Goldberger, Ph.D., DABFT |
| Continuing Education | Ann Marie Gordon, M.S. |
| Young Forensic Toxicologists | Jane Thatcher, Ph.D. |
| Drug Facilitated Sexual Assault | Laureen Marinetti, Ph.D., DABFT |
| Ethics | Robert Osiewicz, Ph.D., DABFT |
| Nominating | Bradford Hepler, Ph.D., DABFT |
| Strategic Planning | Peter Stout, Ph.D., DABFT |
| Consortium of For. Science Organizations | Laurel Farrell, B.A. |
| Vendor Liaison | Peter Stout, Ph.D., DABFT |

## Webmasters

Bruce Goldberger, Ph.D., DABFT
Matthew Juhascik, Ph.D., DABFT

ToxTalk **Deadlines** for Contributions:

**April 1** for June Issue
**August 1** for September Issue
**November 1** for December Issue
**February 1** for March Issue

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

**2012**: Boston, MA.....June 30-July 6, 2012....Michael Wagner/Colleen Scarneo
**2013:** Orlando, FL.....Oct. 26-Nov. 3, 2013..... Bruce Goldberger
**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


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