



# TOXTALK

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## INSIDE THIS ISSUE:

2007 Meeting Info	2-3
Drugs in the News	4-5
Case Notes	6-10
SOFT Member Interest News	11
Future Meeting News	12

Inserts: SSEP Info / Application  
Call for Papers / Instructions  
Meeting Registration Form  
Fun Run Sign Up Form

## CONGRATULATIONS ERA/Y SMA AWARDEES

S.O.F.T. sponsors two awards intended to encourage academic training and research in areas related to forensic toxicology. The Educational Research Award (ERA) grants the recipient a stipend of up to \$1,000 intended for travel expenses to attend the S.O.F.T. annual meeting and the opportunity to present their research to attendees. The Young Scientist Meeting Award (YSMA) was established to encourage involvement of the bench level scientist. The YSMA awardee also receives up to a \$1,000 stipend intended for travel expenses to attend the S.O.F.T. annual meeting and report research findings as an oral presentation. The S.O.F.T. website has a link for eligibility and application information. S.O.F.T. members are encouraged to persuade talented co-workers or students to apply for one of these prestigious recognition awards. Congratulations to the following 2007 ERA and YSMA Awardees.

### ERA Awardees

#### Amy Cadwallader -

Title: "Activity of Anabolic-Androgenic Steroids in a Biological Assay"

University of Utah  
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Ph: 801-581-5117  
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amy.cadwallader@pharm.utah.edu  
Mentor: Douglas Rollins, M.D., Ph.D.

#### Michele Merves -

Title: "Propofol in Pig Breath and Plasma"

University of Florida  
Rocky Point Labs, Toxicology  
4800 SW 35<sup>th</sup> Drive  
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Ph: 352-265-0680, ext. 72002  
Fax: 352-265-9904  
merves@pathology.ufl.edu  
Mentor: Bruce Goldberger, Ph.D.

#### Erin Kolbrich -

Title: "Two-Dimensional GC/EL-MS with Cryofocusing for Sensitive and Specific Quantification of MDMA, MDA, HMMA, HMA, and MDEA in Human Plasma"

National Institute of Drug Abuse  
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Baltimore, MD 21224  
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ekolbrich@intra.nida.nih.gov  
Mentor: Marilyn Huestis, Ph.D.

#### Cody Peer -

Title: "Direct-Injection Mass Spectrometric Method for the Rapid ID of Fentanyl and Norfentanyl in Postmortem Urine of Six Drug Overdose Cases"

WV University, Dept. of Basic  
Pharmaceutical Sciences  
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Fax: 304-293-2576  
cpeer@hsc.wvu.edu  
Mentor: Patrick Callery, Ph.D.

#### Sandeep Sunny Rodhey -

Title: "Analysis of Ayurvedic Medicinal Products for Heavy Metals Using a Direct Combustion Mercury Analyzer and Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)"

Pace University  
Department of Forensic Science  
1 Pace Plaza  
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Ph: 914-346-1967  
Fax: 914-989-8424  
srodhey@gmail.com  
Mentor: Donald Hoffman, Ph.D.

### YSMA Awardees

#### Sara Kegler -

Title: "Aripiprazole Analysis and Tissue Distribution in Postmortem Specimens"

Forensic Laboratories  
1104 N. Mission Rd.  
Los Angeles, CA 90033  
Ph: 323-343-0670  
Fax: 323-222-5171  
skegler@lacoroner.org  
Supervisor: Dan Anderson

#### Henry Swofford -

Title: "Macronutritional Composition Induced Differential Gastrointestinal Absorption Kinetics of Alcohol: A Pharmacokinetic Analysis of Alcohol Absorption in the Postprandial State"

Georgia Bureau of Investigation  
Division of Forensic Science  
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Decatur, GA 30034  
Ph: 404-244-2500  
Fax: 404-270-8174  
henry.swofford@gbi.state.ga.us  
Supervisor: Glenn O'Loughlin

#### Tor Selden -

Title: "Buprenorphine Concentrations in Postmortem Whole Blood and Urine From Suspected Overdose Cases"

Nat'l Board of Forensic Medicine  
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Fax: +46 13 10 4875  
tor.selden@rmv.se  
Supervisor: Robert Kronstrand, Ph.D.

#### Brienne Brown -

Title: "Pharmacokinetic Study of  $\beta$ -Hydroxy- $\beta$ -Methylbutyrate in Male and Female Human Subjects"

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Ph: 801-581-5117  
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ballan@chem.utah.edu  
Mentors: Diana Wilkins, Ph.D.,  
Matt Slawson, Ph.D.



## PRESIDENT'S MESSAGE BY DIANA WILKINS, PH.D.

Summer is upon us and there are many exciting events and activities that S.O.F.T. members can anticipate for the approaching months.

The current issue of ToxTalk contains some very important information about the upcoming 2007 S.O.F.T. annual meeting at the Sheraton Imperial Hotel in Chapel Hill, N.C. Our local meeting co-hosts, Jeri Roper-Miller and Ruth Winecker, along with their incredible local team have put together a program that promises to be both informative and fun. Take a moment to look over the Preliminary Program and begin your own meeting planning! October in North Carolina offers a beautiful venue, coupled with an exciting scientific program. Also, be sure to take advantage of the enhanced on-line meeting registration that is now available thanks to the efforts of Paul Lubbers, Bruce Goldberger, Vickie Watts, and Lisa O'Dell.

I am happy to report that S.O.F.T. continues to nurture continuing education and training in forensic toxicology. There are two

items of particular note in this issue of ToxTalk. First, upon the recommendation of the Awards Committee, S.O.F.T. is pleased to announce the nine ERA and YSMA recipients for 2007. These students and colleagues have worked very hard to develop individual research projects in forensic toxicology. The results of their work will be presented at the upcoming 2007 annual meeting. Second, I'd like to call your attention to the new S.O.F.T. Student Enrichment Program (SSEP). This educational outreach program will be held in conjunction with the annual meeting. Over 100 students with an interest in forensic sciences from local area high schools and colleges will experience a full-day workshop and a laboratory tour. It is hoped that this will become a new S.O.F.T. tradition that will be repeated in future years to facilitate early exposure to the scientific discipline of forensic toxicology.

S.O.F.T.'s Ad Hoc Committee for Long-Term Strategic Planning is continuing to review and develop recommendations for the future growth of the organization. Comprised

of former S.O.F.T. Presidents and Treasurers, this committee has been charged with providing advice on the development of long-range planning goals and budgets for S.O.F.T. It is anticipated that this important committee, chaired by Dr. Brad Helper, will be able to report to the membership on their progress at the 2007 annual meeting.

Please continue to submit your news items, ideas and articles for ToxTalk to our Editorial Staff, Yale Caplan, Vickie Watts, Dan Anderson, Matthew Barnhill, Dwain Fuller, and Don Kippenberger. As always, ToxTalk continues its long-standing tradition of excellence and service to our members. Thanks to all of the many S.O.F.T. members who continue to help create this outstanding resource for the membership.

Wishing everyone an enjoyable summer season.

Diana



### S.O.F.T. 2007 ANNUAL MEETING RALEIGH-DURHAM-CHAPEL HILL October 15 – 19, 2007

Co-Hosts: Jeri Roper-Miller / Ruth Winecker

Site: Sheraton Imperial Hotel, Durham, North Carolina



## PRELIMINARY PROGRAM

### Sunday, October 14, 2007

- Satellite Organization Meetings
- NSC Executive Board  
(11:30 am—1:30 pm)
- Registration Opens  
(2:00 pm—6:00 pm)
- NLCP Inspector Training  
(2:00 pm—6:00 pm)

### Monday, October 15, 2007

- Continental Breakfast  
(7:00 am—8:30 am)
- Registration (7:00 am—6:00 pm)
- Workshops (8:00 am—5:00 pm)
- SOFT Student Enrichment Program  
(8:00 am—5:00 pm)
- ABFT Exam Committee  
(noon—6 pm)
- Dinner—on your own

### Tuesday, October 16, 2007

- Continental Breakfast  
(7:00 am—8:30 am)
- Registration (7:00 am—6:00 pm)
- Workshops (8:00 am—5:00 pm)

- ABFT Examination (8 am—noon)
- ABFT Accreditation Committee  
(9 am—noon)
- ABFT Board Meeting (noon—6 pm)
- Exhibits Set-up (noon—5:00 pm)
- Exhibits Open (6:30 pm—8:00 pm)
- Welcoming Reception in Exhibit Hall  
(6:30 pm—8:00 pm)
- Elmer Gordon Forum  
(8:00 pm—10:00 pm)
- Nite Owl Reception  
10:30 pm—midnight

### Wednesday, October 17, 2007

- Continental Breakfast  
(7:00 am—8:30 am)
- Registration (7:30 am—5:30 pm)
- Scientific Session (8:30 am—10:00 am)
- Exhibits Open (9:30 am—3:30 pm)
- Poster Session 10:30 am—noon
- Lunch w/ Exhibitors (noon—1:30 pm)
- Scientific Session (1:30 pm—3:00 pm)
- SOFT Business Meeting  
(3:30 pm—5:00 pm)
- Exhibitor's Happy Hour  
(5:00 pm—6:30 pm)
- Historic Tobacco Evening Dinner and Dance (6:30 pm—10:30 pm)

### Thursday, October 18, 2007

- SOFT Fun Run/Walk  
(6:30 am—8:00 am)
- Continental Breakfast  
(7:00 am—8:30 am)
- Registration (7:00 am—5:00 pm)
- Exhibitor Feedback Mtg.  
(8:00 am—9:30 am)
- Exhibits Open (9:30 am—1:30 pm)
- Scientific Session  
(8:30 am—10:00 am)
- Poster Session (10:30 am—noon)
- Lunch w/ Exhibitors (noon—1:30 pm)
- Exhibits Breakdown  
(1:30 pm—3:30 pm)
- Scientific Session (1:30 pm—3:00 pm)
- Poster Session (3:30 pm—5:00 pm)
- ABFT Certificant Reception  
(5:00 pm—6:00 pm)
- President's Reception  
(6:30 pm—10:30 pm)

### Friday, October 19, 2007

- Continental Breakfast  
(7:30 am—9:00 am)
- Closing Scientific Session  
(9:00 am—11:00 am)

## NEW S.O.F.T. STUDENT ENRICHMENT PROGRAM

A goal of S.O.F.T. has been to promote continuing education and training in forensic toxicology. In support of this mission and our own traditions, the S.O.F.T. 2007 Planning Committee has developed a student educational outreach program that invites college and upper level high school students to attend a day long educational event during our annual meeting in Raleigh, NC.

Over 500 postcards have been sent to North Carolina High Schools and over 50 e-mail notifications were directed to North Carolina Colleges and Universities inviting teachers to go to the S.O.F.T. website to learn more about this program and how students could apply for this wonderful educational opportunity.

The S.O.F.T. Student Enrichment Program (SSEP) will take place at the Sheraton Imperial on Monday, October 15, 2007



(8:00 am to 5:00 pm). The SSEP application is included in this issue of ToxTalk as an insert or may be downloaded from the website (<http://www.soft-tox.org/docs/SOFT%202007%20SEP%20Application.pdf>).

The Application Period ends **Sept. 14, 2007** (the **firm deadline**). Acceptance notification will occur by email on or before September 24, 2007.

S.O.F.T. and its sponsors (RTI International, Lab Corporation of America, and North Carolina State Bureau of Investigation) are supporting this day long event which will allow students interested in forensic sciences to experience a tour of a forensic laboratory, learn first hand about forensic toxicology and actual experiences of professionals in the field. Lunch will be provided with forensic toxicologists for further discussion and additional question and answer time. If you know of a deserving student that

may be interested in attending the inaugural SSEP, please invite them to apply.

The SSEP will be limited to 100 students. The purpose of SSEP is to foster education among our future forensic scientists and to give students an educational opportunity they may not otherwise experience.

Students will be chosen through an application process. Students demonstrating a high academic achievement in the sciences, especially with an indicated interest in forensic sciences, can apply to the SSEP. Students are responsible for their own transportation to SSEP and lodging, if needed. All costs associated with the day-long event itself, including lunch, will be covered by SOFT and its sponsors.

### Applications available:

[www.soft-tox.org](http://www.soft-tox.org)  
[forn6tox@aol.com](mailto:forn6tox@aol.com)  
[jerimiller@rti.org](mailto:jerimiller@rti.org)

### Application Period:

May 1, 2007 to September 14, 2007

### Acceptance Notification:

September 24, 2007

## S.O.F.T. 2007—NORTH CAROLINA

The S.O.F.T. 2007 Meeting Committee and many volunteers are busily planning and making final decisions for the organized events to provide a fabulous time for all attendees that visit Raleigh-Durham-Chapel Hill. Exquisite food, entertainment, and fun will most definitely please all attendees.

The S.O.F.T. website is being updated regularly with "new" information as it becomes available (Thanks Bruce!). The online registration, is now available on the S.O.F.T. website ([soft-tox.org](http://soft-tox.org)).

This year's scientific program includes eight workshops. Refer to the inserts included with this issue or the SOFT website (<http://www.soft-tox.org/docs/SOFT%202007%20Workshops.pdf>) for more workshop details. Our Workshop Chairs have worked hard putting together some great op-

portunities for continuing education, so make sure you include in your registration as many workshops as your schedule can handle!

The 2007 Raleigh meeting will host the initial S.O.F.T. Student Enrichment Program (SSEP) hosting 100 college and high school students interested in forensic toxicology. This SSEP is proposed to be an annual event at future S.O.F.T. meetings.

S.O.F.T. enjoys a loyal following of exhibitor support, and will have a full exhibit hall presenting the latest and best technology the industry has to offer.

The S.O.F.T. planning committee is looking forward to personally welcome meeting attendees to Raleigh-Durham-Chapel Hill this October, so clear your desks and calendars for October 15-19, 2007. Final details and more updates will be published in the September issue of ToxTalk.

The planning committee is continually gathering information to share with attendees, including area restaurant lists, entertainment spots, and transportation information. If there is additional information you would like us to include in the upcoming correspondence or in the meeting attendee bags, please drop us a line and we will be happy to investigate!

The scientific program promises to knock your socks off! The abstract submission deadline of June 29, 2007 is quickly approaching. The abstracts will incorporate five scientific sessions and three poster sessions. Some special sessions are being prepared, which is intended to enhance the event. Abstract reviewers are needed: Anyone willing to assist can email Rebecca Jufer Phipps at [rphipps@phipps.ws](mailto:rphipps@phipps.ws) to get more details.

## S.O.F.T. 2007 PLANNING COMMITTEE MEMBERS

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## DRUGS IN THE NEWS

*Submitted by Section Editor, Dwain Fuller, BS, D-FTCB, TC-NRCC*

### MEDICAL MARIJUANA: MORE THAN BLOWING SMOKE?



This headline recently caught my eye: “Dying Woman Loses Marijuana Appeal”. This Associated Press article tells the story of Angel Raich who lost her appeal with the 9<sup>th</sup> U.S. Circuit Court of Appeals to be allowed to legally use marijuana under what is called the “right to life theory”; the principle that the gravely ill have the right to marijuana to keep them alive when legal drugs fail.

The legalization of marijuana is an issue fraught with political drama. The debate ranges from factions that would have marijuana simply made legal as a grow-your-own commodity for self-medication or recreation to those who advocate it or its chemical constituents as a well-controlled legally-prescribable medicine. If you are like me, you have sometimes wondered what all the fuss is about. In this article I hope to shed some light on some questions that many of us have wondered about, such as: If THC is available by prescription for oral use, as it has been for years, why is there such a push to try to legalize marijuana itself? Do other cannabinoids beside THC have scientifically-validated medical uses? Why the insistence on smoking marijuana?

The first person that came to mind to help answer these questions was Dr. Marilyn Huestis. It would take more space than is allotted to this column to list Dr. Huestis’ qualifications in this field, but for those few who do not know her, she is Chief of the Chemistry and Drug Metabolism Section of the National Institute on Drug Abuse, and suffice it to say, one of the world’s leading experts on cannabinoids. So it is to her that I offer many thanks in pointing me in the right direction and giving me more information on cannabis than I could possibly write down.

First a little history: The first verifiable use of cannabis in medicine goes back to at least 2000 BC Egypt where it was used to treat sore eyes.

Through the ages, however, it has been used to treat the pain of childbirth, earache, hemorrhoids, and rheumatism, as well as edema, inflammation, asthma, tetanus, hydrophobia, delirium tremens, infantile convulsions, neuralgia, cholera, and much more. Today, THC in its legal compound form as Marinol<sup>®</sup>, is used as an antiemetic for chemotherapy patients and as an appetite stimulator for those with HIV-associated wasting syndrome. However, proponents of legalization of marijuana argue that marijuana is, or may be, effective in treating multiple sclerosis, cancer, AIDS, glaucoma, depression, epilepsy, migraine, asthma, pruritis, scleroderma, severe pain, and dystonia.

The study of the pharmacology of cannabinoids has been ongoing for many years, but it is only in the last twenty years have we begun to characterize the endogenous cannabinoid system. There are at least two types of cannabinoid receptors, CB1 and CB2. CB1 receptors are widely distributed and are abundant in areas of the brain that are concerned with movement and postural control, pain and sensory perception, memory, cognition, emotion, autonomic and endocrine functions. CB2 receptors are less well understood, but exist in the immune tissues and are believed to be involved in the immunological effects of cannabinoids. This along with the discovery of the endogenous ligand, anandamide, which acts as a partial agonist at the CB1 receptor, as does THC, has provided new insights into a neuromodulatory scheme that may provide new treatments for painful disorders.

So what are the scientific facts of this debate? The two main issues as far as the science goes have to do with the possible efficacy of other cannabinoids in addition to THC and the inter-related issues of route of administration, absorption, distribution, and bioavailability.

Marinol<sup>®</sup>, the currently available prescription form of THC, is synthetically produced and contains only the THC can-

nabinoid. However, there are more than 60 known cannabinoids contained in the cannabis plant, such as cannabidiol, cannabinol, cannabichromene, and cannabigerol. Many of these have pharmacological activity: psychoactive, antiemetic, analgesic, and anti-inflammatory. Furthermore, some cannabinoids may simply modify the pharmacology of the others. As a result of focusing on only the THC cannabinoid, we may be missing out on many useful cannabinoids that are produced by the cannabis plant. Thus, the emphasis on plant-derived cannabinoid preparations.

Secondly, as toxicologists know, route of administration can have a profound effect on the peak plasma concentration of a drug. In one National Institute on Drug Abuse (NIDA) study in six volunteers, each of whom smoked cigarettes containing 15.8 mg and 33.8 mg of THC, peak plasma THC concentrations occurred within 5 to 10 minutes after smoking began with mean peak concentrations of 84 ng/mL and 162 ng/mL, respectively. In contrast, THC has a low oral bioavailability. Although Marinol’s manufacturer reports that 90% to 95% of the THC is absorbed, due to first-pass metabolism and high lipid solubility only about 10% of the dose reaches systemic circulation. Peak plasma concentrations of THC from the ingestion of Marinol range from 1.3 ng/mL to 7.9 ng/mL with the time to peak plasma concentration ranging from 1 to 2.5 hours. Furthermore, chemotherapy patients who are suffering from nausea may not be able to retain an oral dose long enough to achieve an efficacious concentration.

In early 2006 a product known as Sativex<sup>®</sup>, an oromucosal spray developed by the UK company GW Pharmaceuticals, was given permission from the United States Food and Drug Administration to enter into Phase III trials in the U.S. This product hopes to address both the issues of additional useful cannabi-

## DRUGS IN THE NEWS CONTINUED

noids as well as route of administration issues. Sativex® is a cannabinoid compound derived from the precisely controlled cultivation of marijuana. It contains both THC, the principle psychoactive ingredient in marijuana as well as cannabidiol (CBD) which is not psychoactive and is purported to be almost completely absent from most of the cannabis grown in North America. Both THC and CBD have important pharmacology: THC has analgesic, anti-spasmodic, anti-tremor, anti-inflammatory, appetite stimulant and anti-emetic properties, while CBD has anti-inflammatory, anti-convulsant, anti-psychotic, anti-oxidant, neuroprotective, and immunomodulatory effects. CBD is not intoxicating and it has been postulated that the presence of CBD in cannabis may alleviate some of the potentially unwanted side-effects of THC. GW Pharmaceuticals believes that the beneficial therapeutic effects of cannabis based medicines result from the interaction of different cannabinoids.

Each spray of Sativex® reproducibly delivers a dose of 2.7 mg of THC and 2.5 mg of CBD to the oral mucosa where it is absorbed, thereby avoiding first-pass

metabolism in the liver. Although concentrations of both THC and CBD are generally less than 10 ng/mL after the administration of about 10 mg each in Sativex, onset of action is typically 15 – 40 minutes, which allows the patient to titrate the dose according to symptoms. Time to peak plasma concentration (Tmax) is generally 2 – 4 hours.

At this time clinical trials with THC and CBD are ongoing. These involve the pharmacokinetics of sublingual and buccal mucosa absorbed cannabinoids, the effects of THC and CBD on sleep, the efficacy of these cannabinoids for the relief of neuropathic pain and other symptoms associated with Multiple Sclerosis, as well as chronic pain. In April 2005 Sativex® received regulatory approval in Canada for the symptomatic relief of neuropathic pain in adults with Multiple Sclerosis.

It appears that the pharmaceutical industry and the government are in the process of allowing science to decide the issues of the medical marijuana debate, as it should be. As for toxicologists, we may soon have to solve the emergent issue of how to tell legitimate cannabinoid use

from clandestine. Cannabidiol assays anyone?

*Thanks again to Dr. Marilyn Huestis for her invaluable contributions to this article.*

1. Dying Woman Loses Marijuana Appeal, David Kravets, Associated Press, March, 14, 2007
2. [www.medicalmarijuanaprocon.org/pop/history](http://www.medicalmarijuanaprocon.org/pop/history)
3. [www.gwpharm.com](http://www.gwpharm.com)
4. <http://en.wikipedia.org/wiki/Sativex>
5. Huestis MA, Henningfield JE, Cone EJ, Blood cannabinoids. I. Absorption of THC and formation of 11-OH-THC and THCCOOH during and after smoking marijuana. *J Anal Toxicol.* 1992 Sep-Oct;16(5):276-82.
6. Russo E., Guy G., A tale of two cannabinoids: The therapeutic rationale for combining tetrahydrocannabinol and cannabidiol. *Medical Hypotheses* (2006) 66, 234-246

### REGISTER ON-LINE ASAP FOR RALEIGH, NC MEETING

On-line registration for the October S.O.F.T. annual meeting in Raleigh, North Carolina is now operational at the S.O.F.T. home web page ([soft-tox.org](http://soft-tox.org)). Click onto the 2007 meeting logo to access your way to easy do-it-yourself registration, payment, and confirmation receipt. Seating is limited in some of the workshops and it is highly advisable to register as soon as possible.

This year's souvenir (free with each registration) is a long sleeve denim shirt, embroidered with the 2007 meeting logo. Selecting shirt size will be more exacting than the typical tee shirt offerings of past meetings. These denim shirts will be offered in both women's and men's sizes.



### RESERVE YOUR HOTEL ASAP FOR RALEIGH, NC

The 2007 meeting will be held at the Sheraton Imperial Hotel & Convention Center where the group rate is \$115 per night. The hotel is located at 4700 Emperor Blvd, Durham, NC 27703 (919-941-5050). Attendees can access the hotel using the following website for information, to book, modify, or cancel reservations:

<http://www.starwoodmeeting.com/StarGroupsWeb/res?id=0610275106&key=91838>

As hotel bookings fill up, back-up lodging may be required. News of other hotels to utilize if more space becomes necessary will be posted at the website.



### SO-SOFT THINGS TO DO

Significant Others of S.O.F.T. Members (SO-SOFT) will have a plethora of unique outings to choose from. There are museums, planetariums, theatre, golf, trolley tours, zoos, a wildlife sanctuary, woodland gardens, lakes, as well as the gorgeous changing colors of the leaves against the bright blue October sky. "What to do" possibilities are endless.



## CASE NOTES

Submitted by Section Editor, Matthew Barnhill, Ph.D.

Please send interesting "Case Notes" to Section Editor, Matthew Barnhill, Ph.D. at mbarnhilljr@worldnet.att.net

### CASE NOTES: #1

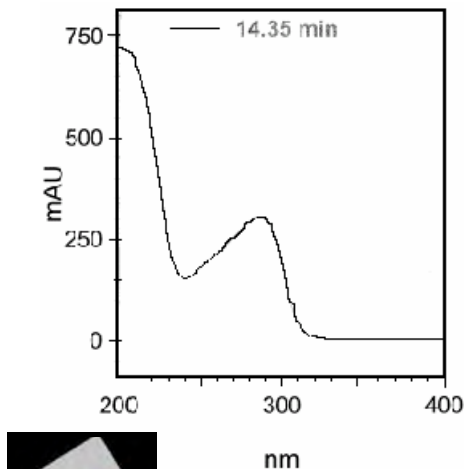
## DISTRIBUTION OF TWO COMMON ANTISECRETORY DRUGS IN BIOLOGICAL SPECIMENS COLLECTED IN AVIATION ACCIDENTS

Dennis Canfield, Ph.D., Kurt Dubowski, Ph.D., Russell Lewis, Ph.D., and Robert Johnson, Ph.D.

FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, OK 73034

Proton-pump inhibitors (PPI) are current first-line treatment for many patients with acid-peptic disorders, including GERD, NERD, and duodenal and gastric ulcers. In 2004, prescriptions for this drug category ranked second among the top 10 therapeutic classes (1). PPI drugs or their metabolites should, therefore, be frequently encountered in postmortem toxicological analyses. However, not all biological specimens are equally suitable for identification of PPIs. Urinary excretion of PPIs can range from 14-23% of an oral dose (lansoprazole) to 71-80% (pantoprazole) (2). According to the PDR there is no unchanged renal excretion of these drugs. All specimens received by the Bioaeronautical Sciences Research Laboratory are screened by HPLC equipped with a diode array and fluorescence detector. A large unknown HPLC peak at a retention time of 14.35 minutes was found in a urine specimen received by the laboratory.

The pilot's medical history indicated the use of pantoprazole



(Protonix<sup>®</sup>). A pantoprazole standard was analyzed by HPLC and the resultant spectra and

retention time were obtained. The spectra and retention time compared favorably with the unknown peak. The compound was not amenable to GC/MS analysis; therefore, blood and urine specimens were analyzed by LC/MS. Pantoprazole was found in blood with a  $[M+H]^+$  of 384.3 amu and daughter ions at 200 amu and 138 amu. The urine specimen had a large

peak consistent with the desmethyl metabolite; however, the parent compound was not identified. A structurally related compound, lansoprazole (Prevacid<sup>®</sup>), was identified by HPLC in the blood of another pilot and was confirmed using LC/MS, but urine, heart and brain were negative. Lung, however, was found to be positive for lansoprazole. Therefore, these compounds can be reliably identified in a blood matrix. Additionally, it appears that lung can be used as a second matrix for the identification of these compounds.



1. 2004 year-end U.S. prescription and sales information and commentary. *IMS Health, National Sales Perspectives*, 2/2005. Retrieved 3/6/2005 from <http://www.imshealth.com/ims/portal/front/article.html>.
2. Vanderhoff, B.T., Tahboub, R.M. Proton pump inhibitors: An update [Electronic version]. *Amer. Fam. Physician* 66:273-80 (2002).

### CASE NOTES: #2

## A CLAIM OF MOONSHINE MIXED WITH METHAMPHETAMINE

Richard E. Struempfer, Jacques Wilson, and John Giddens

Toxicology Department, Doctor's Laboratory Inc., 2906 Julia Drive, Valdosta, Georgia 31602

Following a standard pre-employment related urine drug test, a donor was reported as positive for the presence of methamphetamine. The donor denied any knowing use of methamphetamine and offered to the Medical Review Officer the explanation that an illegally obtained ethanol

beverage known commonly as "moonshine", which he had recently purchased had been adulterated with methamphetamine. A sample was provided to the laboratory for gas chromatography/mass spectrometric analysis. Analysis detected the presence of methamphetamine in excess of

400,000 ng/mL, with no significant levels of amphetamine detected. A standard 30 mL (one ounce shot) dose of the "moonshine" would have contained approximately 12 mg of methamphetamine, a dose capable of cause a positive result on a standard employment related urine drug test.

## CASE NOTES: #2 (CONTINUED)

### History of Moonshine

"Moonshining" is the making of whiskey surreptitiously and illegally; this distilled spirit is known commonly as "moonshine". Because the activity of distilling whiskey unlawfully was usually done at night under the light of the moon, the word became both a verb, meaning making the liquor, and a noun, meaning the liquor that was made. The reason it is done at night, and usually somewhere away from houses and buildings, is that the distillation process requires heat to boil the alcoholic liquor from the "mash," so it produces a considerable amount of smoke and steam which can be visible for a great distance if it is done outdoors in the daytime. The fire can be seen at night if the still is not set up inside a building or somewhere hidden by rocks and/or trees, but buildings are not considered as safe as outdoor locations, in case of a raid by the law enforcement authorities or competition.



Moonshine continues to be produced in the U.S., mainly in Appalachia and parts of the South. The simplicity of the process, and the easy availability of key ingredients such as corn and sugar, makes enforcement a difficult task. However, the huge price advantage that moonshine once held over its "legitimate" competition legally sold has been reduced. Nevertheless, over half the retail price of a bottle of distilled spirits typically consists of taxes. Many of those who buy moonshine do so for the thrill of obtaining and consuming an illicit product and as a defiance of authority. Also, the number of jurisdictions which ban the sale of alcoholic beverages is steadily decreasing. This means that many of the former consumers of moonshine are much nearer to a legal alcohol sales outlet than was formerly the case. "Moonshining" is far from totally over, but is certainly far less widespread than was the case decades ago. For individual "moonshiners",

with the buying of cheap refined white sugar, moonshine can be produced at a small fraction of the price of heavily taxed and legally sold distilled spirits.

Sloppily-produced moonshine can be contaminated with toxins, mainly from materials used in construction of the still. Despite the well-known hazards, it is claimed that stills constructed using car radiators for a condenser are still used. The lead used in soldering these radiators ends up in the moonshine, and in some cases, glycol products from antifreeze used in the radiator can appear as well. Occasionally moonshine is deliberately mixed with industrial alcohol-containing products, including methanol and denatured alcohol. Results are toxic, with methanol easily capable of causing blindness and death.

Although home distillation of ethanol for commercial purposes is still illegal in the United States, legislation was introduced<sup>1</sup> in November of 2001 to legalize home distillation in much the same way as home brewing of beer and wine were legalized in 1978. This bill had a single sponsor and did not make it out of the committee. Despite the illegal status, home distillation is growing in popularity in the U.S. with ready availability of instructions, materials and support. Hundreds of thousands of gallons of moonshine are produced annually in the U.S. The illegal production is highly profitable and continues because of the heavy taxation of legally-produced distilled spirits.<sup>2</sup> Under 26 U.S.C. Section 5171 operations as a distiller, warehouseman or processor may be conducted only on the bonded premises of a qualified distilled spirits plant.

### History of Methamphetamine

Methamphetamine is a synthetic drug illegally produced and sold with a high potential for abuse and dependence. A derivative of amphetamine, methamphetamine was first developed in the early 20th century for use in nasal decongestants, bronchial

inhalers, and in the treatment of narcolepsy and obesity. In the 1970s methamphetamine became a Schedule II drug, classifying it as a drug with little medical use and high potential for abuse. Despite its classification and illegal status, methamphetamine has continued to be both produced and sold. In the 1980s a powerful form of methamphetamine that resembles granulated crystals was created, known commonly as "ice". A powerful central nervous system stimulant, methamphetamine is used by athletes and students looking to initially heighten physical and mental performance, as well as service workers looking to work extra shifts. Young women often begin using methamphetamine to lose weight, and others use methamphetamine recreationally to stay energized at "raves", parties, and/or social events. Methamphetamine is easier to obtain and less expensive than many other illegal substances, which leads to increased use. Methamphetamine is currently considered to be the most abused drug on the market.

### Moonshine and Methamphetamine

Illegally produced methamphetamine in the United States has become the "moonshine" of the 21<sup>st</sup> century, with the proliferation of small clandestine labs being operated by one person. It is not large stretch to envision an enterprising moonshiner and crystal meth lab operator working in a rural area to enhance their moonshine produce through fortification of their beverage with methamphetamine. This would be much in the same way that ouzo distillers have been known to add cocaine to their product, and the addition of cocaine into cola beverages, and lithium carbonate into non-cola beverages at the turn of the last century. Is this the ultimate "Kickapoo Joy Juice" we read about in the comics?

<sup>1</sup>107<sup>th</sup> Congress, 1<sup>st</sup> Session, H.R. 3249, November 7, 2001

<sup>2</sup>Lord, L. Moonshine doesn't come unleaded, study says. *Roanoke Times-Dispatch*, 5-30-03



## CASE NOTES: #3

# FATAL EXSANGUINATION DUE TO EPISTAXIS WITH THERAPEUTIC ADMINISTRATION OF TOPICAL COCAINE AND ADRENALINE

*George S. Behonick, Ph.D., DABFT, UMass Forensic Toxicology Laboratory, Worcester, MA 01605 and  
Elizabeth A. Bundock, MD, Ph.D., Office of The Chief Medical Examiner, Boston, MA 02118*

### Introduction

Epistaxis is defined as acute hemorrhage from the nostril, nasal cavity or nasopharynx.<sup>1</sup> The condition is common, occurring in 60 percent of the population and presenting more often in males than females. Affected persons do not usually seek medical attention when the bleeding is minor or self-limited.<sup>2</sup> Most cases of epistaxis do not have an easily identifiable cause. Insertion of an epistaxis balloon or Foley catheter and chemical cautery (silver nitrate sticks) are treatment modalities. A third treatment option is the insertion of pledgets soaked with an anesthetic-vasoconstrictor solution into the nasal cavity to anesthetize and shrink the nasal mucosa. Pledgets are soaked in 4% topical cocaine solution or a solution of 4% lidocaine and topical epinephrine (1:10,000), placed into the nasal cavity, and allowed to remain in place for ten to fifteen minutes. In this case note we report the toxicological findings associated with exsanguination caused by epistaxis which included treatment by nasal packing with the use of topical cocaine.

### Case History and Autopsy

A 55 year old male was discovered slumped over a bathroom toilet by staff members of the half-way house where he resided. EMS personnel described a large (~ 2 L) pool of coffee-ground blood on the floor and in the toilet. The decedent's past medical history was notable for hypertension treated with diltiazem and lisinopril, prior myocardial infarction, atrial fibrillation treated with an implanted defibrillator, Coumadin<sup>®</sup>, and Plavix<sup>®</sup> and bipolar disorder and schizophrenia treated with Depakote<sup>®</sup> and Risperdal<sup>®</sup>. A day prior to his death, the decedent presented to an urgent care center for an episode of epistaxis where an unsuccessful attempt was made to cauterize the source of the bleeding. He was transferred to the ED of a major trauma center where he received topical "cocaine and adrenaline packing

x 2" at approximately 5:10 pm. He was discharged at 6:00 pm, but returned later for continued bleeding. At 10:30 pm he received another topical cocaine treatment, oral vitamin K and nasal packing. The patient was discharged at 1:10 am and returned to the half-way house. He was last seen alive at 9:30 am and found pulseless and apneic in the bathroom at 10 am. The autopsy was notable for blood soaked packing in each nasal cavity with a fresh clot in the oropharynx, 200 mL of blood in the stomach, hemoaspiration, and patchy subendocardial hemorrhages consistent with hypovolemic shock. Evidence of hypertensive and atherosclerotic cardiovascular disease was apparent. The death was certified as exsanguination due to nasopharyngeal hemorrhage in a patient receiving anticoagulation treatment for atrial fibrillation; the manner of death as therapeutic complication.

### Postmortem Toxicology

Postmortem fluoridated heart blood, urine and vitreous humor was submitted for toxicological analyses which included: Volatile compounds by dual column headspace (HS) GC-FID, drugs of abuse by ELISA (cocaine/cocaine metabolite, benzodiazepines, fentanyl, methadone, opiates and oxycodone), drugs of abuse in urine by EMIT II Plus and alkaline drugs by GCMS following liquid-liquid extraction. The toxicology findings are summarized below.

#### Blood (ELISA)

Benzodiazepines	ND
Cocaine/Cocaine Metabolite	POS
Fentanyl	ND
Methadone	ND
Opiates	ND
Oxycodone	ND

Blood (GCMS) Diltiazem present\*

<u>Blood (GCMS-SIM)</u>	Cocaine-ND
(LOQ 0.05 mg/L)	Cocaethylene-ND
	Benzoyllecgonine-.025 mg/L

#### Urine (EMIT II Plus)

POS Cocaine/Metabolite; None detected for nine other drug(s)/drug classes

#### Blood (HSGC-FID)

No volatiles detected (ethanol, methanol, acetone, isopropanol)

#### Vitreous Humor (HSGC-FID)

No volatiles detected

ND=None Detected

POS= Positive

\*Confirmed present by second aliquot extract

#### Discussion

The use of cocaine has become largely obsolete in modern medical practice; however, the drug is administered by otolaryngologists for topical anesthesia in head and neck surgeries.<sup>3</sup> The detection of a major cocaine metabolite (benzoyllecgonine, 0.25 mg/L) in postmortem blood is corroborative of the decedent's clinical history with therapeutic intervention that included nasal packing with topical cocaine and adrenaline. Miller and co-workers report cocaine concentrations in the blood during rhinoplasty.<sup>4</sup> After applying 5% or 10% cocaine to the nasal mucosa, blood concentrations were measured in 9 patients undergoing rhinoplasty and in 6 unoperated controls. The concentrations in the unoperated persons were lower than in those undergoing rhinoplasty, and lower concentrations were found after 5% solutions in both groups than in those exposed to 10% solutions. No correlation existed between the concentration of the solution used and the degree of bleeding or the success of the anesthesia. The use of intranasal cocaine as an anesthetic or topical cocaine as treatment for epistaxis is not without apparent risk. Acute nontransmural myocardial infarction has been reported in a patient following topical cocaine anesthesia for nasal surgery.<sup>5</sup> Similarly, a non-Q wave myocardial infarction is reported in a 57-year-old man with hypertension and stable angina who was being treated for epistaxis by the



## CASE NOTES: #3 (CONTINUED)

inappropriate use of intranasal cocaine. Specifically in this case, the intranasal packing soaked with 4% cocaine was left in place with continuous nasal mucous membrane contact over 5 to 6 hours.<sup>6</sup> Although exsanguination was the mechanism of death in our case, the decedent's hypertensive and atherosclerotic cardiovascular disease may have placed him at risk for complications of topical cocaine. The decedent had a past history of myocardial infarction, hypertension, had an implanted defibrillator and was being treated with Coumadin<sup>®</sup>.

As a final observation, the case post-mortem toxicology revealed the presence of diltiazem. The finding is consistent with the known prescription history of this decedent; however, without the very thorough case history provided in this case it is appealing to attribute the detection of the diltiazem to use of the drug as a cutting

agent during the illicit cocaine manufacturing process.<sup>7</sup> We have identified the presence of diltiazem in a number of post-mortem blood specimens concomitant with the detection of cocaine and its metabolites, benzoylecgonine and cocaethylene, with accompanying case histories of illicit drug use, but without indication or prescription need for diltiazem.

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3. Makaryus, J.N., Makaryus, A.N. and Johnson, M. Acute myocardial infarction following the use of intranasal anesthetic cocaine. *South Med J.*, 2006 July;99(7):759-61

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7. Hahn, T., Avella, J. and Lehrer, M. Case Note: #1 Postmortem detection of diltiazem (Cardizem<sup>®</sup>) in individuals abusing cocaine. *Society of Forensic Toxicologists, Inc. ToxTalk*, 2006 Dec:30(4):10-11

## CASE NOTES: #4

### IDENTIFICATION OF EIGHT DRUGS IN FIFTEEN MINUTES FROM POSTMORTEM URINE BY DIRECT INFUSION MS/MS

**Cody J. Peer, B.S.,<sup>1</sup> Patrick S. Callery, Ph.D.,<sup>1</sup> James C. Kraner, Ph.D.,<sup>2</sup> and Dina M. Shakleya, Ph. D.<sup>3</sup>**

<sup>1</sup>Department of Basic Pharmaceutical Sciences, West Virginia University, Morgantown, WV 26506, <sup>2</sup>Office of the Chief Medical Examiner, Charleston, WV 25302, <sup>3</sup>Chemistry and Drug Metabolism Section, IRP, NIDA, NIH, Baltimore, MD 21224

Mass spectrometric (MS) methods for the identification of drugs of abuse involve chromatographic separation prior to analysis (e.g., GC/MS, LC/MS, CE/MS, ESI/MS and APCI/MS). Multistage mass spectrometry (MS<sup>n</sup>) provides increased substance selectivity over that of single stage mass spectrometry. We have evaluated the application of direct infusion MS/MS to the identification of drugs in the urine of drug abuse cases (biological fluids and trace evidence) by developing a simpler and more rapid direct mass spectrometric method as a qualifying step in support of GC/MS information.

A 31 year old male with a history of drug abuse was found dead as the result of an apparent drug overdose. Drug paraphernalia found at the scene included a syringe, straw and two hollowed out light bulbs. Several drugs of abuse were identi-

fied in blood and urine and confirmed by GC/MS. The GC/MS and pyrolysis GC/MS results will be published elsewhere.

A filtered (0.45 μm pore size) urine sample (100-500 mL) from the deceased was diluted with water/methanol mixture (50:50 v/v) and directly infused into a quadrupole ion trap mass spectrometer. Drugs or drug metabolites were found to be present in the urine based on observation of MH<sup>+</sup> ions. Detection of a prominent daughter ion in the second stage MS in comparison with the MS/MS spectra of authentic standards was used to confirm the identity. For some analytes, detection of further fragments under MS<sup>3</sup> conditions provided additional structure proof. Drugs or metabolites were detected in a total run and analysis time of 15 minutes by an experienced mass spectrometrists.

Drugs and metabolites detected:

Methamphetamine	Cocaine
Amphetamine	Fentanyl
Acetaminophen	Oxycodone
Chlorpheniramine	Caffeine

MS/MS analyses of multiple analytes in a single biological matrix and/or trace evidence provides an advantage over routine RIA screening methods in reducing the total analysis time and confirming the identity of the major abused drugs. The total analysis time by MS/MS for the urine sample was less than 15 minutes.

The results suggest that MS/MS provides the opportunity to develop identification methods in biological fluids that take less time to perform, decrease hazardous solvent use, obviate derivatization steps, and provide a qualitative basis for chemical identification.

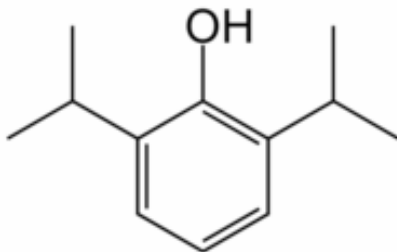
## CASE NOTES: #5

### DRIVING UNDER THE INFLUENCE OF PROPOFOL

*John Musselman, Anil Solanky & William Arnold; Phoenix Police Dept Crime Lab, Phoenix, AZ 85003*

Propofol (Diprivan<sup>®</sup>) is an intravenous sedative hypnotic agent for use in the induction and maintenance of anesthesia or sedation. It has a molecular weight of 178.27 and elutes in both the acidic and basic extracts by solid phase extraction (SPE). Qualitative tests were performed for the presence of Propofol. The mass spectrum base peak is 163 m/z.

During the year 2006, the Phoenix Police Department Crime Laboratory had blood samples submitted specifically for the analysis of Propofol on two suspicion of driving under the influence of drugs (DUID) cases. As with other blood samples received where trauma and DUI coexist, it is not unusual to find emergency room medications in blood draws post-surgical. Among those found are propofol, midazolam, etomidate, lidocaine, pentobarbital, ketamine, morphine, etc. Not surprising, both subjects were employed in hospital emergency rooms, and had access to Propofol.



Chemical Structure of Propofol

#### Case #1:

A 38 y/o male was observed weaving and swerving on a roadway in north Phoenix. He came to a stop in a private parking lot (16:24). The fire department responded and found the subject self-administering Propofol. Initially, the subject declined to answer questions, or perform SFST's. A breath test was negative, his eyes were watery, face flushed and blood droplets were found on his shorts. After being arrested and transported to a police precinct, a DRE was called and performed an evaluation approximately two hours later (18:30). His pulse was 72/78/74 (norm), HGN-none; time estimate 25/30; eyelid and leg tremors, pupill- room light 3.5, dark 8.0, direct 3.0-4.0 mm; blood pressure (bp) 124/80 (norm), temp 98.3; injection sites on both arms; performed Walk and Turn (WAT) and One Leg Stand (OLS) tests okay. The DRE was unable to form an opinion and collected both blood and urine samples.

#### Case #2:

A 35 y/o male nurse was found slumped over in the driver's seat after crashing into a wall at a gas station (23:10). A DRE officer arrived at the scene one minute after the "hot call". He observed the scrubs, track marks on both arms, a syringe and small glass bottle of

Propofol on the seat next to him. He admitted shooting up twice to help him sleep; 5mg in the left arm and 5 mg in the right, and was racing the clock home. The Fire Dept. measured bp at 122/70 and pulse 88. The officer performed HGN at 23:15 and got 6 cues with an angle of onset at 35degrees (i.e. a BAC equivalent of 0.15). He had slurred speech, obvious balance problems and did not follow directions on the WAT/OLS. A full DRE evaluation was performed three hours later (2:00) while at a police precinct by the same officer. At that time, all the clinical indicators and performance decrements were absent. Pulse 74/84/78 (norm); HGN-none; time estimate 25/30; pupil size-room light 4.0, dark 6.5/7.0, direct 4.0-5.0 mm; bp 150/110 (high-a history of high bp); temp 98.3; injection sites both arms; WAT and OLS okay. The DRE called CNS depressant based upon his earlier observations.

Propofol has a rapid onset of effects that lasts for approximately fifteen minutes making it difficult to observe a person under its influence. The physical evidence and track marks in both cases allowed these individuals to be prosecuted. Abusers of drugs are opportunistic in nature, their "fix" will be had, whether a drug is bought illegally, prescribed, or diverted.

*Send your "Case Notes" to Section Editor, Matthew Barnhill, Ph.D. at [mbarnhilljr@worldnet.att.net](mailto:mbarnhilljr@worldnet.att.net) for publishing consideration.*

## ABFT NEWS

### YALE H. CAPLAN, PH.D., DABFT, PRESIDENT

The 15th annual ABFT Certificant reception and meeting will be held at the 2007 S.O.F.T. meeting in Raleigh, North Carolina on Thursday, October 18, 2007 at 5:00 pm—6:00 pm. The examination for Diplomates and Specialists is scheduled for Tuesday, October 16, 2007 at 8:00 am—noon.

All requirements for certification can be found on the ABFT website ([www.abft.org](http://www.abft.org)).

**ABFT is accredited by the Forensic  
Specialties Accreditation Board**

#### **Congratulations to ABFT New Certificants:**

Meagan E. Wilbur, B.S., FTS-ABFT  
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Ashlyn G. Rackley, M.S., FTS-ABFT  
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Director: Sherwood Lewis, Ph.D., DABCC

## MEMBER NEWS

### Press Release

In February, the Pennsylvania Joint State Government Commission appointed Michael F. Rieders, Ph.D., as a member of the Commission's Advisory Committee on Wrong Convictions. Dr. Rieders is a Forensic Scientist and Licensed Laboratory Director at NMS Labs, Willow Grove, PA where he is also Chairman of the Board of Directors.

The Wrongful Convictions Committee was established to study the underlying causes of wrongful convictions and to make findings and recommendations to reduce the possibility that innocent persons will be wrongfully convicted in the future.

Nationally, more than 180 individuals have been exonerated through post-conviction DNA testing, and some of those individuals spent time on death row. At least eight individuals have been exonerated in Pennsylvania through post-conviction DNA testing, three of whom were in prison for murder and one of whom was on death row. Not only is it a great injustice to imprison an innocent person, but by incarcerating them, there is the likelihood that a guilty person remains capable of committing additional crimes.

The Committee will consider potential implementation plans, cost implications and the impact on the criminal justice system for each potential solution. The Committee will report their findings and recommendations to the Senate by November 30, 2008.



*"Being appointed to this Committee is truly an honor. I am dedicated to the mission of this Committee and I intend to make a valuable contribution especially as a forensic scientist working to improve the criminal justice system."*

-Michael F. Rieders, Ph.D.

### Congratulations On Retirement

Laurel Farrell recently retired from the Colorado Bureau of Investigation after 30 quick years of dutiful service. She is now free to consult, travel, and enjoy a different lifestyle than she was accustomed. Congratulations to such a very nice lady.

### Fond Farewell Friend

Roger Maickel, long time Retired S.O.F.T. member, passed away in December 2006 after a six month battle with diabetes. Roger will be sorely missed by his wife, Lois, and by many friends and colleagues.

### John Ellsworth R.I.P.

It is with great sadness that we report the passing away of John Ellsworth on Wednesday, May 2, 2007. John was well known to an abundance of S.O.F.T. members in his capacity as Director of Sales and Marketing for Immunalysis Corporation. He is survived by his wife, Doris, to whom condolences may be sent (6336 Deerview Drive, Raleigh, NC 27606). John was responsible for creating many of the "theme oriented" vendor games at CAT, SAT, and MATT. He will be sadly missed.

### T2007 August 26-30, 2007



Registration is currently underway for T2007, the annual meeting of International Council on Alcohol, Drugs, and Traffic Safety (ICADTS) and The International Association of Forensic Toxicologists (TIAFT). The joint conference will be held in Seattle, Washington August 26-30, 2007. Registration and additional information is available at [www.T2007.org](http://www.T2007.org).

This meeting will provide a spotlight on the toxicology of alcohol, drugs and traffic safety, while retaining all the normal topic areas for TIAFT and ICADTS meetings. It is also a great opportunity for North American Toxicologists to attend a TIAFT meeting in your own backyard.

### SAT News

The Southwest Association of Toxicologists, established in the 1970's holds biannual meetings to provide communication among toxicologists of the southwest region of the U.S. SAT membership has grown to over 200 members and is hosting it's next meeting at the Hilton Island Resort in Galveston, Texas, November 8-10, 2007. For more information, contact Vincent Papa, Air Force Drug Testing Laboratory, Brooks City-Base, Texas ([vincent.papa@brooks.af.mil](mailto:vincent.papa@brooks.af.mil)).

### Congratulations

Dr. Kurt M. Dubowski received two surprise awards for his service to the FAA and the State of Texas in April 2007. Dr. Dubowski was made an Honorary Member of the Texas Rangers for his years of toxicology service both nationally and internationally. This was presented by Randy Beaty and Mack Cowan, Director of the Breath Alcohol Testing Program of the Texas Department of Public Safety. Dr. Dubowski also received a silver plate from Dr. James Whinnery, Manager of the Aerospace Medical Research Division. The poignant inscription on the plate read "This award is given to Kurt M. Dubowski, Ph.D. in recognition of his outstanding scientific contributions to the Aerospace Medical Research Division, Federal Aviation Administration. The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy (Martin Luther King Jr.) and Kurt M. Dubowski, Ph.D. has always stood for truth regardless of the circumstances."



*Mack Cowan (left), Dr. Kurt Dubowski (center), and Randy Beaty (right)*



*James Whinnery (left), Dr. Kurt Dubowski (center), and Dennis Canfield (right)*

**Society of Forensic Toxicologists, Inc.**

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ToxTalk Deadlines for Contributions:

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

**ToxTalk is the official publication of the Society of Forensic Toxicologists, Inc., mailed quarterly (bulk mail) to its members. It is each member's responsibility to report changes of address to the SOFT Administrative Office. Non-members may receive ToxTalk for \$15 per calendar year. Checks payable to SOFT may be mailed to the SOFT Administrative Office. To submit articles or address ToxTalk issues please email to [ToxTalk@soft-tox.org](mailto:ToxTalk@soft-tox.org).**

**Future S.O.F.T. Meeting Info**

<b>2007:</b>	Chapel Hill, NC.....Oct. 15-19, 2007.....	Jeri Ropero-Miller, Ruth Winecker
<b>2008:</b>	Phoenix, AZ.....Oct. 27-31, 2008.....	Vickie Watts, Norman Wade
<b>2009:</b>	Oklahoma City, OK.....Oct. 18-23, 2009.....	Phil Kemp
<b>2010:</b>	Richmond, VA.....	Michelle Peace, Lisa Tarnai Moak
<b>2011:</b>	San Francisco, CA.....	Nikolas Lemos
<b>2012:</b>	Boston, MA.....	Michael Wagner

**S.O.F.T. 2008: PHOENIX, ARIZONA**



October is the best time of the year to be in Phoenix. High temperatures are in the 70's. Golf courses are prime, lakes and forests are only an hour drive away. Idle hours can be spent in casinos, horseback riding, at the racecar track, or

simply lounging around the pool.

The 2008 SOFT Annual Meeting will be held at the Pointe South Mountain Resort, a luxury facility located at the base of the South Mountain Preserve; also the perfect location for the hiking / biking adventurer. Since every reser-



vation at the resort is a two room suite, why not make plans to bring the whole family and restructure the conference into a fun vacation for all. There are nearby zoos, parks, museums, theatres, shopping malls, sport stadiums, even hot air balloon rides. The scientific sessions, workshops, exhibits, and meetings will be the reason you visit Phoenix, but the Arizona lifestyle is what will make your stay memorable. There will be no need for neckties!

**We're on the Web!**  
[www.soft-tox.org](http://www.soft-tox.org)

**S.O.F.T. 2009:  
OKLAHOMA CITY**

October 2009 will take S.O.F.T. members to America's heartland. Oklahoma City is proud of it's plentiful medical schools, mild climate, and beautiful urban parks.



Oklahoma City Meeting Host, Philip Kemp

is putting together another entertaining and educational conference for SOFT members to experience.

**2007 S.O.F.T. COMMITTEE CHAIRS**

Committee

Committee Chair

Nominating.....	Timothy Rohrig, Ph.D., DABFT
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ToxTalk Co-Editors.....	Yale Caplan, Ph.D., DABFT Vickie Watts, M.S.
ByLaws.....	Yale Caplan, Ph.D., DABFT
Publications (JAT Special Issue) .....	Sarah Kerrigan, Ph.D.
Awards.....	Philip Kemp, Ph.D., DABFT
Drugs & Driving.....	Sarah Kerrigan, Ph.D.
Meeting Resource.....	Christine Moore, Ph.D., DABCC
Laboratory Guidelines.....	W. Lee Hearn, Ph.D.
Policy and Procedure.....	William Anderson, Ph.D.
SOFT Internet Web-Site.....	Bruce Goldberger, Ph.D., DABFT
Continuing Education.....	Ann Marie Gordon, M.S.
Ethics.....	Aaron Jacobs, Ph.D.
Drug Facilitated Rape & Sexual Assault.....	Marc LeBeau, Ph.D.
MS/MS Guidelines.....	John Cody, Ph.D.

