Society of Forensic Toxicologists, Inc.

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TOXTALK

INSIDE THS ISSUE:

SOFT 2009
OKLAHOMA CITY MEETING UPDATE

WELCOME TO OKLAHOMA CITY!

The 2009 Meeting is only weeks away. The abstracts have been received, the venues secured, workshops organized, and menus determined. The registrations are flying in, and hotel rooms reserved.

The meeting preparations are being managed by Laurel Farrell this year, while prior Meeting Planner, Vickie Watts, is recuperating from surgery and further medical treatments. Vickie has received so many well wishes and truly appreciates the encouragement and love shown.

Meeting Hosts, Phil Kemp and Dennis McKinney have really gone all out to welcome the SOFT group to Oklahoma City. Attendees will be pleasantly surprised to be able to visit multiple "out of the hotel" events and enjoy many local attractions.

Workshop Chairs, John Soper and Jesse Kemp are proud of the nine workshops available for continuing education credits.

The deadline for scientific abstracts resulted in 130 articles received. The Scientific Program Chairs, David vonMinden and Tom Kupiec along with a review committee are currently busy sorting the research and will be able to notify authors of "acceptance" shortly. Authors giving Platform Presentations will need to communicate with the AV Team (see page 6 for details) prior to the meeting to make sure data format and equipment functions are compatible.

HOTEL ROOM ATTRITION ISSUES

Reserving "room blocks" with discount pricing during the annual meetings has recently become a big problem for SOFT meeting planners. A guarantee (signed contract) is required by the hotel, that a given number of rooms will be utilized in exchange for lower room rates. It turns out that many meeting attendees reserve their room for a longer period of time than they actually use it. And when "check out" is early, the remainder of the reservation is left unsold by the hotel. When reserved "room blocks" are filled early, reservations are turned over to overfill hotels, and yet at the end of the meeting, the required room guarantees may not be met. This scenario can result in substantial penalties and unexpected expense to the meeting budget.

It is imperative that anyone and everyone who makes an early reservation in the group's discounted room block for meeting attendance, be cognizant of the REAL nights needed and adjust accordingly from the number of nights guessed during the making of the reservation.

If room reservations are corrected early, unsold rooms can be opened up for many attendees who otherwise will have to stay at overflow hotels.

PRESIDENT'S MESSAGE

By Anthony Costantino, Ph.D., D-ABFT

I hope that everyone had a great summer. It certainly has been an interesting one for our community given celebrity deaths, federal scrutiny and Supreme Court Decisions! I think that those of you who have been involved have admirably and competently represented our discipline.

These are interesting and challenging times. There are significant national issues, particularly the economy, affecting businesses and for some, their livelihood, with this year one of the more influential to our field of forensic toxicology. It is my hope that at our annual meeting in October, time and attention are given to these important and potentially industry changing subjects. Here is a partial discussion of what is happening and the impact to our industry.

We began the year with scrutiny by the Federal government as described in the National Academy of Sciences report in February which called into question the validity of several disciplines of forensic science with particular focus on the qualifications of scientists, laboratories and academic institutions. Peter Stout represented SOFT as a member of the CFSO and attended several meetings including one with some senior staff of the Senate Judiciary Committee. In short, it looks as though the existing certification and accreditation boards will be relied upon to embellish their programs to meet the stated needs. This will alleviate the need for additional funding for a National Institute of Forensic Science as was described in the NAS report. There is support for this course of action from the House of Representatives as well.

The latest issue that has received attention is The Supreme Court's decision on Melendiaz v. Diaz. In July, Justice Antonin Scalia wrote the Supreme Court decision that requires laboratory analysts to be in court to testify about their tests (results?). This ruling impacts all of us. I know that Bob Zettl polled SOFT members for information about the impact of this decision so that he can report this important information to the membership. Additionally, I am asking the SOFT Board to discuss the issues and to outline a path forward. At our meeting, we should be prepared to brainstorm the appropriateness for SOFT to create a guidance document for defense attorneys; a guide to help attorneys understand what they need form the laboratory to help their cases. I know that this may be a controversial issue: we represent both public and private entities and each may view the impact differently.

Some laboratories have received letters from some jurisdictions alerting them to be ready to receive more subpoenas and other jurisdictions are taking a "wait and see" approach. My guess is that the private sector, will try to recoup the financial loss for the time out of the office for staff members but that does not solve the service issues that may ensue. If laboratorians are required to testify in a greater number of cases then the backlog issues that currently exist will only get worse and have further impact on the amount of time that it takes to finalize a report. If all laboratory persons who are subpoenaed to testify in court cannot appear then some important cases may be dismissed. With respect to reports that are issued from offices or laboratories that have high turnover it could be a virtual nightmare to find and make the pertinent parties available for testimony. This only begins the debate, which will open up the possibilities for how SOFT can influence how justice and laboratories can be served.

We are fortunate that we have this professional society to bring us together to consider and address these issues. I look forward to the annual meeting in October, where these important topics will be discussed.

VISIT THE S.O.F.T. WEBSITE

SOFT has a wonderful website which can be used as an informational resource. One could post job openings or explore employment opportunities. There is a tab titled "Toxilinks" which easily connects to scientific journals, government organizations, academic institutions, and many other related forensic science sites.

SOFT members are encouraged to "log in" to make mailing address, phone, or e-mail corrections in the member database.

Membership applications and blank reference forms can easily be downloaded as needed.

The "home page" stays current with many possible downloads of interest to members, such as:

- Toxicology Lab. Guidelines
- Drug Facilitated Sexual Assault Survey
- Forensic Science Continuing Education Opportunities
- SOFT's Response to the NAS Report

Information and links to upcoming meeting sites can be found as well as requirements and instructions how to apply for the coveted Educational Research Award and the Young Scientist Meeting Award.

Compliments to the longtime SOFT webmaster, Bruce Goldberger, Ph.D. for his countless hours (days and years) of contributions to the SOFT organization in many capacities and roles. SOFT is a better organization because of him.

GUEST EDITORIAL-LABORATORY ACCREDITATION IN FORENSIC TOXICOLOGY

By Graham R Jones, Ph.D., D-ABFT

This past February, the National Academy of Sciences (NAS) published the long-awaited report entitled: "***Strengthening Forensic Science in the United States: A Path Forward - Committee on Identifying the Needs of the Forensic Science Community***".[1] Among the many important recommendations included one that all forensic science laboratories be subject to mandatory accreditation.

By way of background, the Society of Forensic Toxicologists (SOFT), the Toxicology Section of the American Academy of Forensic Sciences (AAFS) and the American Board of Forensic Toxicology (ABFT) have a long history of education and professional advancement in forensic toxicology, but it was not until 1991 that SOFT and the AAFS published the joint Forensic Toxicology Laboratory Guidelines and in 1996 asked the ABFT to develop a voluntary laboratory accreditation program based on those guidelines. While an overwhelming majority (>95%) of SOFT and AAFS toxicologists voted to adopt the original 1991 Guidelines only a relatively small number of forensic toxicology laboratories performing postmortem or human performance toxicology testing are specifically accredited for that type of work.

Why is that? In most states there is little or no incentive for forensic laboratory directors to apply to have their laboratories accredited. It takes time, substantial effort and resources many laboratories do not currently have. One of the issues that the NAS report noted is that most forensic facilities (laboratories and medical examiner/coroner) are under-funded and under-staffed. That has been the case for decades and the situation has, with some exceptions, worsened as precious resources have been diverted to rapidly growing areas such as DNA testing. The situation is made worse because, at least in the public sector, the means of funding human performance testing (e.g. DUID) and death investigation across the U.S. is a hodge-podge of disparate systems. Funding may be marginally adequate for some state or richer county systems whereas many other laboratories are at the mercy of financially poor local administrations with too many demands on a shrinking tax base.

Only a few states have centralized and well structured forensic programs. Currently only three states (New York, Texas and Oklahoma) have legislation requiring mandatory accreditation of forensic laboratories, although some other states do have regulations for specific activities such as blood alcohol testing. Even in those three states, the initiatives were driven more by issues relating to DNA testing than other forensic science concerns. Even the legislation in New York State and Texas differ and do not completely address all aspects of forensic science or toxicology. For example, mandatory accreditation in New York is only required for public sector laboratories (although some private laboratories sought accreditation on a voluntarily basis). In Texas the legislation is slightly different in that only forensic results generated by a laboratory accredited by the state of Texas is admissible in criminal cases within the state's jurisdiction (whether that laboratory operates within the state or not). It seems almost bizarre that despite the legislation, it is legally acceptable for results from a non-accredited laboratory (within the state or not) to be admissible in non-criminal Texas cases, subject to the usual discretion of the court. Although a few other states are in the early states of exploring mandatory accreditation of forensic laboratories (e.g. Florida, California), the bureaucratic effort for that to occur is substantial and unlikely to be fast given the current economic climate.

So what is the solution? The NAS report states "*The committee thus concluded that the problems at issue are too serious and important to be subsumed by an existing federal agency. It also concluded that no existing federal agency has the capacity or appropriate mission to take on the roles and responsibilities needed to govern and improve the forensic science enterprise*." The report further recommended that "*Congress should establish and appropriate funds for an independent federal entity, the National Institute of Forensic Science (NIFS). NIFS should have a full-time administrator and an advisory board with expertise in research and education, the forensic science disciplines ...and public policy. NIFS should focus on: (a) establishing and enforcing best practices for forensic science professionals and laboratories; (b) establishing standards for the mandatory accreditation of forensic science laboratories and the mandatory certification of forensic scientists and medical examiners/forensic pathologists—and identifying the entity/entities that will develop and implement accreditation and certification...*" (in addition to numerous other recommendations). These recommendations are what many forensic scientists have been advocating for years. The problem is that implementation of the NAS recommendations will require considerable political will and money - neither of which will be easy to come by. So, for the foreseeable future, forensic laboratories will have to "go it alone" with the local resources available to them.

How do you go about becoming accredited? Select the accreditation program or standards that are most suitable for your type of laboratory. Whether that is an ISO-based program or one that is more discipline-based, but incorporates ISO principles is less important than just picking one. For a DUID or postmortem toxicology laboratory the next step is to perform a realistic self-assessment against the standards of the program. Identify obvious deficiencies and a draw up a realistic timetable for rectifying them. If necessary, identify and apply for the fiscal and manpower resources necessary to implement and maintain the required standards. Once you have addressed most, but not necessarily all of the problem areas, seek the expertise of someone from a laboratory that is already accredited to perform a "mock" or readiness assessment. It is tough to be objective about whether your own laboratory meets the required standards - you may have one or more "blind spots" regarding practices you have been conducting for years. In some cases laboratory directors may over-interpret a standard and waste value time and resources fixing something that doesn't need to be fixed. When applying for accreditation, do not wait until you think your laboratory is guaranteed to be in absolutely perfect compliance with a program's standards - most of us will never reach that point - it is a continuous, ongoing process of improvement. Even if you know you don't have the resources to fully meet all accreditation program standards, it is important that you accomplish what you can now. One step at a time.

Preparing for accreditation can hard work - but be assured maintaining the standards for accreditation is easier than preparing for it.

Reference:

1. http://www.nap.edu/catalog.php?record_id=12589 (Note, there is a charge for the full report, but a detailed executive summary of over 50 pages, that contains the key recommendations, may be downloaded free of charge).

NOMINATING COMMITTEE OFFERS 2010 SLATE

The 2009 SOFT Nominating Committee, Christine Moore (Chair), Michael Schaeffer, and Marilyn Huestis respectfully submit the following slate for consideration by the membership for 2010.

President: Bradford Hepler, Ph.D., DABFT
Vice President: Sarah Kerrigan, Ph.D., DABFT
Secretary: Dan Anderson, M.S.
Director: Jeri Ropero-Miller, Ph.D., DABFT

The President and Vice President serve one year terms while the Secretary and Treasurer serve two year terms which expire in alternate years. Five additional Directors are elected for three year terms. If a Director cannot serve his/her entire term, an interim Director shall be named by the Board to serve the remaining term. All Officers are also Directors.

President (one year term)

Bradford Hepler, Ph.D.

Dr. Brad Hepler is the Laboratory Director at the Wayne County Medical Examiner's Office, a position he has held since 1992. He began his career in chemistry after receiving his B.Sc. degree in Chemistry in 1969 from California State Polytechnic University at San Luis Obispo. Following graduation, Dr. Hepler then served six years in the United States Air Force. In 1981, he received his Ph.D. degree in Chemistry (Analytical) from McGill University in Montreal. He was employed at the Cuyahoga County Coroner's Office in Cleveland in 1980 where he trained under Dr. Irving Sunshine and held two university appointments.

Dr. Hepler has been with the Wayne County MEO in Detroit, MI since 1990 and holds appointments at Wayne State University in Detroit as Clinical Assistant Professor (Department of Pathology), and as an Adjunct Professor (Department of Pharmaceutical Sciences). His research interests include the analytical, clinical and forensic aspects of toxicology, as well as using computer, chromatographic and electroanalytical methods in solving problems related to these disciplines. He has authored, co-authored and presented over fifty papers on these topics.

A SOFT member for many years, Dr. Hepler has served on the Method Evaluations Committee in 1985, on the ToxTalk Editorial Board 1990-1993, and as co-editor of the 1998 Journal of Analytical Toxicology/ SOFT special issue. He was a co-host of the 2002 Annual Meeting held in Dearborn, MI, has been a member of the SOFT Board of Directors, (2004-2006) and as Treasurer of the organization, a position he has held since from 2007-2008. Dr. Hepler is currently Vice President of the SOFT organization, a position he has held since 2008.

Dr. Hepler is a Diplomate of the American Board of Forensic Toxicology (DABFT), an AAFS fellow, and recipient of the 1998 AAFS Toxicology Section Ray Abernethy Award. He has been AAFS Toxicology Section Program Chair, Section Secretary, Section Chair, a member of the AAFS Nominating Committee and served on the AAFS Toxicology Section Nominating Committee. He is also a member of multiple toxicology and chemistry professional organizations, including AACC, CAT, ASCP, and TIAFT, as well as a registered Medical Technologist (MTASCP) and a licensed Clinical Laboratory Scientist with the State of California. Dr. Hepler is a laboratory inspector for CAP, NLCP, and the ABFT laboratory Accreditation Programs.

Vice President (one year term)

Sarah Kerrigan, Ph.D.

Dr. Kerrigan is a Professor of Criminal Justice at Sam Houston State University where she is Director of the Master of Science in Forensic Science Program. She also serves as Laboratory Director of the Sam Houston Regional Crime Laboratory in The Woodlands, TX. She received her initial training in forensic toxicology in 1990 at the Metropolitan Police Forensic Science Laboratory in London, England. Between 2001 and 2004 she served as Bureau Chief for the New Mexico Department of Health, Scientific Laboratory Division where she was responsible for the blood and breath alcohol program in addition to forensic drug and alcohol related medical examiner and criminal casework statewide. Prior to this she was employed as a forensic toxicologist at the California Department of Justice Toxicology Laboratory in Sacramento, CA.

Over a period of six years Dr. Kerrigan served on the Board of Directors of the California Association of Toxicologists where she held a variety of elected positions, including President (2004-2005). She has chaired several committees of the Society of Forensic Toxicologists and American Academy of Forensic Sciences including Membership, Awards and Scholarship, and Drugs and Driving. Dr. Kerrigan was elected to the SOFT Board of Directors in 2006 and the Executive Board in 2008.

Dr. Kerrigan has been a contributing author in several toxicology textbooks including Encyclopedia of Forensic Science, Principles of Forensic Toxicology, Encyclopedia of Forensic and Legal Medicine, Medical-Legal Aspects of Abused Substances, Forensic Nursing and others. She has

published research in peer reviewed scientific journals on a wide range of topics. In 2002 she joined the faculty of the National Judicial College in Reno, NV. She was appointed to the Editorial Advisory Boards of the Journal of Analytical Toxicology and the Journal of Forensic Sciences. Dr. Kerrigan works closely with attorneys, law enforcement and the judiciary on drug and alcohol-related traffic safety issues. Dr. Kerrigan received the Outstanding DRE Program Innovation award from the International Association of Chiefs of Police in 2003 and was the recipient of the Irving Sunshine Toxicology Award from the American Academy of Forensic Sciences in 2002. She was appointed to the Texas Forensic Science Commission by the Attorney General in 2008.

Secretary (two year term)

Dan Anderson, M.S.

Dan Anderson has been a Toxicologist for 20 years and is currently the Supervising Criminalist/ Toxicologist in the Forensic Science Laboratories of the Los Angeles County Department of Coroner in Los Angeles, CA, a position he has held since 1995. Previously, Dan was employed with the Los Angeles Department of Coroner (1990-1994) and the Ventura County Sheriff's Department (1994-1995) as a Criminalist/ Toxicologist. He was an Adjunct Professor at California State University-Los Angeles (2001-2005) where he taught the subject of Forensic Toxicology to students obtaining their Master's Degree, served as an instructor at the California Criminalistics Institute in Sacramento, CA (2002) and at the Midwest Forensics Resource Center in Ames, IA (2008). Dan received a BS Degree from Colorado State University in Fort Collins, CO in 1988 and a MS in Forensic Science from the University of New Haven in West Haven, CT in 1990.

Dan has been affiliated with several professional organizations including the California Association of Toxicologists (CAT), American Academy of Forensic Sciences (AAFS), California Association of Criminalists (CAC), and Society of Forensic Toxicologists (SOFT). He has been very active in the organizations including being the SOFT Meeting Workshop Coordinator (Phoenix, 2008), SOFT Board of Directors (2008-present), SOFT ToxTalk Associate Editor (2001-present), SOFT Budget, Finance and Audit committee, SOFT Membership Committee, hosting seminars for CAT (2000 & 2006-2x) and CAC (2002), CAC Toxicology Study group Chair (1995-1997), CAT Quality Assurance Coordinator (2000-2007), CAT New Drugs Chair (2002-present), and CAT President (2005-2006). Dan is a Diplomate of the American Board of Criminalistics (1998) and is certified as a Forensic Toxicology Specialist with the American Board of Forensic Toxicology (2007).

Dan has given many platform presentations, posters, and published articles in forensic toxicology which topics include Buproprion, Fentanyl (Duragesic® Patch), Flecainide, GHB, Oxycontin®, Mirtazapine, Paroxetine, Quetiapine, and Duloxetine. He has peer reviewed articles for both the Forensic Science International and Journal of Analytical Toxicology (JAT) including serving as the 2008 Special Editor of JAT.

As a firm believer of becoming involved and promoting research within the laboratory, Dan has mentored four members of his scientific staff who were awarded the SOFT Young Scientist Meeting Award (2004, 2006, 2007, 2009) and two members who were awarded the AAFS Regional Award (2001 & 2005).

Director (three year term)

Jeri Ropero-Miller, Ph.D.

Dr. Jeri D. Ropero-Miller is a Senior Research Forensic Scientist in the Center for Forensic Sciences at RTI International (RTI). She completed her undergraduate degree in Chemistry at Wesleyan College (Macon, GA) and her doctorate at the University of Florida College of Medicine (Gainesville, FL). She is a Board-Certified Forensic Toxicologist with Diplomate status with the American Board of Forensic Toxicology (D-ABFT). Dr. Ropero-Miller has more than 10 years of experience in conducting forensic toxicology, clinical chemistry, and hair drug-testing studies. Prior to her tenure with RTI, Dr. Ropero-Miller served as the Deputy Chief Toxicologist at the State of North Carolina Office of the Chief Medical Examiner. She is an active member of the ABFT, Society of Forensic Toxicologists (SOFT), and The International Association for Forensic Toxicologists (TIAFT), the American Association for Clinical Chemistry (AACC). She is an ABFT Board of Directors member, a Fellow and Toxicology Section Chair of AAFS, and a laboratory inspector for the National Laboratory Certification Program (NLCP) and the ABFT. At RTI, she has served as Project Lead for the Pilot Hair Performance Testing Program of the NLCP. Other projects of Dr. Ropero-Miller's include technology transfer strategies of forensic sciences, Web-based continuing education for forensic scientists, the Census for Medical Examiner and Coroner Offices, the National Forensic Laboratory Information System, the Forensic Toxicology Laboratory Survey for the National Violent Death Reporting System and the Law Enforcement Forensic Evidence Processing Survey. Throughout her career, she has published many journal articles and book chapters in research and cases of forensic toxicology and clinical chemistry. She recently Co-edited a book entitled Handbook of Workplace Drug Testing, Second Edition.

OKLAHOMA MEETING NEWS

THANK YOU TO MEETING EXHIBITORS / **SPONSORS**

Advanced Chemistry Development
AIT Laboratories
Aegis Sciences Corporation
Agilent Technologies
Alternative Biomedical Solutions
American Solutions for Business
Anton Paar
Advanced Research Laboratories
Applied Biosystems
Apollidon, Inc.
Apollo LIMS / Common Cents
Axiom Diagnostics, Inc.
Biochemical Diagnostics, Inc.
Biophor Diagnostics, Inc.
Biotage
Branan Medical Corporation
Caliper Life Sciences
Campbell Science Corporation
Central Police University
Cerilliant Corporation
ChemWare, Inc.
Chromsys, LLC
DPX Labs
Express Diagnostics Int'l, Inc.
GenTech Scientific, Inc.
GERSTEL, Inc.
Grace Davison Discovery Sciences
Immunalysis Corporation
JEOL USA, Inc.
JusticeTrax, Inc.
LECO Corporation
Lin-Zhi International, Inc.
Lipomed, Inc.
Microliter Analytical Supplies, Inc.
Neogen Corporation
OraSure Technologies, Inc.
Orochem Technologies
Parker—domnick hunter
Perkin Elmer
Pharmaceutical Press
Phenomenex
Preston Publications / JAT
Quality Assurance Science Corp.
QI Macros SPC Software for Excel
Randox Laboratories
Regis Technologies, Inc.
Research Triangle Institute, Int'l
Roche
Rudolph Research Analytical
Scitech Diagnostics, Inc.
SGE Analytical Science
Shamrock Glass
Shimadzu Scientific Instruments, Inc.
Siemens Healthcare Diagnostics
Speware Corporation
Thermo Fisher Scientific
United Chemical Technologies
UTAK Laboratories, Inc.
Varian, Inc.
Venture Labs, Inc.
Waters Corporation
X-Link Bioscience, Inc.

2009 AUDIO VISUAL TEAM

The SOFT Audio-Visual support staff are tasked with making sure all the workshop and scientific presentations run smoothly. Attendees and presenters expect to focus on the information provided in the presentations, not on making the computers and projectors run properly.

SOFT members Frank Wallace, Dale Hart, and Carl Horn will be working at the meeting to make sure all the workshop and scientific presentations, and other AV functions come together to provide the high-quality workshop experience meeting attendees have come to expect.

The laptops used in the workshop will have Microsoft Office 2007 installed (backward compatible with older versions). Presentations will be loaded onto the workshop laptops ahead of time and tested to make sure they run properly. The presentations will be hyperlinked from agenda slides providing a seamless flow between presentations. All files will be backed up and can be re-loaded quickly if a problem occurs.


Carl Horn


Dale Hart


Frank Wallace

The SOFT Audio-Visual support staff would like presenters to begin sending in their presentations as soon as possible. There are two primary ways to send in presentations:

1. Email to Frank.Wallace.2 @gmail.com. This method works well in most instances.
2. Upload to http://www.soft-workshops.org/uploadfile.asp. Sometimes presentation files are too large to send by email, multimedia files are needed, or mail server issues arise. The upload page is available if email doesn't work.

Friday, October 16, 2009 will be the last day to accept presentations via email and web uploads, since we need to start loading presentations on the laptops. The registration desk can help presenters find the AV team during the meeting. Anyone with special requests should contact us as soon as possible. We will accommodate presenters with last minute updates prior to each workshop if time permits.

Oklahoma Meeting News (Continued)

SSEP Update

SOFT will continue the Student Enrichment Program (SSEP) as a Monday event at the annual October meeting. SSEP is an educational outreach program designed for college students to participate in a one-day introduction to the many disciplines of forensic toxicology. The program primarily consists of a laboratory tour, lunch with SSEP faculty and lectures by SOFT members.

This year we hope to tour the state-of-the-art facilities of the Oklahoma State Bureau of Investigation and/or the Forensic Science Institute both located on the Oklahoma Central University campus in Edmond. SSEP is funded by proceeds of the annual SOFT Silent Auction and contributions from research organizations such as this year's sponsors, Analytical Research Laboratories (ARL), Apollidon Learning, and Research Triangle Institute (RTI).

SOFT members are encouraged to publicize this program to students having an interest in learning more about forensic toxicology. Both undergraduate and graduate level students can apply. The SSEP committee will review all applications and contact the most qualified applicants with an invitation to attend.

SSEP Coordinator:
Jeri Ropero-Miller, RTI Int'l
Contact: 919-485-5685
jerimiller@rti.org

Application Period:
May 1, 2009 to September 25, 2009

Applications Available from:
http://www.soft2009.org/ssep.html *or* **jerimiller@rti.org**

Acceptance Notification: Oct.2, 2009

Silent Auction

The fun and popular (4th annual) Dr. Irving Sunshine / Dr. Fredric Rieders Silent Auction is being planned for a repeat memorial event during the 2009 annual meeting in Oklahoma. This annual tradition keeps the Sunshine / Rieders names alive and funds student enrichment programs into the future. Company or individuals may donate any variety of items for competing write-in bids. A separate "Silent Auction Donation Form" is included with this mailing of ToxTalk for those who would like to participate. Thank you, **Laurie Tobler** for kindly agreeing to chair this event.

Volunteers Welcomed

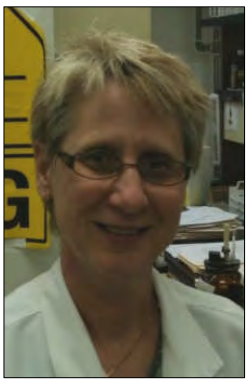
Deb Denson (denson@rti.org) has once again sported her angel halo and agreed to coordinate the hefty list of volunteers who take a shift or two at the annual meeting. Please contact her if you would like to be included in the many available openings that will cumulatively pull the annual meeting in Oklahoma together. Thank you to both the seasoned volunteers and generous new additions!

Oklahoma Fun Facts

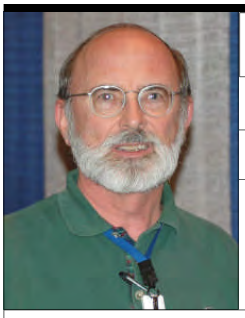
1. Oklahoma has produced more astronauts than any other state.
2. The Port of Catoosa (just north of Tulsa) is the largest inland port in America.
3. The Oklahoma State Capital is the only capital in the U.S. with working oil wells on its grounds.
4. The highest wind speed ever recorded on earth was in Moore, Oklahoma on May 3, 1999 during the Oklahoma City F-5 tornado. Wind speed was clocked at 318 mph.
5. Per square mile, Oklahoma has more tornadoes than any other place in the world.

Fun Run

In memory of the late Karla Moore, the annual SOFT Fun Run Event has adopted the new name "The Karla Moore Annual Fun Run" in honor of its creator. A separate Fun Run Sign Up Sheet for 2009 has been included with this mailing of ToxTalk for those who wish to reserve a commemorative tee shirt in a specified shirt size. This event has grown larger each year to approximately 100 participants (both athletes and the recreational).



Much appreciation is sent to **Linda Harty**, who has generously volunteered to chair this fun event in 2009.



CASE NOTES

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

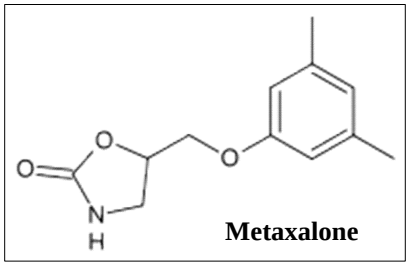
Send interesting "Case Notes" to Section Editor, Matthew Barnhill, Ph.D. at mbarnhilljr@worldnet.att.net

CASE NOTES #1: DRIVING UNDER THE INFLUENCE OF A POSSIBLY LETHAL LEVEL OF METAXALONE

Submitted by: ***Jon Stephenson*** *DFTCB, Georgia Bureau of Investigation, Division of Forensic Sciences*

Introduction

Metaxalone (Skelaxine®) is a skeletal muscle relaxant that has no established mechanism of action. It is often prescribed in 400 and 800 mg doses with increased absorption after consumption of fatty foods. Maximum reported plasma concentration from a single 800 mg dose after administration of a fatty meal is 3.2 mg/L. Therapeutic doses were found to produce metaxalone peak plasma concentrations of 0.9mg/L from a single 400 mg dose and 1.7 mg/L for a single 800 mg/L dose[1].



Metaxalone

Case History

A 42 year old female with a known history of prescription drug abuse was pulled over for DUI after driving to the grocery store for soda and cigarettes. The officer's report showed that she had a pale face with droopy eyelids, speech was very sluggish, and she was disoriented and confused. Horizontal Gaze Nystagmus was reported with a lack of smooth pursuit, and dilated pupils that had a slow reaction time to light. Field Sobriety testing was not completed for safety purposes arising from her lack of balance.

Results

A six panel CEDIA screen testing for amphetamines, barbiturates, cocaine/metabolites, benzodiazepines, cannabinoids, and opiates showed the sample to be indicative for benzodiazepines and barbiturates. A supplemental LC/MS/MS screen gave indications of clonazepam, promethazine, and metaxalone. Confirmation testing of whole blood sample by LC/MS/MS and GC/MS found metaxalone 20 mg/L (+/-21%), clonazepam 26 µg/L (+/-26%), promethazine 72 µg/L (+/-21%), and butalbital.

Discussion

The subject was found with an amount of metaxalone that is often attributed to fatal concentrations, along with three other sedating drugs, while still operating a motor vehicle. Reports of fatalities related to metaxalone have been 21 and 38 mg/L [2,3]. Other publications found metaxalone attributed deaths having concentrations of 17, 14, and 39 mg/L in femoral blood[4]. The subject for this case not only lived from the large dose of metaxalone, but drove to the store, albeit she was impaired.

References

1. Baselt RC, Disposition of Toxic Drugs and Chemicals in Man, Biomedical Publications 2008.
2. Cervenak J, Clovin SM, Couper FJ, A combined drug intoxication involving metaxalone. Presented at the annual meeting of the Society of Forensic Toxicologists, Washington DC, September 1, 2004.
3. Moore KA, Levine B, Fowler D, A fatality involving metaxalone. J. For. Sci. 2003: 48:432.
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C.A.T. GOES TO RENO

The California Association of Toxicologists (CAT) will hold their next meeting in Reno, Nevada on November 6th & 7th, 2009 at the Grand Sierra Resort (reservations 800-501-2691, www.grandsierraresort.com) hosted by Bill Anderson of the Washoe County Sheriff's Office.

The May CAT meeting will be held in Sacramento, California, hosted by D. Coleman of the California Dept. of Justice.

Additional information about CAT meetings and membership can be found at their website (www.cal-tox.org)

CASE NOTES #2: AN UNUSUAL FINDING OF 1,1-DIFLUOROETHANE IN A DROWNING VICTIM

Submitted by: ***William A. Dunn[1]****, M.S.,* ***George F. Jackson[1]****, Ph.D., and* ***Gerard Breton[2]****, MD,* ***Edward H. Albano[2]****.*
[1]Institute of Forensic Science State Toxicology Laboratory and Regional Medical Examiner's Office, Newark, NJ,
[2]Ocean County Medical Examiner, Toms River, NJ

1,1-Difluoroethane (HFC-152a), is a colorless, flammable gas with a slight ethereal odor, is used as a non-ozone depleting aerosol propellant and as an alternative to trichlorofluoromethane (CFC-11) and dichlorodifluoromethane (CFC-12) in foam applications.(1) It is also commonly found in electronic cleaning products, and many consumer aerosol products that must meet stringent volatile organic compound (VOC) requirements.

Since Broussard(2) first reported the deaths of a driver and passenger in a motor vehicle accident, the forensic literature has had a steady increase in the number of reports of this compound relating to driving impairment with and without fatal outcomes (3-6). There are additional reports of sudden deaths involving this substance (7-9).

We report here what we believe to be the first involvement of 1,1-difluoroethane in a drowning.

The decedent was a 33-year-old male reported missing by his wife six hours after going kayaking and scuba diving. His body was discovered by a police helicopter floating in a river and he was pronounced dead approximately 9 ½ hours after being last seen alive. He was dressed in a wet suit, fins mask and snorkel. His past medical history included an occasional complaint of chest pain. He was also known to use "energy" drinks.

Specimens submitted to the toxicology laboratory included blood (collection site not specified), urine, bile, gastric content, liver, kidney and brain.

The blood was tested by headspace gas chromatography for ethanol and other volatiles, and colorimetrically for the presence of carbon monoxide and cyanide. Urine was tested by immunoassay for common drugs of abuse and colorimetrically for salicylates, acetaminophen, phenothiazines, ethchlorvynol and chloral hydrate.

Positive findings were an unidentified peak on both BAC-1 and BAC-2 columns (RRT of 0.4342 verses n-propanol on BAC-1 and RRT of 0.4956 verses n-propanol on BAC-2). There were no retention time/relative retention time matches with Restek's application note (10), thus a sample of 1,1-difluoroethane with n-propanol was subjected to our headspace alcohols procedure. The 1,1-difluoroethane peaks were at the same retention times as the unidentified peak and a blood aliquot was sent to a reference laboratory for confirmation and quantitation by GC/MS. The result was the 1,1-difluoroethane was present at a concentration of 43 mg/L. Financial considerations precluded testing in other fluids and tissues. The only other significant positive finding was acetaminophen at 22 mg/L.

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CASE NOTES #3: IDENTIFICATION OF BENZOYLECGONINE IN HAIR

From the Miami Dade Medical Examiner Dept.,
***Theresa Hippolyte**, M.S., Toxicologist, **George Hime**, M.S., Toxicologist, **Marta Coburn**, M.D.*

Introduction

Cocaine is a central nervous system stimulant that is found in the leaves of the Erythroxylon coca shrub that grows in South America. It is a potent drug that is administered either as a hydrochloride for nasal inhalation and/or a liquid for intravenous injection. It can also be smoked when in its free base form. Hydrolysis of cocaine in the liver by enzymatic and non-enzymatic processes produces cocaine's primary metabolite benzoylecgonine. (1) Pregnant women who abuse cocaine put their unborn child at risk because cocaine crosses the placenta to enter the baby's circulatory system. A fetus is much slower at eliminating cocaine in turn increasing the baby's exposure time. Cocaine and its metabolites can be found in the fetus's urine and hair. Miscarriage can occur early in the pregnancy and placental abruption can occur later in the pregnancy of cocaine abusers. Babies who were exposed to cocaine intrauterine tend to have lower birth weights, are shorter in length, with smaller head circumferences. (2)

Head hair consists of hair follicles located under the skin that contain a network of arterial capillaries. These capillaries provide the root with nourishment. Drugs in the blood are distributed by passive diffusion which is enhanced by the following factors: high lipid solubility, low protein binding, and physicochemical factors that prefer the unionized forms of the drug. Arterial capillaries through passive diffusion deposit drugs into the matrix cells located at the base of the follicle. The drugs bind to the matrix and pigments in the hair. The cells in the hair slowly die as the cells elongate and age. A union of nonliving hair fiber is formed with the drug stored in the matrix allowing for drug analysis to be conducted on hair sample.(3)

Case History

A baby girl was born at 37 weeks of gestation to a mother who was incarcerated on possible drug charges. The baby had a low birth weight of 1 lb. 9 oz. and had lower measurements. The cause of death was intrauterine demise. Due to an ongoing legal action taken against the mother by the State of Florida more details cannot be provided at this time.

Postmortem Toxicology

Postmortem chest cavity blood, liver tissue, brain tissue, muscle tissue, small bowel content (meconium), and three tubes containing pulled head hair were submitted for toxicological analysis. The analysis included a brain volatile screen by headspace GC-FID and confirmations of cocaine, benzoylecgonine, and sympathomimetic amines by GC-MS. An EMIT and GC-MS confirmation were performed on the small bowel content. Confirmation analyses for cocaine, benzoylecgonine, and sympathomimetic amines were also conducted on hair extracts.

The toxicology results reported below are from the final toxicology report.

Confirmation of Cocaine and Metabolites by GC-MS

Brain	*Not Detected*
Hair Extract	*Benzoylecgonine*

Confirmation of Sympathomimetic Amines by GC-MS

Hair Extract	*Not Detected*

Extraction

Hair analysis is not routinely performed in-house so an extraction procedure was developed and modified based upon a review article using different hair extraction procedures. (4) A sample of hair was weighed and then washed twice with 5mL of methylene chloride for 2 minutes at room temperature. The washes were not discarded, but saved in a separate tube for possible examination later. The hair sample was incubated for 16 hours at 56^{o}C in 1.5mL of 0.1N HCl. The liquid was then decanted and aliquoted into three separate tubes. Two of the tubes were analyzed for cocaine, benzoylecgonine and sympathomimetic amines by GC-MS using in-house methods. The third tube was later used to confirm the findings of the positive identification of benzoylecgonine in the previously tested hair extract. (4)

Discussion

The decedent's toxicology results were positive for benzoylecgonine which confirmed the allegations of the mother abusing drugs during her pregnancy.

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NEW DRUGS

ILOPERIDONE (FANAPT™)

Submitted by Section Editor, Dan Anderson, FTSABFT
Supervising Criminalist II, Los Angeles County Dept. of Coroner, 1104 N. Mission Road, Los Angeles, CA 90033 (Danderson@coroner.lacounty.gov)

Iloperidone, active ingredient of Fanapt™, is a new atypical antipsychotic drug that was recently approved by the FDA on May 6, 2009. In fact, according to the Vanda Pharmaceuticals Inc website, the drug is so new that it will be "Available in U.S. Pharmacies Soon."

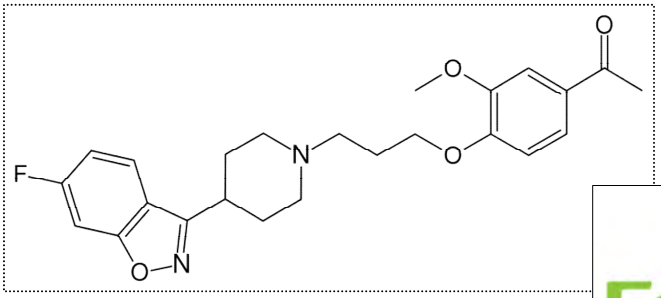
Iloperidone is considered an antagonist and blocks the sites of noradrenaline (α_{2C}), dopamine (D_{2A} and D_3), and serotonin (5-HT_{1A} and 5-HT_6) receptors. A recommended target dose of Fanapt™ is 12 to 24 mg/day, administered twice daily. Starting at a dose of 1 mg twice daily, than moving to 2, 4, 6, 8, 10, and 12 mg twice daily on days 2, 3, 4, 5, 6, and 7 respectively, to reach the 12 to 24 mg/day dose range.

Toxicology:

Unknown, however if compared with other similar atypical antipsychotics along with it's large molecular weight and small tablet dosages, therapeutic concentrations are expected to be low and most likely detectable by LC/MS/MS.

General Information:

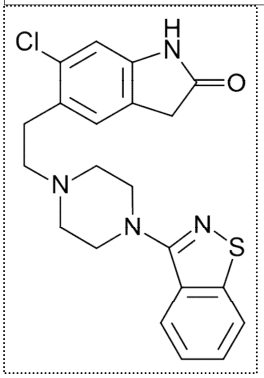
Common Name:	Iloperidone
Trade Names:	Fanapt™, Fanapta, Zomaril
Chemical Name:	1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]-3-methoxyphenyl]ethanone
Chemical Formula:	$C_{24}H_{27}FN_2O_4$
Formula Weight:	426.481g/mol
CAS Number:	133454-47-4
Administration:	Tablets -1, 2, 4, 6, 8, 10, and 12 mg



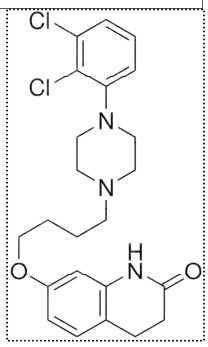
Pharmacokinetics:

Protein Binding:	Approximately 95%
Metabolism:	Extensively metabolized -Hepatic (CYP2D6 & CYP3A4)
Half-Life:	18-33 hours
Excretion:	Urine and Feces

Ziprasidone (Geodon®)
MW=412.94 g/mol



Aripiprazole (Abilify®)
MW=448.39 g/mol



Risperidone (Risperdal®)
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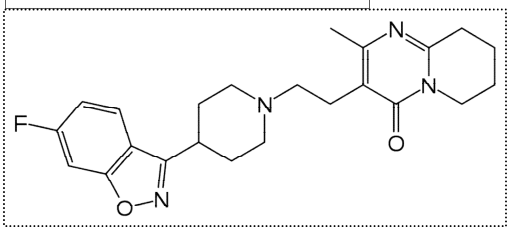
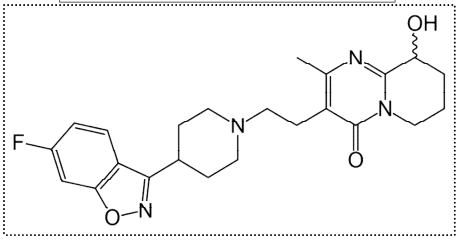


Paliperidone (Invega®)
MW=426.48 g/mol



DRUGS IN THE NEWS

Send interesting "*Drugs In The News*" to Section Editor, Dwain Fuller, B.S., DFTCB, at Dwain.Fuller@va.gov

USE AND ABUSE OF MODAFINIL (PROVIGIL, AKA "THE SMART PILL")

Submitted by: ***H. Horton McCurdy,*** *Ph.D., DABFT, Toxicology Consultants, Inc., 597 Palmer Court SE, Conyers, GA*

Society must respond to the growing demand for cognitive enhancement. That response must start by rejecting the idea that 'enhancement' is a dirty word. Today, on university campuses around the world, students are striking deals to buy and sell prescription drugs …not to get high, but to get higher grades, to provide an edge over their fellow students or to increase in some measurable way their capacity for learning. These transactions are crimes in the United States, punishable by prison. (H Greely, et al: Towards responsible use of cognitive enhancing drugs by the healthy; Nature, 456, 702-705, 11 Dec 2008).
On an episode of Law & Order: SVU titled "Hothouse"(13 Jan 2009), a 15-year old girl uses Provigil to study harder and ends up killing her roommate (with the apparent message that even if you're only slight crazy you probably shouldn't be using this drug).

Introduction:

Modafinil (Provigil) is FDA approved for use in improving wakefulness in adults who experience excessive sleepiness due to one of the following diagnosed sleep disorders: obstructive sleep apnea, shift work sleep disorder, or narcolepsy. However, it is the "off-label" use of modafinil that has garnered much attention as of late because of its reputation as a "smart-pill" by allegedly increasing concentration and as a brain-enhancer. This has lead to wide-spread illegal use by college students and professionals who buy and sell Provigil illegally, as they do with Ritalin and Adderall, to stay alert while studying.

Modafinil's reputation stems from an Air Force study that found it improved the performance of sleep-deprived fighter pilots. One study on helicopter pilots suggested that 600 mg of modafinil given in three doses can be used to keep pilots alert and maintain their accuracy at pre-deprivation levels for 40 hours without sleep, although significant levels of nausea and vertigo were observed.

The off-label use of modafinil was perhaps even further reinforced by a recent article in the prestigious journal *Nature* (see quote above) that argued people without medical problems should be able to use drugs such as Provigil, Adderall or Ritalin in order to work harder and longer. Professionals of all kinds are apparently doing it, according to a subscriber survey conducted by *Nature* (Look who's doping; *Nature*; 452, 674-675, 2008) to boost their concentration and memory. Some 62 percent of the respondents still prefer Ritalin (methylphenidate), but 44 percent preferred modafinil, the "keep-awake" drug. The rest generally preferred either Adderall (amphetamine) or Inderal (propranolol).

The smart pill that may not be so smart:

Of 1,400 *Nature* subscribers in 60 countries who responded to the survey (*ibid*) and indicated that they used modafinil as their "stay-awake" drug of choice; about 15 percent were biologists, 15 percent engineers, 12 percent were educators, 8 percent worked in the medical field, and 7 percent were in the media. Almost 80 percent of the respondents said healthy people should be allowed to take cognitive-enhancing drugs if they choose (however, 86 percent did agree that anyone under the age of 16 should not be on any "smart pill" even if otherwise healthy). As a result of this survey, *Nature* has been called cavalier and misleading in equating the use of such brain-enhancing drugs "was no more dangerous than drinking coffee".

Research has now arrived from NIDA that modafinil may carry more of an addiction risk than first believed. The study recently reported in *JAMA* [ND Volkow, *et al*: Effects of modafinil on dopamine and dopamine transporters in the male human brain: *JAMA*; **301**: 1148-1154 (2009)] showed significant and measurable changes in dopamine D_2 / D_3 receptor and dopamine transporter availability in the nucleus accumbens after modafinil administration as when compared with placebo.

DRUGS IN THE NEWS (CONTINUED)

Earlier research had shown the same results in mice and monkeys. This study was accomplished using positron emission tomography to measure the effects of modafinil on extracellular dopamine and on dopamine transporters in 10 healthy male participants ages 23 to 46. The study took place over an 8-month period (2007-2008) at Brookhaven National Laboratory.

The lead investigator and director in the NIDA study, Dr. Nora Volkow, indicated that "It would be wonderful if one could take a drug and be smarter, faster or have more energy, but that is like fairy tales. We currently have nothing that has those benefits without side effects. The off-label use of stimulants such as Provigil has been promoted as cognitive enhancers with the belief that these drugs are safe. Without proper medical oversight use of such drugs could lead to abuse and addiction."

As a result of this study, *Nature* has since issued a follow-up commentary where it was stated that caution is needed along with a little humility when we're "interfering with brain chemistry. After all the years that it (modafinil) has been on the market, we are still learning things about it that are relevant to its safety". At about the same time Cephalon, the manufacturer of modafinil, issued a statement that the company has seen no evidence the drug is highly abused because they have not seen it used at rave scenes. *(Say what?).* Cephalon did go on, however, to appropriately warn that there is no drug yet that is a substitute for a good night's sleep.

Selected "Off-Label" Uses for Modafinil:

As an alleged cognitive enhancer, Modafinil seems to improve some aspects of working memory, such as digit span, digit manipulation and pattern recognition memory, but the results related to spatial memory, executive function and attention are equivocal. Interestingly, some of the positive effects of modafinil may be limited to "lower-performing" individuals or to the individuals with lower IQ.

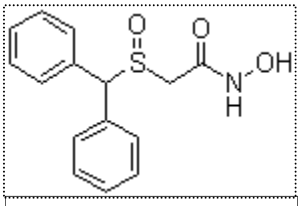
Modafinil has received some publicity in the past when several athletes were discovered allegedly using the drug as a performance-enhancing doping agent and as a result, Modafinil was added to the World Anti-Doping Agency "Prohibited List" in 2004.

Modafinil has been used to allay symptoms of the neurological fatigue reported by some with multiple sclerosis. Participants taking a lower dose of modafinil reported feeling less fatigued and there was a statistically significant difference in fatigue scores for the lower dose versus the placebo. The higher dose of modafinil was not reported to be significantly more effective.

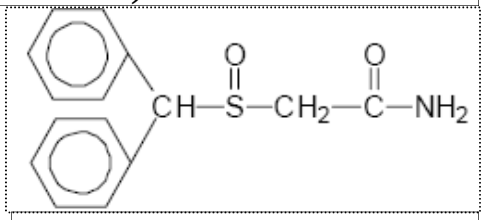
As an adjunct to experimental treatments for cocaine addiction, a single 8-week double-blind study of modafinil for cocaine dependence produced inconclusive results. In other experimental studies, the appetite reducing effect of modafinil appears to be similar to that of amphetamines, but without significantly increasing the heart rate.

Modafinil Pharmacology and Pharmacokinetics:

Modafinil is the primary metabolite of adrafinil, and, while their activity is similar, adrafinil requires a higher dose to achieve equipotent effects. Modafinil is a racemic mixture; the longer-lasting (*R*)-enantiomer is known as Armodafinil (Nuvigil), which is currently in development.



Adrafinil



(R,S)- Modafinil (Provigil): Metabolite of Adrafinil
(R)-Modafinil = Armodafinil (Nuvigil)

The exact mechanism of action of modafinil is unclear, although numerous *in vitro* studies have shown it to increase the levels of various monoamines, namely; dopamine in the striatum and nucleus accumbens, noradrenaline in the hypothalamus and serotonin in the amygdala and frontal cortex. While the co-administration of a dopamine antagonist is known to decrease the stimulant effect of amphetamine, it does not negate the wakefulness-promoting actions of modafinil.

After single or multiple oral doses, modafinil is readily absorbed, reaching maximum plasma concentrations at 2-4 hours after administration and pharmacokinetic steady state within 2-4 days. Its pharmacokinetics are dose-independent between 200 and 600 mg/day. The elimination half-life is approximately 12-15 hours; modafinil is primarily eliminated via metabolism, mainly in the liver, with subsequent excretion in the urine. Less than 10% of the dose is excreted as unchanged drug. Metabolism is largely via amide hydrolysis, with lesser contributions from cytochrome P450 (CYP)-mediated oxidative pathways. Stereospecific

DRUGS IN THE NEWS (CONTINUED)

pharmacokinetics of modafinil is shown by the d-modafinil enantiomer being eliminated at a three-fold faster rate than l-modafinil. Modafinil 200 mg, 400 mg, and 600 mg doses are generally well tolerated; however, the 800 mg dose panel was discontinued after 3 days of treatment due to the observation of increased blood pressure and pulse rate. Drug safety data suggests therefore that the maximum tolerable single daily oral modafinil dose, without titration, may be 600 mg.

Possible Implications for the toxicologist:

Whether the *Law and Order*: *SVU* episode alluded to above is based on a real life event is not known, but does have possible implications for the toxicologist. The sales of Provigil approached $1 billion last year. Currently, 100 mg Provigil tablets sells for about $8-$10 (Ritalin is only about $2 per tablet); however, when the cheaper generic modafinil hits the market in 2012, the drug's popularity could possibly explode.

There are clear warnings that anyone with psychotic tendencies should not be using drugs like Provigil. Additionally, with increasing popularity and beliefs that modafinil and like drugs are brain-enhancers, the impending availability of cheaper generic substitutes and more powerful stay-wake drugs such as Nuvigil in the pipeline, all could have the potential to be among the drugs of abuse of the future.

However, Dr. David Weinshenker, associate professor of human genetics at Emory University in Atlanta downplays modafinil's addiction potential: "What is Provigil's street value? It is zero. There are not addicts walking around buying and selling the drug. Most people who take Provigil don't report euphoria or being high. They don't even report feeling particularly stimulated, like caffeine. In terms of addiction and withdrawal, it just doesn't do that."

But anecdotal evidence of Provigil addiction can be found on the Erowid web site that suggests the opposite: "It is now day 5 and I am back up to 1200 mg per day and cannot imagine not having this stuff," one user wrote, who started off with one 200 milligram pill from her husband's Provigil prescription. (*Note: At current pricing for 1200 mg of Provigil, such a habit would cost approximately $70 per day or over $25K a year to sustain*).

Cephalon did agree with the NIDA position that Provigil should not be taken by healthy individuals. "(Modafinil) is a very serious medication for serious medical disease. This is for pathological sleep disruption, not for people who've stayed awake for 24 hours."

In the final analysis, individuals who are taking these drugs off-label are doing so because they believe they're going to improve their cognitive ability. This is despite the fact that there is really no evidence to show this is the actual case, and there is even more concern that some people may become addicted in the process.

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TOXICOLOGY - BITS & PIECES

Section Editor, J. Robert Zettl, MPA

AAFS/ SOFT JOINT DRUGS & DRIVING COMMITTEE

Submitted by Jennifer Limoges, M.S.

The Drugs & Driving Special Session will again be offered during the SOFT 2009 Oklahoma City conference, and has a full slate of presentations relevant to impaired driving toxicology. The next committee meeting will be on Monday evening, October 19th, 2009 in Oklahoma City. Anyone interested in Committee activities is encouraged to attend.

AAFS NEWS, TOXICOLOGY SECTION

Submitted by Jeri Ropero-Miller, Ph.D.

At the February Academy meeting in Seattle, there will be three special sessions in the scientific program. There will be the traditional Pediatric Toxicology session, the DUID Committee will present a special session, and there will be a joint session with Jurisprudence on Melendez-Diaz and other 6th Amendment confrontational clause cases with presentations from the prosecution, judicial, laboratory and defense perspectives.

This year's Toxicology Section Workshop Chair is Ruth Winecker. Phil Kemp is Program Chair. Submission deadline for both Workshop and abstracts was August 1st. If you missed the deadline, contact Dr. Kemp at PKemp@arlok.com or Dr. Winecker at winecker@ocme.unc.edu to check on your options on submitting a late abstract or workshop proposal.

If you are not a member of AAFS Toxicology Section you are welcome to join. And if you are a member and need to update your membership to Fellow see one of the Section Officers.

NATIONAL SAFETY COUNCIL — COMMITTEE ON ALCOHOL AND OTHER DRUGS

Submitted by Laura Liddicoat, B.S.

The next joint meeting of the NSC CAOD and Executive Board will be held at the SOFT conference in Oklahoma City, Oklahoma on Friday, October 23, 2009. The meeting will start at 1 pm with the location to be announced later. To access CAOD policies, previous Borkenstein Award recipients or learn more about the committee go to www.nsc.org and type in Committee on Alcohol and Other Drugs under the search engine.

POTENTIAL IMPACT OF MELENDEZ – DIAZ SUPREME COURT RULING

Submitted by J. Robert Zettl, MPA

Dr. Barry Logan provided an extensive article on the Melendez-Diaz ruling that may provide complications for those in the forensic science business (see his article in this issue of ToxTalk, pgs 16-18).

Others were surveyed and their input is summarized as follows with most stating the impact will have to play out and to take a wait and see attitude:

- Limoges/NY – Breath testing feeling the impact more than toxicology.
- Cowan/TX – Little or no effect on the Breath Program. Will more likely impact DNA and other Crime Laboratory testing.
- Moore/WY – Little or no effect except possibly where there is a multiple positive drug case which would then require more than one analyst.
- Internet/VA – It appears that some cases have already been dismissed due to the ruling.
- Canfield/FAA – Magyari - military drug case – no impact.
- Eastman/MO – Little or no impact.
- Leonard/CO – Well run prosecutor offices probably little or no impact. Chain of custody procedures might be attacked more.
- Walls/FL – Impact of the ruling could be devastating. Probably have to redo the way they handle cases.
- Dubowski/OK/FAA – Wanted to emphasize that the forensic science profession has for decades and on its own initiative created independent personnel standards, certification and accreditation programs to police ourselves.

Forensic Magazine has published a very interesting article discussing the repercussions of the US Supreme Court decision on the Melendez-Diaz v. Massachusetts case.

The Court Syllabus for the ruling can be found here: **http://www.supremecourtus.gov/opinions/08p...8pdf/07-591.pdf**

The original July 1, 2009 article in Forensic Magazine reporting on the case can be found here: **http://www.forensicmag.com/News_Articles.asp?pid=595**

The July 24, 2009 article discussing in implications of the ruling is here: **http://www.forensicmag.com/News_Articles.asp?pid=633**

SCIENCE, LAW, AND POLICY

Melendez Diaz v Massachusetts – Impact on Toxicology Laboratories

Submitted by: Barry K Logan PhD, DABFT

On June 25th, 2009 the US Supreme Court ruled in the case of Luis Melendez-Diaz v. Massachusetts. This case has major implications for forensic laboratories and for prosecutors offering expert forensic evidence at trial.

In what was a routine case from a forensic point of view, three defendants were arrested for suspected drug sales and trafficking. During the ride to the police station, the defendants were observed making furtive movements in the back of the police car. When the area was subsequently searched, plastic bags containing suspected drug material were found and submitted to the Massachusetts state crime lab for analysis. The laboratory conducted the tests and issued three "certificates of analysis", which stated in part that the bags "[h]a[ve] been examined with the following results: The substance was found to contain: Cocaine". The certificates were notarized, and at trial, consistent with relevant Massachusetts state law, were admitted over the objection of the defendant who asserted that the Supreme Court's ruling in Crawford v Washington (54 U.S. 36 (2004)) required the analyst to testify in person. Melendez-Diaz was convicted, and appealed to the US Supreme Court that the Massachusetts statute, which allows the use of the certificates as "prima facie evidence of the composition, quality, and the net weight of the narcotic… analyzed." violated his sixth amendment rights.

The sixth amendment to the US constitution states "In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district where in the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; *to be confronted with the witnesses against him* [italics added]; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defense [sic]". The interpretation of what constitutes a witness against the defendant has been subsequently litigated, most recently in Crawford v. Washington, where a taped statement regarding an assault was played to the jury in lieu of the witness appearing in person, and without the opportunity for the defendant to cross-examine her. The court ruled that anyone testifying to material facts about the evidence were witnesses against the defendant, and the defendant had a right "to be confronted with" the witnesses at trial, unless the witness was unavailable and the defendant had had a prior opportunity to cross examine them.

The majority opinion in Melendez-Diaz written by Justice Scalia, reaffirmed the Court's earlier finding in Crawford, and ruled that the analyst's affidavits were testimonial statements, and that the analysts were "witnesses" for the purposes of the sixth amendment. Consequently the defendant has the right to be confronted by the analysts in court. Four dissenting justices in an opinion by Justice Kennedy said that scientific evidence should be treated differently than statements from an eyewitness to a crime, and warned that the decision would subject the nation's criminal justice system to "a crushing burden" and that "guilty defendants will go free, on the most technical grounds." As an example, Justice Kennedy wrote that Philadelphia's 18 drug analysts would each be required to testify in more than 69 trials next year, and Cleveland's six drug analysts in 117 trials each. Talking about analysts from the FBI Laboratory in Quantico who, he said, conduct more than a million tests each year, he observed "The court's decision means that before any of those million tests reaches a jury, at least one of the laboratory's analysts must board a plane, find his or her way to an unfamiliar courthouse and sit there waiting to read aloud notes made months ago."

The majority scoffed at those concerns that "the sky was falling" and argued that the defense's interests in not putting prejudicial testimony before the jury, and their interest in not aggravating the courts with spurious demands for testimony without any intent to present the witness, would protect the legal system against wasting of an analysts time, while permitting the right and opportunity for confrontation. They justified their decision by noting that the impact of the right to confrontation is mitigated by the use of "notice-and-demand" rules, which are constitutional, and appear to work well where they are in place. "Notice-and-demand" statutes allows for the

SCIENCE, LAW, AND POLICY

Melendez Diaz v Massachusetts – Impact on Toxicology Laboratories (Continued)

state to give "notice" that they intend to rely on admitting testimony through a certificate, and for the defense in turn to "demand" the witness appear in person. Typically these statutes require that the defendant "request[s], by notifying the prosecuting attorney at least [some number of] days before the trial, that the [analyst] testify in person at the trial on behalf of the state". In effect the statute simply requires an early assertion of the confrontation right, without which, an affidavit or certificate may be admitted in lieu of testimony.

Within days of the Court's decision, there were reports from across the country of scores of DUI and drug cases being continued, or dismissed by judges where an analyst was unavailable, evidence being suppressed and there were knee jerk reactions from prosecutors from coast to coast demanding an analyst in court "just in case", even in notice-and-demand states, where no demand for an appearance had been made. Other fallout included the Governor of the State of Virginia calling a special session of the legislature to amend that state's statute in response.

What are the long-term implications for toxicology laboratories from this ruling? At present there are more questions than answers. Melendez-Diaz dealt with a drug chemistry case, so many of the specific aspects of toxicological laboratory operation were not before the court. Toxicology differs from the way in which much forensic science is done, and in many respects is more similar to clinical laboratory practice than to other forensic disciplines such as drug chemistry or firearms examination. The most notable difference in toxicology is the practice of batching and dividing analytical toxicology casework, say to an alcohol department, where the alcohols are done by analyst A, then to the screening department where immunoassay and spot tests are performed by analyst B, and then to confirmation for GCMS or LCMS, where analysts C and D may be involved in the preparation, analysis, and review of the chromatographic extracts and results. Finally, the case goes to a certifying reviewer or equivalent whose signature typically appears on the report, but who may have performed none of the analytical work themselves. In this scenario, who is "the analyst", and who is the witness against the defendant? Does this mean for toxicology cases, that every person who touched the sample or who handled a tray of extracts is subject to appear in court to confront the defendant? This would seem ludicrous for several reasons. While some smaller laboratories may adopt a "cradle to grave" approach to their casework where each analyst is responsible for all aspects of the analysis and sample handling, these are few and far between. Also, small laboratories are the ones who can least afford to have an analyst in court on every case, as productivity will plummet dramatically. In larger laboratories with a "departmental" approach, employee turnover may be higher, analysts will change jobs, leave the county or state, become incapacitated, or die. Does the unavailability of one of those analysts, result in the suppression of that report, or sections of it?

An important distinction between the eye-witness testimony analysis of the Crawford decision and the expert witness testimony of Melendez-Diaz, is that in the latter case, the laboratorian likely has no knowledge of whose sample was being analyzed on a particular day in a particular batch, since most laboratories use case numbers or accessioning numbers. Additionally, in handling hundreds or thousands of specimens or extracts each year, an analyst will have no specific recollection of any individual defendants specimen. If asked on the stand their testimony will be general about what they usually do, as opposed to what they actually did on this particular case, and will be based on their review of the documents on file. The individual analysts at the bench often do not know the toxicological significance of the findings, how they relate to the results of tests done in other departments, and other aspects of the overall integration of data from tests into a final conclusion. Their testimony lends little weight to the validity of the final report.

A strong argument can be made that in a toxicology case, the "analyst" for the purposes of the sixth amendment would be the person who reviews and assesses all the data, who is familiar with the laboratory's standard operating procedures, accreditation requirements, quality assurance and quality control policies, has a technical knowledge and qualifications to interpret the result, and who signs the report.

Melendez Diaz v Massachusetts – Impact on Toxicology Laboratories (Continued)

This person is the author of the report, and responsible for its content. Identifying the author of the report as the analyst of record allows the defendant to confront an important witness who is offering the testimony about the test results; it provides the court with most qualified person to explain what was done and why, and what it means; and it minimizes the impact on the daily operation of the laboratory. The majority opinion in Melendez-Diaz appears to recognize at least part of this dilemma, since they specifically state that the ruling did not require everyone involved in establishing the chain of custody, or instrument maintenance to appear in person, noting that any questions about the integrity of the chain of custody, or by extension the proper operation of the instrument would go to the weight, not the admissibility of the evidence. A military case which supports this approach, and is currently relied upon by at least one federal laboratory is U.S. v. Magyari (63 M.J. 123 (2006)) which ruled that random drug testing results were non-testimonial hearsay evidence and therefore did not require the technician who ran the test to appear in court. The person running the test did not know the identity of the individual and therefore did not provide testimony against the accused. The person signing and rendering the opinion based on the totality of the tests conducted is considered the accuser, and therefore is the appropriate witness for purposes of the sixth amendment.

Importantly, this approach relies on the laboratory's ability to meet certain standards emerging in the profession, and embodied in the requirements for accreditation. Specifically, having comprehensive policies and procedures detailed in the standard operating documents, having a structured quality assurance program that requires appropriate standards, calibrators, controls and proficiency testing, and having periodic inspections by qualified peer laboratory directors. In each specific case, a case file should be available that contains all the chain of custody information, instrumental printouts, and documentation in support of a specific result Together these form the basis for the final reviewer to arrive at a conclusion about the findings in a case, and to testify to their reliability. The material relied on by the reviewer must also be available to the defendant in a litigation pack format for their independent review.

Toxicology laboratories are already short-staffed, facing cuts in funding, trying to keep up with new technology, manage backlogs, and deal with increasing demands for service and testimony, so the impact of this decision cannot be understated. With the Supreme Court's reiteration of its expectations on the right to confrontation, things will not be the same again for forensic evidence in court. Lower courts will have to develop rules and processes to keep cases coming to trial without broad dismissal of cases, slowing the system to a crawl, or emptying out the labs. The use of video testimony, a designated analyst of record, notice-and-demand statutes, and accountability for appropriate use by attorneys of witnesses that are required to appear in court, will all be important parts of the solution.

The parallels between the expectations of the Supreme Court in Melendez-Diaz and the recent National Academies of Science Report on the Future of Forensic Science are hard to miss. The bar is being raised, and although toxicology was recognized as having taken steps to standardize and professionalize the field, the need for accreditation of laboratories, certification of individuals, and appropriate tertiary and continuing education for forensic scientists, all help reduce the potential for error, and provide the criminal justice system with the most appropriate, reliable and relevant testimony that both protects the defendants constitutional rights and serves the interests of justice.

Acknowledgements:

Thank you to Dennis Canfield PhD, DABFT, CAMI, Oklahoma City, OK, for providing details of the Magyari case.

Resources:

Transcript of oral argument before the Supreme Court in Melendez-Diaz: http://www.oyez.org/cases/2000-2009/2008/2008_07_591/argument

Petitioners Brief: http://www.abanet.org/publiced/preview/briefs/pdfs/07-08/07-591_PetitionerAmCuLawProfs.pdf

Respondents Brief: http://www.abanet.org/publiced/preview/briefs/pdfs/07-08/07-591_RespondentAmCu35StatesDC.pdf

Ruling: http://www.law.cornell.edu/supct/html/07-591.ZO.html

SCIENCE, LAW, AND POLICY

UPDATE: THE NAS REPORT AND CFSO

Submitted by Peter Stout, Representative to CFSO (pstout@rti.org)

This has been a year for historic reports and court decisions. I think most everyone has been made aware of the National Academy of Sciences (NAS) Report on *Strengthening Forensic Science in the United States: A Path Forward* that was issued during the Academy meeting in February of this year. If you have not already read this document, I would encourage you to do so. There is a charge for the document, but it is available at www.nap.edu. Likely, this document will have lasting impacts on our field.

As a result of this report, SOFT issued a press release during the Academy (AAFS) meeting and has subsequently joined the Consortium of Forensic Science Organizations (CFSO) in a combined membership with the American Board of Forensic Toxicology (ABFT). CFSO is a group of forensic organizations including AAFS, ASCLD, ASCLD-LAB, FQS-I, IAI, NAME and now SOFT and ABFT. The mission of CFSO is to speak with a single forensic science voice in matters of mutual interest to its member organizations, to influence public policy at the national level and to make a compelling case for greater federal funding for public crime laboratories and medical examiner offices. The primary focus of the CFSO is local, state and national policymakers, as well as the United States Congress.

Prior to May of this year, toxicology was not represented in this organization. With the far-reaching implications of the NAS report, the SOFT and ABFT boards felt that toxicology needed greater representation in the national policy debate now occurring and voted to join CFSO. This is an important step in the growth of SOFT and ABFT to become a part of the national discussion, but it is also crucial to have the interests of toxicology be a part of this discussion. We need to avail ourselves of every means of actively representing our needs and interests as a science. To take a passive role at this time is to assure the adoption of policies that do not address our needs.

So far this year since the release of the NAS report, CFSO has been actively discussing the needs of forensic sciences with the White House Office of Science and Technology Policy (OSTP). OSTP has been seeking the opinions of forensic scientists and of the Innocence Project. Senator Patrick Leahy (D,VT), Chairman of the Senate Judiciary Committee encouraged CFSO to host discussions among forensic stakeholders to provide recommendations for congressional action. CFSO hosted two meetings, both prior to SOFT/ABFT joining. We became a part of these discussions with conference calls in April.

I don't think it is a stretch that there may be a legislative response to the NAS report at the Federal level. Both the White House and the Senate Judiciary committee appear to be engaged in the discussion. On August 5th and 6th there were additional meetings in Washington DC between CFSO and the Senate Judiciary committee staff to further discuss legislative issues. At the meeting there were representatives from IAI, IACP and NDAA in collaboration with CFSO and representatives of the Innocence Project. Other interests including the Innocence Project have also been vocal in their response to address the issues raised in the NAS report. CFSO is actively working to respond where appropriate. Currently, there is scheduled to be a Senate Judiciary hearing on September 9th at which CFSO will have an opportunity for oral testimony.

The call to see an oversight body (NIFS) for the forensic sciences at the Federal level, appears to be at a standstill currently. It is also unclear what funding may be available, where to address issues of concern to our community, and the potential for an unfunded mandate is a concern that has been voiced. Accreditation and certification are widely discussed topics as well.

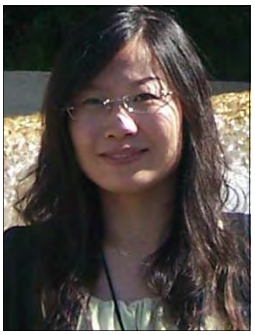
Many articles are beginning to appear in the popular press (see for example Popular Mechanics August 2009, http://www.popularmechanics.com/technology/military_law/4325774.html). We will likely see more such articles. They may not be complimentary. Keeping current on what is out there will be important since you may find yourself confronted with the popular versions of the ongoing discussion.

There have been significant developments this year and the trend is expected to continue. I was asked by the SOFT Board to serve as the first voting representative to CFSO along with an ad hoc member from ABFT. I am honored and humbled at being asked to represent our forensic toxicology science in this capacity. I encourage you to send me your comments and concerns about what you see as needs to be represented. Your efforts to make yourself informed about the issues at hand are essential. The big issues are here, an opportunity to influence our science for years to come is here. Please, be informed and be active.

ERA / YSMA 2009 AWARDEES

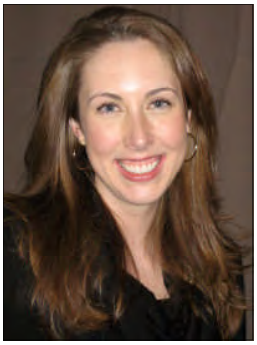
Congratulations to the following 2009 SOFT Awardees of the Educational Research Award (ERA) and the Young Scientist Meeting Award (YSMA). Beginning this year, the financial award amount has been re-set to $2,000 plus a complimentary SOFT meeting registration. Winners will report their findings of their research during a scientific session at the October annual meeting in Oklahoma City.

ERA Awardees (6)



Xiaoyun (Michelle) Liu-
S. China University of Technology
Wushan, Guangzhou, P.R. China
Mentor: Guohong Wang, Ph.D.
"Effect of SPE and Derivatization Conditions on GC/MS and LC/MS/MS Detection Sensitivity of Multi-Functional Ractopamine"

Jillian Yeakel-
Arcadia University,
Philadelphia, PA
Mentor: John DiGregorio, MD, Ph.D.
"In Vitro Stability of Salvinorin-A in Human Blood at Various Temperatures and Time"



Jayne Thatcher-
University of Washington,
Seattle, WA
Mentor: Nina Isoherranen, Ph.D.
"The Contribution of Hepatic Cyp26A1 to All Transretinoic Acid Clearance"

Teresa Gray-
NIDA, Baltimore, MD
Mentor: Marilyn Huestis, Ph.D.
"Comparing the Efficacy of Sweat Testing to Urine and Oral Fluid Opiate Analysis in Methadone Maintained Pregnant Women"

Huda Hassan-
University of Glasgow
Forensic Medicine and Science Dept.
Glasgow City, Scotland, UK
Mentor: Gail Cooper, Ph.D.
"Determination of β-Hydroxybutyrate (BHB) in Blood and Urine Using Gas-Chromatography-Mass Spectrometry (GC-MS)"

ERA Awardees (continued)

Erin Karschner-
NIH/NIDA-IRP, Baltimore, MD
Mentor: Marilyn Huestis, Ph.D.
"A Two-Dimensional GC/EI/MS Method for the Simultaneous Detection of Cannabidiol, Δ9-Tetrahydrocannabinal (THC), 11-Hydroxy-THC (11-OH-THC), and 11-nor-9-Carboxy-THC (THCCOOH)"

YSMA Awardees (3)

Oscar Pleitez-
Los Angeles County Dept. of Coroner, Los Angeles, CA
Mentor: Dan Anderson, M.S.
"Postmortem Study of Fentanyl"

Mary Jeanette Aiken-
Virginia Commonwealth University, Richmond, VA
Mentor: Carl Wolf II, Ph.D.
"Mother's Little Helper: Analysis of Common Benzodiazepines by LC/MS"

Nichole Bynum-
Research Triangle Institute International, Durham, NC
Mentor: Peter Stout, Ph.D.
"A Direct Comparison of GC/MS and LC/MS/MS Analysis of Urine for Benzoylecgonine, Morphine, Codeine, and 6-Acetylmorphine"

AMERICAN BOARD OF FORENSIC TOXICOLOGY (ABFT) NEWS

Submitted by Marina Stajić, Ph.D., D-ABFT, President, ABFT Board of Directors

Effective January 1, 2010, all ABFT accredited laboratories will be required to subscribe to both the FTC (Toxicology) and the T-series proficiency tests of the College of American Pathologists (CAP). Laboratories will be required to complete all challenges for the FTC set for which the laboratory has established, validated methods. All of the laboratory's usual screening and confirmation tests will need to be completed for the T-series, plus those quantitative challenges for which the laboratory has routine methods. Results must be returned to CAP within the reporting period. In addition, laboratories must subscribe to the CAP AL1 Whole Blood Alcohol program or comparable program(s) with an equivalent number of challenges for ethanol and related volatiles. Laboratories are encouraged to continue participation in any other proficiency test programs to which they currently subscribe.

All directors (or designees) of laboratories accredited by ABFT are invited to attend the initial portion of the ABFT Accreditation Committee meeting at the SOFT meeting in Oklahoma City, OK. The purpose of this meeting is to allow a format for ABFT to inform participants of program changes that are planned or being considered for the future. It is also an opportunity for the laboratories to voice concerns or suggestions regarding the Accreditation Program. The meeting will start at 9:00 am, Tuesday, October 20, 2009. The open portion of the meeting is expected to last until 10:30 am. An invitation will be forwarded, via e-mail, to all directors of ABFT accredited laboratories in October.

The American Board of Forensic Toxicology (ABFT) was established to provide professional certification for forensic toxicologists who practice human performance and postmortem forensic toxicology. ABFT is itself accredited by the Forensic Specialties Accreditation Board (FSAB), ensuring that appropriate educational, experiential, continuing education and knowledge exam standards are included in the qualification. ABFT offers personal professional certification to qualified individuals holding BS and MS degrees (Forensic Toxicology Specialist) and to those holding PhD degrees (Diplomate). ABFT will present an all day workshop at the Society of Forensic Toxicologists meeting in Oklahoma City, OK, on Monday, October 19, 2009. The workshop is designed to demystify the certification process, often perceived as an intimidating and daunting task, by reviewing the various sections covered in the ABFT examination, reviewing the qualifications needed to apply for certification, discussing study techniques, and reviewing resource materials necessary for a successful application. The workshop will be co-chaired by Barry K Logan PhD, DABFT and Laura Labay PhD, DABFT and will cover exam topics of Laboratory Practice (10%), Analytical Procedures (30%), Drugs and other xenobiotics - factual questions (20%), Drugs and other xenobiotics - interpretive questions (30%), Urine Drug Testing (5%), History of Toxicology (5%). Presentations from recently qualified Certificants on study approaches and a moderated discussion (question and answer) session will conclude the workshop. Please visit www.soft-tox.org for more information.

CONGRATULATION to our colleagues who have successfully met the requirements and joined the ranks of ABFT Certificants since February 2009:

- Sean Kocur, FTS-ABFT
- Vincent Papa, D-ABFT

CONGRATULATIONS to the staff of the following laboratories on successfully meeting all the ABFT requirements for lab re-accreditation:

- Forensic Toxicology Division, Armed Forces Institute of Pathology, Office of the Armed Forces Medical Examiner
- Forensic Toxicology Laboratory, Office of Chief Medical Examiner, City of New York
- Forensic Toxicology Laboratory, Westchester County Department of Laboratories and Research

The annual ABFT Certificant ceremony and reception will be held during the SOFT meeting in Oklahoma City, OK, on Wednesday, October 21, 2009 from 5:30 pm to 6:30 pm.

REMINDERS:

►ABFT Board of Directors has restructured the certification application, re-certification application and continuing education fees. Effective January 1, 2009, a non-refundable fee of $150 will be applied to all new applications, replacing the previous $300 fee. The re-certification fee of $300 is no longer required every five years. Instead, a fee of $100 is required with the annual submission of continuing education credits. Certificants will still need to submit a re-certification application every five years in order to remain in good standing.

►ABFT no longer has the USA/ Canada residency requirement for certification. All other requirements remain the same. The examination is administered (in English only!) twice each year, at the American Academy of Forensic Sciences (AAFS) Annual Meeting and at the Society of Forensic Toxicologists (SOFT) Annual Meeting. Additionally, a candidate may request to have an examination administered at a different location under the direction of a member of the Board of Directors. We welcome and encourage our international colleagues to consider applying for ABFT certification. Please visit www.ABFT.org for more information.

MEMBER NEWS

CONGRATULATIONS TO SOFT'S NEWEST MEMBERS

The SOFT organization has rigorous standards of qualifications that must be met by applicants. Congratulations to the newest SOFT members who have been added to the SOFT roster (listed below).

The Membership Committee also deserves acknowledgement for the extraordinary amount of time spent constantly reviewing applications and assuming heavy responsibility for ensuring a successful future for the Society of Forensic Toxicologists.

Besides applications for New Membership, the Membership Committee also reviews applications for Promotion and Retirement status change. This Committee is always busy!

Gracious commendations to the 2009 Membership Committee:

Sarah Kerrigan, Ph.D., Chair
Robert Osiewicz, Ph.D.
Rebecca Jufer-Phipps, Ph.D.
Jeri Ropero-Miller, Ph.D.

Ntei Abudu
Emily Adelman
Ahmed Al-Asmari
Darryl Arfsten
Tim Aukerman
Rachel Beck
Sarah Campbell
Christine Cava
Edward Carter
Philip Carter
Jenna Chin
Ayodele Collins
Kazandra Ruiz Colon
Joseph Corvo
Gary Davis
Abbegayle Dodds
Natividad Dumaual
Glenda Easterling
Leyla Evans
Nicholas Fillinger
Joyce Flanagan
Thomas Gluodenis
Gregory Gossage
Dale Haak
Veronica Hargrove
Curt Harper
Trista Haupt
Jennifer Hogue
Brandy Holey
Alice Holland
Kim Huynh
Joseph Jones
Saeed Jortani
Asa Louis
Amy Mach
Jennifer Markham
Henry Maynard
Gary McGarity
Cecilia Medina
Christa Miklancie
Katherine Moore
Faith Musko
Douglas Posey
Rachel Pratt
Ridhima Rao
Jennifer Regalia
David Sartori
David Schwope
Douglas Smith
Jay Spencer
Susan Stanich
Dina Swanson
Sarah Swenson
John Tobin
Marco Trauzzi
Sandra Valtier
Mark Vandervest
David von Minden
Sandy von Sengbusch
Jarrad Wagner
Guohong Wang
Chinyere Williams
Edward Yingling

BRUCE A. GOLDBERGER, PH.D., DABFT AND THE MICHAEL JACKSON DEATH

Bruce A. Goldberger, Ph.D, DABFT

On June 25, 2009, pop star Michael Jackson died at the age of 50. Within a few days, media reports shifted away from the now cancelled comeback tour to Jackson's prior drug abuse, especially recent reports of propofol abuse. There were reports of numerous opioids and benzodiazepines at the scene, as well as his alleged use of propofol at his home, rather than in a hospital. The intense media scrutiny of Michael Jackson's death led the national media to Dr. Bruce Goldberger. He was interviewed by ABC's 20/20, Good Morning America, and NBC's Dateline. For those who did not attend the 2009 American Academy of Forensic Sciences Annual meeting in Denver, Dr. Goldberger presented a unique case involving propofol administration which led to a manslaughter charge and a conviction. The release of Jackson's toxicology report is currently pending indefinitely, but this case has already sparked the interest of many in a drug which is used in countless medical procedures, but rarely reported as a drug of abuse.

Member News

Congratulations Christine Moore, BSc, MSc, PhD, DSc, CChem FRSC, DABCC

Submitted by Gail Cooper, Ph.D.

In recognition of her substantial contribution to the field of Forensic Toxicology, Dr. Christine Moore was awarded the prestigious degree of Doctor of Science from the University of Glasgow for her work entitled "*Development of new analytical techniques for the quantitation of drugs and metabolites in biological matrices: applications in forensic analysis*".

Dr. Moore is a highly respected member of the forensic toxicology community both in the United Kingdom and in her adopted home *across the pond*. She is a prolific researcher with over 85 papers in peer reviewed journals and a Fellow of both the Royal Society of Chemistry and the American Academy of Forensic Sciences. Most recently Dr. Moore held the office of President of the Society of Forensic Toxicologists and is actively involved as a board member for a number of organizations in the field.

Dr. Moore has a long established association with Forensic Medicine and Science at the University of Glasgow, as a graduate in 1989 (PhD) and more recently as an external examiner (*viva voce*). At the recent celebrations to mark the 50th Anniversary of Forensic Toxicology at the University, Dr. Moore chaired and delivered the plenary lecture for the scientific session on Alternative Matrices.

Christine, on behalf of all the staff (past and present) at Forensic Medicine and Science, and your colleagues worldwide, I would like to congratulate you on your achievement. You are the first recipient of the degree of Doctor of Science from Forensic Medicine and Science and no one is more deserving. Well done!

Dr. Moore is pictured with past and present staff from Forensic Medicine and Science, following her graduation on the July 2, 2009 *(from left Dr Hazel Torrance, Dr Karen Scott, Prof. John Oliver, Dr Christine Moore, Dr Gail Cooper, Dr Robert Anderson and Dr Fiona Wylie).*

ACMT's 1st Forensic Course: "Ethanol and Marijuana"

Submitted by Marc LeBeau, Ph.D.

The American College of Medical Toxicology (in association with SOFT) presents an intensive course on the forensic aspects of ethanol and marijuana. Leaders in the field will cover issues pertaining to biochemistry, toxicokinetics, clinical effects, laboratory analysis and interpretation of these widely available intoxicants. Recent advances in understanding the neurobiology of impairment will be presented. Issues related to the choice of matrix (blood, urine, oral fluid, and hair) will be analyzed. Special emphasis will be given to a thorough understanding of the scientific basis for the assumptions, modeling, and calculations used in these cases. Small group, interactive, and multimedia presentations will be used to enhance the curriculum.

Planning Committee Members:

- Marilyn Huestis, Ph.D.
- Barry Logan, Ph.D., DABFT
- Charles McKay, M.D., FACMT
- Lewis Nelson, M.D., FACMT
- Paul Wax, M.D., FACMT

Conference Location:
Sheraton Inner Harbor Hotel,
Baltimore, Maryland,
November 18 & 19, 2009
$475 for SOFT/ACMT Members

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.

Future S.O.F.T. Meeting Info

2009: Oklahoma City, OK……Oct. 18-23, 2009……..Phil Kemp, Dennis McKinney

2010: Richmond, VA……Oct. 18-22, 2010…..…..Michelle Peace, Lisa Tarnai Moak

2011: San Francisco, CA……...Aug. 29-Sep. 2, 2011…….……Nikolas Lemos

2012: Boston, MA…….June 30-July 6, 2012…..…….……...…Michael Wagner

2013: Orlando, FL…….Oct. 26-Nov.3, 2013 …….…….Bruce Goldberger

OKLAHOMA MEETING HOTEL CHOICES

Hotel # 1:
Renaissance Oklahoma City Convention Center Hotel,
10 N. Broadway,
Oklahoma City, OK 73102
Phone 1-405-228-8000
Use group code (socsoca) for discount rate of $189/ night

Hotel # 2:
Courtyard Marriott Oklahoma City
2 W. Reno Ave.
Oklahoma City, OK 73101
Phone 1-405-232-2290
Toll Free 1-800-217-9905
Use group code (forfora) for discount rate of $139/night

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www.soft-tox.org

Two convenient hotels were secured for meeting attendees at group rates. The Renaissance Hotel is reportedly "sold out", however, room reservations may be released soon as visitors firm up their travel plans and cancel un-needed rooms. ***Anyone wishing to be notified about vacancies that may occur at the Renaissance should leave their name with the office (toll free 1-888-866-7638).***

SOFT 2009 Planning Committee

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2009 S.O.F.T. COMMITTEE CHAIRS

Committee	Committee Chair
Nominating	Christine Moore, Ph.D., DABCC
Membership	Sarah Kerrigan, Ph.D.
Strategic Planning	Marc LeBeau, Ph.D.
Budget, Finance, and Audit	Robert Turk, Ph.D., DABFT
ToxTalk Co-Editors	Yale Caplan, Ph.D., DABFT Vickie Watts, M.S.
ByLaws	Yale Caplan, Ph.D., DABFT
Publications (JAT Special Issue)	Jennifer Limoges, M.S., DABC
Awards	Philip Kemp, Ph.D., DABFT
Drugs & Driving	Jennifer Limoges, M.S., DABC
Meeting Resource	Bradford Hepler, Ph.D., DABFT
Meeting Guidelines	Bradford Hepler, Ph.D., DABFT
Policy and Procedure	William Anderson, Ph.D.
SOFT Internet Web-Site	Bruce Goldberger, Ph.D., DABFT
Continuing Education	Ann Marie Gordon, M.S.
Web Based Continuing Ed.	Peter Stout, Ph.D., DABFT
Laboratory Guidelines	W. Lee Hearn, Ph,D.
Ethics	Aaron Jacobs, Ph.D.
Drug Facilitated Rape & Sexual Assault	Marc LeBeau, Ph.D.
MS/MS Guidelines	Dennis Crouch, M.S.