



SAT Newsletter

News of the Southwestern Association of Toxicologists

Volume 25, Number 1

Spring 2003

**SOUTHWESTERN ASSOCIATION OF TOXICOLOGISTS
2003 SPRING MEETING
MAY 2 - 3, 2003
ALBUQUERQUE, NEW MEXICO**

**JOINT MEETING WITH CAT -THE CALIFORNIA ASSOCIATION OF
TOXICOLOGISTS**

The 2003 Spring Meeting of the Southwestern Association of Toxicologists will be held May 2-3, 2003 at the Sheraton Old Town in Albuquerque, New Mexico. This will be a joint meeting with CAT -the California Association of Toxicologists.

Authors are invited to submit abstracts (200 words or less) for the meeting. We especially encourage presentations from bench chemists and others who may not be inclined to present at major toxicology meetings. Case studies are appropriate and welcome. Please limit length of oral presentations to 15-20 minutes. The abstract deadline has been extended from February 28th to March 31, 2003. The abstract form is available in Word ([http://www.sat-tox.org/CAT-SAT abstract form mar 31.doc](http://www.sat-tox.org/CAT-SAT%20abstract%20form%20mar%2031.doc)) and in PDF formats ([http://www.sat-tox.org/CAT-SAT abstract form extended.pdf](http://www.sat-tox.org/CAT-SAT%20abstract%20form%20extended.pdf)).

AACC ACCENT credit

It is anticipated that AACC ACCENT credit will be approximately 6.5 units for the Friday session and approximately 5 units for the Saturday session. ACCENT credit is given only for attendance throughout a full session. Check with CAT for more information.

Hotel Information

The meeting will be held at the Sheraton Old Town Inn in Old Town Albuquerque. The CAT/SAT conference rate is \$119/night (single/double occupancy). For reservations, call (505) 843-6300 or fax a Reservation Form to (505) 842-8426. The form is available for download as a PDF file (<http://www.sat-tox.org/hotel.pdf>). Conference rates are valid until April 15, 2003 and space is limited. Be sure to mention when making your reservation that you will be attending the SAT meeting (Group: Southwestern Association and California Association of Toxicology).

Check the Sheraton Old Town website (http://www.buynewmexico.com/heritagehotels/sheraton/sheraton_home.html) for more information. It has links for hotel amenities and local points of interest.

Sheraton Old Town Inn
800 Rio Grande Boulevard NW
Albuquerque, NM 87104

The Sheraton is located in Historic Old Town, where Albuquerque began (founded 1706). More than 200 shops and galleries, housed in historic adobe buildings, are hidden among the patios and winding paths that are of traditional Spanish design. Visit the Albuquerque Museum of Art and History and the Museum of Natural History and Science, both located across the street. Within a 1-mile radius of the hotel you can enjoy.

- The Albuquerque Botanical Gardens and Aquarium
- The Rio Grande Zoo
- The Rio Grande Nature Center
- The Indian Pueblo Cultural Center
- Golf Courses
- Albuquerque Children's Museum
- Albuquerque Museum
- National Atomic Museum (newly opened)
(<http://www.atomicmuseum.com/index.cfm>)

Enjoy a wide variety of foods with over 20 local cafés and restaurants within walking distance. The Sheraton Old Town's Location is unsurpassed.

To find out more information about what Albuquerque has to offer check out the Albuquerque Convention and Visitors Bureau website (<http://www.itsatrip.org/visitors/>).

If you are able to come a day early or stay until Sunday, consider traveling to Sante Fe (an hour away) or Roswell (4 hours away). Sante Fe has plenty of sights to see and Roswell will guarantee you a visit with aliens and a look at their spacecraft!

Travel Information

By Railway:

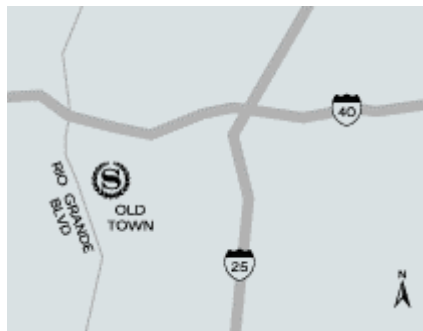
Albuquerque is on the main line of Amtrak's (<http://www.amtrak.com/>) Los Angeles to Chicago route with daily service in both directions on the Southwest Chief (<http://www.amtrak.com/trains/timetable/p3.pdf>).

By Air:

Flights go to Albuquerque International Sunport (ABQ). For shuttle service between hotel and airport, check Sunport Shuttle (<http://www.sunportshuttle.com/>) or Airport Shuttle (<http://www.airportshuttleabq.com/>).

Directions from airport to Sheraton Old Town:

- Start out going East on SUNPORT BLVD SE toward SUNPORT LOOP SE.
- Stay straight to go onto SUNPORT BLVD SE.
- Merge onto I-25 N toward I-40/DOWNTOWN and SANTA FE.
- At I-40, go west.
- Take the RIO GRANDE BLVD. exit- exit number 157A. Keep LEFT at the fork in the ramp.
- Turn LEFT onto RIO GRANDE BLVD NW/NM-194 S.
- Hotel is 2 blocks south on the left.
- Total distance is 8 miles.



Questions:

Check the CAT website (<http://www.cal-tox.org/>).

or contact Mike Frontz
Bexar County Forensic Science Center
San Antonio
(210) 335-4031
email Mike Frontz (mefron@co.bexar.tx.us)

or email Bob Schoenfeld (RGS6565@aol.com) or Sarah Kerrigan (skerrigan@sld.state.nm.us) in Albuquerque

Schedule for Combined CAT/SAT meeting in Albuquerque

Thursday, May 1st; SAT Board Meeting

- 19:00 SAT Board Meeting in Mike Frontz's Room .

Friday, May 2nd; "Interpretive Toxicology: Unraveling the Mystery? "

- 08:00 - 08:30 REGISTRATION & CONTINENTAL BREAKFAST
- 08:30 - 09:45 ARE POSTMORTEM BLOOD DRUG CONCENTRATIONS RELIABLE INDICATORS OF TOXICITY? Steven Karch, MD, Office of the Chief Medical Examiner, San Francisco, CA.
- 09:45 - 10:15 BREAK
- 10:15 - 11:30 POSTMORTEM TOXICOLOGY RESULTS: THEY DO USUALLY MEAN *SOMETHING*: Graham Jones, PhD, Office of the Chief Medical Examiner, Edmonton, Alberta.
- 11:30 - 11:45 BREAK
- 11:45 - 12:30 CASE PRESENTATIONS FROM THE LA COUNTY CORONER'S LABORATORY: Daniel Anderson, LA County Department of the Coroner.
- 12:30 - 13:30 LUNCH (provided)
- 13:30 - 14:45 DRUGS AND DRIVING; "WHAT BAC IS THAT EQUIVALENT TO?" AND OTHER IMPLAUSIBLE QUESTIONS: Barry Logan, PhD, Washington State Patrol.
- 14:45 - 15:15 BREAK
- 15:15 - 16:30 CANNABIS EFFECTS ON HUMAN PERFORMANCE AND BEHAVIOR: Marilyn Huestis, PhD, National Institute on Drug Abuse.
- 16:30 - 17:15 DRIVING UNDER THE INFLUENCE OF UFO'S, DEMONS AND THE NEW MEXICO HOT TAMALE DEFENSE; CASE PRESENTATION OF SOME UNIQUE DRUG-IMPAIRED DRIVERS IN NEW MEXICO: Sarah Kerrigan, PhD, New Mexico Department of Health.
- 17:15 - 21:00 MARIACHI AND MARGARITAS!
-

Saturday, May 3rd; Scientific Sessions:

- 08:00 - 08:30 REGISTRATION & CONTINENTAL BREAKFAST
- 08:30 - 09:30 CAT & SAT BUSINESS MEETINGS
- 09:30 - 10:00 BREAK
- 10:00 - 12:30 SCIENTIFIC SESSIONS
- 12:30 - 13:30 LUNCH (on your own)
- 13:30 - 14:45 SCIENTIFIC SESSIONS
- 14:45 - 15:15 BREAK
- 15:15 - 16:30 SCIENTIFIC SESSIONS



California Association of Toxicologists
Southwestern Association of Toxicologists



Joint Quarterly Meeting
Friday May 2 & Saturday May 3, 2003

Important Pre-Registration and Hotel Information

Pre-registration deadline for the workshop and quarterly meeting is April 1, 2003. Both the correct payment in full and the pre-registration form must be received by April 1, 2003 to avoid the late fee and ensure that lunch is included. Do not fax "intent to register". Whether or not a late fee is assessed depends on the date that the form and payment are received. Payment by mail must be check or cash – No credit or ATM cards are accepted. Make check payable to "CAT". Pre-registration received after April 1, 2003 is charged a \$10 late fee per session. Payment cannot be refunded for cancellations received after April 1, 2003. There is no written acknowledgement of pre-registration prior to the meeting unless a self-addressed and stamped envelope accompanies the payment.

For pre-registration, all members (CAT and SAT) as well as non-members must register through CAT as follows: Mail the Quarterly Meeting Pre-Registration Form and payment to: CAT, Attn: Judy Rector, PO Box 52335, Livonia, MI 48152. **Note that members must register for EACH DAY of the meeting (see below).**

Note: Late pre-registration, incorrect payment, lack of forms, and forms with no payment are not acceptable. On-site registration is available as space permits. On-site registrants are assessed the \$10 late fee and lunch is not guaranteed.

Hotel Accommodations: The meeting will be held at the Sheraton Old Town Inn in Old Town Albuquerque. The CAT/SAT conference rate is \$119/night (single/double occupancy). For reservations, call (505) 843 6300 or fax a Reservation Form (available at www.cal-tox.org and www.sat-tox.org) to (505) 842 8426. **Conference rates are valid until April 15, 2003 and space is limited.**

Directions from Albuquerque International Sunport: Start out going East on SUNPORT BLVD SE toward SUNPORT LOOP SE. Stay straight to go onto SUNPORT BLVD SE. Merge onto I-25 N toward I-40/DOWNTOWN & SANTA FE. Turn West at I-40. Take the RIO GRANDE BLVD. exit- exit number 157A. Keep LEFT at the fork in the ramp. Turn LEFT onto RIO GRANDE BLVD NW/NM-194 S. Total distance is 8 miles.

CAT/SAT WORKSHOP AND QUARTERLY MEETING REGISTRATION FORM

Workshop: Interpretive Toxicology: Unraveling the Mystery? Friday May 2, 2003

- \$60.00 Pre-registered CAT/SAT Member (\$70.00 after April 1, 2003)
- \$40.00 Pre-registered CAT/SAT Emeritus/Student Member (\$50.00 after April 1, 2003)
- \$70.00 Pre-registered Non Member (\$80.00 after April 1, 2003)

CAT/SAT Quarterly Meeting: Saturday May 3, 2003

- \$40.00 Pre-registered CAT/SAT Member (\$50.00 after April 1, 2003)
- \$30.00 Pre-registered CAT/SAT Emeritus/Student Member (\$40.00 after April 1, 2003)
- \$50.00 Pre-registered Non Member (\$60.00 after April 1, 2003)

Enclosed is the total pre-registration of \$_____

Name: _____
Professional/Business Affiliation: _____
Address: _____
Phone: _____



California Association of Toxicologists
 Southwestern Association of Toxicologists
 Joint Meeting
 Albuquerque NM
 May 2-3, 2003



ABSTRACT SUBMISSION FORM

Instructions: Authors are invited to submit abstracts (200 words or less) for the combined C.A.T./S.A.T. meeting. We especially encourage presentations from bench chemists and others who may not be inclined to present at major toxicology meetings. Case studies are appropriate and welcome. Please limit length of oral presentations to 15-20 minutes.

Extended! Abstract Deadline: March 31, 2003 **Extended!**

Send this form and your abstract to:

Michael Frontz
 Bexar County Medical Examiner's Office
 Forensic Toxicology Laboratory
 7337 Louis Pasteur
 San Antonio, TX 78229

CORRESPONDING AUTHOR:

Last Name: _____

First Name: _____

C.A.T. member S.A.T. member Member of both Non-member

MAILING ADDRESS:

Institution/Company: _____

Department: _____

Address: _____

City: _____ State: _____ ZIP: _____

Phone: _____ FAX: _____

E mail: _____

TITLE OF ABSTRACT:

_____ Signature: _____

Southwestern Association of Toxicologists
Meeting Grants Application

The SAT Meeting Grant (\$300.00 plus meeting registration) may be awarded to two individuals per meeting (at the approval of the board). It may be applied toward the current meeting or one of the next two meetings.

Guidelines for Meeting Grant:

- SAT Member in good standing.
- Presenting paper at meeting.
- Non-supervisory position.
- Sponsoring letter from laboratory or section manager.

Application for the SAT Meeting Grant should be forwarded to:

Chris Heartsill
Dallas County Institute of Forensic Sciences
5230 Medical Center Drive
Dallas, TX 75235

Phone: (214) 920-5966
email: cheartsill@dallascounty.org

Applicant's
Name: _____
Position: _____
MailingAddress: _____

Phone: _____
Sponsor: _____ Title: _____

NOTE: Title and abstract must be received by program chair prior to application.

Applicant Signature: _____
Date: _____
Date Application received: _____ SAT member verified: _____

Recommendation of committee: _____ Approve _____ Disapprove

Action of Board: _____ Fund _____ Do Not Fund Date: _____

Southwestern Association of Toxicologists
Board of Directors:

President: 2002-2003	Mike Frontz Bexar County Forensic Sciences Center 7337 Louis Pasteur Dr. San Antonio, TX 78229 (210) 335-4031
President-Elect: 2002-2003	Chris Heartsill Dallas County Institute of Forensic Sciences 5230 Medical Center Drive Dallas, TX 75235 (214) 920-5966
Past President: 2002-2003	Lori Speaker Texas Department of Public Safety 1617 E. Crest Waco, TX 76705 (254) 759-7156
Secretary: 2002-2003	Kathy Erwin Texas Department of Public Safety P.O. Box 4143, MSC 0460 Austin, TX 78765 (512) 424-2105
Treasurer: 2002-2004	Robert G. Schoenfeld, Ph.D. 7204 Aztec Road, N.E. Albuquerque NM 87110 (505) 884-4997
Councilor: 2002-2004	Brad Hall, Ph.D. Travis County Medical Examiner Laboratory PO Box 1748 Austin, TX 78767 (512) 854-9861
Councilor: 2001-2003	Phil Kemp, Ph.D. Office of Chief Medical Examiner 901 N. Stonewall Oklahoma City, OK 73117 (405) 239-7141
Membership Chair:	Brenda Snodgrass 519 Fleetwood Dr. Norman, OK 73072 Hm. (405) 360-6103 wk. (405) 522-5440

President's Message:

*If it's green, it's biology, If it stinks,
it's chemistry, If it has numbers it's
math, If it doesn't work, it's
technology
--Unknown*

This might be an oversimplification on the first three items, but all of us have felt this way at times when confronting our desktop computers, our Palm Pilots, or a LIMS with an attitude. Our continuing effort to make S.A.T. a more effective resource for the members will involve more technology, and your input and ideas are what make it work. At the beginning of this year, our membership directory was updated and made available online for the first time. In addition, a sampling of presentations from our Galveston meeting is now available in PowerPoint format. Direct your browsers to

<http://groups.yahoo.com/group/sat-tox/files/>

to access these as well as our e-mail archive and some photos from the last meeting. Many thanks to Kathy Erwin, Glenn Harrison, Bob Schoenfeld, Lori Speaker, and Nancy Gowen Kropp for contributing to these efforts. I hope that use of our Yahoo Groups! website will continue to grow as more of you become aware of its potential. A printed directory can be made available to any member upon request to Kathy or myself, and as always, meeting abstracts appear in the traditional paper form here in this newsletter.

We have an outstanding meeting planned for May 2 and 3 in Old Town Albuquerque. Our group welcomes the participation of the California Association of Toxicologists in our first joint meeting since 1997. We are privileged to have nationally and internationally recognized toxicologists present "Interpretive Toxicology: Unraveling the Mystery?" as Friday's session. Saturday is a planned full day of member-contributed presentations. A notable first is the offering of the ABFT examination, previously available only at the SOFT and AAFS meetings. Several people have already indicated that they also intend to take full advantage of New Mexico's wealth of shopping and outdoor splendor.

A special thank you to Sarah Kerrigan of the New Mexico Department of Health and Bob Schoenfeld, world traveler, for all of their time and preparation in managing the complications of hosting a joint affair. As C.A.T. is the larger group, they are tending to the registration process and much of the other administrative detail. Another difference from our usual program is the Friday evening gathering in lieu of the President's Reception. However, I won't turn you away if you show up on my doorstep Thursday evening (after the board meeting!)

Lori Speaker did a tremendous job for us in Galveston, and I also want to acknowledge the immense contribution of Ashraf Mozayani and her staff and students from Houston. Thanks everyone. See you in Albuquerque!

-Mike Frantz
President 2002-2003



POINTS OF REFERENCE

1. To submit information, newsletter articles, want ads, or answers and discussion for the current Toxicology Exchange Topic:

Nancy Gowen Kropp
Genzyme Glycobiology Research Institute
800 Research Parkway, Suite 200
OKC, OK 73104

(405) 271-8184
krop@gns.com

2. Web page address: <http://www.sat-tox.org/>
Web page email: webmaster@sat-tox.org
Web Page administrator:

Glenn Harrison
TX Dept of Public Safety
PO Box 4143, MSC0460
Austin, TX 78765

(512) 424-2105(ph)
(512) 424-2869(fax)
glenn.harrison@txdps.state.tx.us

3. To Update addresses, phone numbers, employment, and email addresses for member records:

Kathy Erwin
Texas Department of Public Safety
P.O. Box 4143, MSC0460
Austin, TX 78765

(512) 424-2105 (ph)
(512) 424-2869 (fax)
kjerwin@ev1.net or kathy.erwin@txdps.state.tx.us

-Change of address form-

Name: _____				
Last	First	Middle		
Home Address: _____				
Street	City	State	Zip	
Firm Name: _____				
Title: _____				
Address: _____				
Business Phone: _____			FAX: _____	
Home Phone: _____			email: _____	

- 4. To post a message to the e-mail list, send your message to sat-tox@yahoogroups.com.
- 5. To subscribe to the list server, choose one of the following:
 - a. Web-method (preferred): The email list has its own website, which is www.groups.yahoo.com/group/sat-tox. If you go to this website, you will be prompted to either convert your existing status with the old list from e-groups to a Yahoo! Account, or you can simply go through the join process if you are not currently a member or if you are not sure.
 - b. Email only method: Send a blank email to sat-tox-subscribe@yahoogroups.com.
- 6. To view the e-mail list server website, go to www.groups.yahoo.com/group/sat-tox and log in using your Yahoo! Account username and password. You will be able to view and retrieve archived list messages, other files, polls, and databases. You will also be able to upload information such as unknown spectra that you wish for other members to view.

ACKNOWLEDGEMENTS

This newsletter is published biannually for the benefit of the members of the Southwestern Association of Toxicologists.

The publishing of this newsletter was made possible with the help of the following: Sarah Kerrigan, Kathy Erwin, Mike Frontz, Glenn Harrison, Robert Schoenfeld, and Lori Speaker.

Nancy Gowen Kropp (editor)

**RETURN TO THE CRIME LAB
*HISTORICAL PERSPECTIVE***

By
James M. (Jim) Burris

Having worked in a crime lab (Texas Dept. of Public Safety) for almost 13 years, it was quite a change to go to work for private industry and then return to the crime lab almost 20 years later.

When I interned at the DPS Crime Lab in the summers of 1968, 1969 and 1970, I had a good exposure to the routine of everyday work. I started full-time after I received my chemistry degree in Sept. 1970.

I ran the blood alcohol Dubowski technique for approximately six months. We were on a rotation and we would run approximately 25-35 blood alcohol distillations in a batch.

Toxicology was not as easy back then, as livers were weighed, ground in a blender and often stomach contents were removed from large containers leaving quite an odor in the lab. Extractions were performed using 1-liter separatory funnels with diethyl ether. E.M.I.T. and E.L.I.S.A. (immunoassay techniques) were uncommon. Drug screens were performed taking extracts of the samples and performing paper and large plate thin layer chromatography. Arsenic and Strychnine tests, as well as Carbon Monoxide, were run routinely. Samples were also tested for poisons by using lab rats. Dog poisonings were part of the routine. We bought our first mass spectrometer, a Finnigan 3000, in 1972. It had a Gas Chromatograph but no computer. We used a Light Beam Oscillograph (L.B.O.) to print the spectra.

The lab had only been participating in proficiency testing a short time when I left in 1982. The proficiency testing was part of the Forensic Science Foundation which was associated with the American Academy of Forensic Science (AAFS). As I recall, complete qualification of the head space gas chromatography method was circa 1979. 25 mL erlenmeyer flasks were used for the blood, salt was added to the flask and a 1 mL headspace sample was taken after the flask was heated using a disposable gas tight syringe. The sample was then injected manually into the gas chromatograph. A correlation study was performed with the Dubowski method prior to adjustment to routine casework. I thought paper work was excessive then!

I went to work for IBM in April, 1982, and I just thought state government had a great deal of bureaucracy. At IBM, there were controls on everything. Chemicals had Chemical Authorization Requests in order to buy, use and dispose of chemicals as well as a department chemical approved list. There were shipping instructions that had to be issued by a controlling individual, signed by your manager and then re-approved by the same person that issued the shipping instruction. Then the paperwork was taken with the item to shipping. If it was a chemical, there were numerous other hurdles you had to overcome. There were numerous department meetings as well as weekly and monthly reports to keep management apprised of your performance. Pressures were extreme to perform analysis in a short time and produce error free results.

My first assignment was to reverse engineer new IBM commercial products. It involved identifying the hazardous chemicals not listed on the M.S.D.S. of many new chemicals. That information was needed prior to the approval by the Chief Toxicologist and for purchase by IBM for use in manufacturing and development. There were titles such as senior lab technician, associate engineer, senior associate engineer, staff engineer and advisory engineer. Even though I was not an engineer, my title, when I went to work for IBM, was senior associate engineering scientist. We had 1st level, 2nd level, 3rd level and 4th level managers reporting through the chain-of-command to the plant manager. We had departments composed of approximately six to eight people, a project of maybe 25 people and maybe 75 in a function. The plant manager had as many as 8-10 functions.

Returning to the DPS Crime Lab, was different, also, in that the lab now has a Quality manager. I was a part of a quality organization for many years at IBM. This was a pleasant addition as well as the implementation of the evidence technician and computerized evidence tracking program. Twenty years ago, each section received evidence in person and opened their own mail. There is an extensive proficiency testing program as well as an analyst qualification period for all areas. For alcohols, it is approximately three months with a final written examination. You must be able to perform numerous analyses on proficiency samples, previously analyzed medical examiner cases as well as attend intoxilyzer schools to witness alcohol consumption in a controlled environment and attend a class in courtroom testimony techniques. If you pass your written examination and complete all other areas of your training satisfactorily, you are approved for independent casework.

Overall, the return to the crime lab was not as painful as it sounds, but if I had not been still working in the lab even as a supervisor in private industry, the return may have been traumatic.

Awards



Mike Frontz presents this year's Past President's Award to Lori Speaker.

Chris Heartsill, President-elect, presented the Charles Tripp Award to Robert Schoenfeld for his years of dedicated service to SAT. For many of these years Dr. Schoenfeld served as Treasurer for SAT.

SAT Business Meeting
The Hilton Resort Beachfront on Galveston Island
Galveston, Texas
November 7-9, 2002
Minutes taken by Kathy J. Erwin, Secretary

I. Call to Order

The meeting was called to order by President Mike Frontz at 8:08 AM on November 8, 2002. He welcomed everyone to Galveston and introduced our host, Lori Speaker. Lori welcomed everybody to Galveston and mentioned that there were about 70 people in attendance along with 11 vendors. She encouraged those attending who are not members to join the organization. She ended by thanking everyone for their help.

II. Secretary's Report

Secretary Kathy Erwin made a motion to accept the minutes from the Wichita meeting as written in the newsletter. It was seconded by Rod McCutcheon and approved.

III. Treasurer's Report

Treasurer Robert Schoenfeld presented his report. As of October 23, 2002, our total net worth is \$15,619.45 with the Bank Book Balance at \$9,206.45 and the Fidelity Funds Balance at \$6,413.00. A motion was made that we accept the treasurer's report. It was seconded and approved.

IV. Committee Reports

A. Meeting Grants

Chris Heartsill reported that one meeting grant application was submitted for Monica Lopez, who is presenting a paper on "Toluene Artifact in a Medical Examiner Case". The board approved that Monica Lopez be granted the standard \$300 award for being in a nonsupervisory position and presenting a paper. The board also approved deferring the award until the Albuquerque meeting as Monica requested. Chris also encouraged members to apply for meeting grants as SAT is able to grant 2 per meeting.

B. Membership

Councilor Phil Kemp presented the report. Brenda Snodgrass and the two councilors, Phil Kemp and Brad Hall, who make up the Membership Committee, recommended that the board present the following four applicants to the general membership for approval. They are:

Colleen Corcoran, Orleans Parish Coroner's Office, New Orleans, LA
Jay Hoppenwasser, Sam Houston State University, Huntsville, TX
Denise Mire, Orleans Parish Coroner's Office, New Orleans, LA
Kelsie Simons, Sam Houston State University, Huntsville, TX

Mike Carlo moved that we accept all four applicants for membership. It was seconded by John Tarver and approved.

C. Communication Committee

Mike Frontz presented the report. The board approved recognizing our meeting vendors on the SAT website. This recognition would continue for 6 months after the meeting in which the vendor participated.

V. Nominations

In addition to nominations from the board, Mike Frontz opened the floor for nominations for officers.

A. President-elect (for the term 2003-2004). The nominee is:
Phil Kemp

B. Secretary (for the term 2003-2005). Nominees are:
Jim Burris (Jim withdrew his name.)
Carolyn Presses
Monica Lopez (Nominated from the floor by R. Rodriguez and K. Erwin.)

C. Councilor (for the term 2003-2005). Nominees are:
John Tarver
Dan Rios
Lori Speaker
Monica Lopez (Nominated from the floor by Robert Rodriguez. Her nomination was withdrawn by Robert Rodriguez and moved to the secretarial position.)

D. Audit Committee

The Board nominated the following members to serve on the Audit Committee for this meeting: Monica Lopez and Don Riddle. Lori Speaker volunteered from the floor to be the third member of the committee. The Audit committee will go over the financial records and report at the spring meeting.

E. Teller Committee

The board appointed the following members from the Southwest Institute of Forensic Sciences to the Teller Committee: Justin Schwane and Elizabeth Zbranek-Taylor.

VI. Old Business

A. Vendor Liaison

Paola Rodriguez gave a report. The newly created position is working well.

B. Membership Directory

1998 was the last time a printed directory was available. The board has approved making the new directory available in an on-line form only, probably PDF format. This will be a test to see if members prefer having the directory available this way only. For those members without online capabilities, a printed copy will be made available on request. The new directory will be located on the restricted Yahoo Groups website by the end of this calendar year.

C. ABFT Examination

Rod McCutcheon reported that the next ABFT Certification exam will be offered at the joint CAT-SAT meeting. The ABFT board is working toward standardizing the exams. If you want to take the exam, applications need to be in at least 6 months in advance. A Specialist Certification is for those at a BS or MS level of education while a Diplomate Certification is for those at a Ph.D. level. Currently there are about 175-180 people certified.

D. Board Member Duties

Lori Speaker is trying to put together job descriptions for new board members. Objectives for doing this are to provide incoming officers with guidelines for doing their jobs plus to make sure certain tasks are not inadvertently overlooked. This information hopefully will be available online.

E. Charles Tripp Award

Chris Heartsill, President-elect, presented the Charles Tripp Award to Robert Schoenfeld for his many years of dedicated service to SAT, many of those as Treasurer.

F. Past President's Award

Mike Frontz presented this year's Past President's Award to Lori Speaker.

VII. New Business

A. LCD Projector

Mike Frontz announced that Bexar County Forensic Science Center's Toxicology group has offered the indefinite use of their LCD projector for SAT meetings if the group will purchase one spare projector bulb, which the board approved.

B. Future Meetings

A tentative future meeting schedule is as follows:

1. Spring 2003-Bob Schoenfeld/Sarah Kerrigan (CAT), Albuquerque, New Mexico
2. Fall 2003-Travis County Medical Examiner/TX DPS-Austin
4. Spring 2004-Ken Peck, College Station, TX
5. Fall 2004-Oklahoma City (tentative)
6. Spring 2005-Dallas/Fort Worth (tentative)
7. Fall 2005-San Antonio (tentative)
8. Spring 2006-Houston (tentative)
9. Fall 2006-Austin (joint meeting with SOFT)

C. Miscellaneous

Mike Frontz mentioned that if anyone has a nomination for the Charles Tripp Award, let him know. Nomination forms can be found in the newsletter.

Mike also mentioned the possibility of selling polo shirts with the SAT logo at the next meeting.

VIII. Adjournment

A motion to adjourn the meeting was made by Mike Carlo, seconded, and approved.

Abstracts

The 2002 Fall Meeting of the Southwestern Association of Toxicologists was held November 7-9, 2002 at the Hilton Galveston Island Resort in Galveston, Texas.

The focus of the meeting was to attract local presentations on the regional toxicology in Southeast Texas. We had two guest speakers: Mark Winter of the Southeast Texas Poison Control Center at UTMB and Hank Thierry of UTMB's Clinical Laboratory Sciences Department. Mr. Winter provided an interesting look into the toxicity of many creatures in the waters of Texas' Gulf Coast and Mr. Thierry gave us a closer look into the variety of blood tubes used for analysis and how the tube used can affect the quality of the result. We also had a grand showing from many graduate students of Sam Houston State University presenting varied topics of interest from their internship at Harris County Medical Examiner's Office.

THE TOXICOLOGIST'S ROLE IN THE TEXAS COURT SYSTEM

James M. Burris
Texas DPS Austin Crime Laboratory
James.Burris@txdps.state.tx.us

Motions for Discovery require more detail and time to complete in order to meet the requirements of Texas Courts today. Examples of Motions for Discovery will be presented along with the questions and examples of answers used. Information from 2002 Blood Alcohol cases and a Drug case will be represented. Challenges for the expert witness presented in these examples of case law; Kelly, Daubert, Robinson and Hartman, will be discussed as well as the Toxicologist's responsibility to the Administrative License Revocation (ALR) process.

PRINCIPLES AND ADVANCED TECHNIQUES FOR GAS CHROMATOGRAPHY-MASS SPECTROMETRY ANALYSIS

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Gas Chromatography/ Mass Spectrometry is the "Gold Standard" for volatile samples. Samples are typically measured using GC with specific detectors because of the sensitivity and selectivity needed to measure the compounds. Traditional GC detectors will only provide you with quantitative results. GC/MS provides quantitative as well as qualitative information about your samples.

Understanding the components of the GC/MS is very important in maintaining and running a successful GC/MS system: the inlet, ion source, quadrupoles, vacuum, and detector are all vital and necessary parts of the GC/MS system. There are many varieties of each of these components in the market place today.

The development of a more sensitive and faster quadrupole mass spectrometer, along with innovative sample introduction techniques, allows for the quantitation/identification of many analytes at levels previously not achievable.

GC/MS is the method of choice for many chromatographers. It is the only GC detector in the marketplace today that is universal and specific, providing both qualitative and quantitative data.

20,000 BITES AND STINGS UNDER THE SEA

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The American Association of Poison Control Centers (AAPCC), in cooperation with the majority of US poison centers, compiles Toxic Exposure Surveillance System (TESS) data. These data are used to identify hazards early, focus prevention education, guide clinical research, and direct training. The 2001 report consists of nearly 2.3 million human exposures reported by 64 participating poison centers, of which 85,627 (3.6%) were bites and stings. The bites and stings data do not differentiate between insects, snakebites, or marine envenomations. Many different types of animals have developed many different methods of securing food and fighting off predators. Venoms have been developed in many unrelated animals along with complicated methods of delivering that venom into the prey or predator. In no part of the world are venomous marine animals so prevalent that it is impossible to safely enjoy the oceans of the world. Paranoia about venomous animals lying under every rock and lurking in every tidal pool is no reason to avoid venturing into the seas. It can do no harm to know what is out there. A brief review some of the flora and fauna of the Texas gulf coast will help to identify the hazards.

DILTIAZEM: EFFECTS AND TOXICITY IN A GERIATRIC PATIENT

Kollean Orphe B.Sc. & B.A.¹ and Ashraf Mozayani, Pharm. D., Ph.D., D-ABFT^{1,2}

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Diltiazem is commonly used to treat geriatric patients with heart conditions. It inhibits the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle. The subject is a seventy nine year old, white female who died in Harris County. The deceased had hypertensive cardiovascular with myocardial fibrosis, chronic obstructive pulmonary disease – emphysema, and kyphoscoliosis. The sample preparation and instrumentation used to qualify and quantify the detection of Diltiazem will be examined. The physical and chemical findings indicated that the patient may have had a toxic implementation of Diltiazem.

TOLUENE ARTIFACT IN A MEDICAL EXAMINER CASE

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A 38-year-old male presented to the emergency room complaining of acute abdominal pain. He was taken for exploratory surgery and later arrested in the ICU. The cause of death was determined to be sepsis. Antemortem blood, postmortem blood, and vitreous were submitted for toxicological analysis. Results of routine toxicological analysis were as follows:

Postmortem blood: 0.37 mg/L lidocaine

Antemortem blood: 15 mg/L toluene

The presence of toluene was questioned due to the recent history of the individual, the high concentration of toluene, and the absence of toluene in the postmortem sample. Sources of external contamination were considered during the evaluation of the case. The manufacturer of the serum separator tube, Greiner Bio-One, was contacted, and they confirmed that toluene was used in the manufacturing of the separator gel. Several of the separator tubes in question were obtained and analyzed, confirming the presence of the toluene in the gel.

ACYLATION REACTIONS DURING BASIC EXTRACTIONS WITH CHLOROFORM:ISO-PROPANOL

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It has been reported that normeperidine was converted to an ethylcarbamate during extraction from a basic media into chloroform. This was attributed to in-situ formation of phosgene and subsequent reaction with added ethanol added to produce ethylchloroformate, a powerful acylating reagent. Although ethanol has been replaced as a stabilizer by pentene we have observed that other secondary amine drugs undergo a similar acylation reaction during extraction into chloroform:iso-propanol. These isopropylcarbamate adjuncts are less volatile than the parent secondary amines and have longer retention times. The mass spectra are recognized by strong molecular ions 86 mass units higher than the expected mass of the parent amine. We have observed the reaction during extraction of fluoxetine, normeperidine, paroxetine, desmethylclomipramine, desipramine and MDMA (3,4-methylenedioxymethamphetamine). The formation and mass spectral properties of these adjuncts and the importance of recognizing their formation during screens for secondary amine drugs will be discussed.

DEXTROMETHORPHAN: RECREATIONAL ABUSE OF AN OVER THE COUNTER DRUG

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Dextromethorphan (DXM) is the most widely used, nonopioid, antitussive drug. It is also included in the class of drugs referred to as "dissociatives" and is considered to have a high abuse potential because of its psychological effects and ready accessibility. Preparations most favored for abuse are nonprescription commercial products in which DXM is the only active ingredient. DXM is a powerful psychedelic, but unlike most drugs an increase in dosage is not reflected in an increase in effects. Instead, it acts in four different "plateaus" where the nature of the response is dose dependant. In the brain, DXM blocks the dopamine reuptake site, activates sigma receptor and blocks the open NMDA channel.

Between 1997 and 2000, Harris County Medical Examiner's Office, reported 13 deaths in which DXM was detected during postmortem testing. Ages of the deceased ranged from 3 months to 69 years. Among these cases, 2 were infant deaths, 3 had a history of prescription drug abuse, in 3 the cause of death was listed as acute pharmaceutical toxicity, and 5 cases death was related to cocaine toxicity. DXM was detected in concentrations ranging from 0.1 mg/L to 0.43 mg/L.

DXM, due to its easy access, has an unusual potential for misuse and abuse. This presentation will discuss the occurrence and possible misuse of DXM alone and in cases of polypharmaceutical intoxication.

UPDATES ON SST VACUTAINER TUBES AND THERAPEUTIC DRUG MONITORING

Leonce Thierry MS MT (ASCP)
University of Texas Medical Branch

Topics include polymer-based gel tubes, interactions of hydrophobic drugs with silicone gel, and TDM recovery and stability studies.

INCREASING POPULARITY OF HEROIN AND CARISOPRODOL IN ABUSE

Genevieve D. Ledwell, B.S.¹ and Ashraf Mozayani, Pharm. D., Ph.D., D-ABFT^{1,2}

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Heroin is a semi-synthetic opiate. It is metabolized rapidly and is rarely detected in samples obtained from abusers. The use of heroin is inferred from the simultaneous presence of its metabolites, 6-monoacetylmorphine (6-MAM) and morphine. The metabolites of heroin produce analgesia and central nervous system depression. Heroin abuse is common and overdose is frequently fatal.

Carisoprodol is a prescription muscle relaxant in which acute intoxication is rarely fatal. The main metabolite of carisoprodol, meprobamate has been used on its own as an anti-anxiety medication. Carisoprodol has an additive effect in combination with other CNS depressants, including heroin and the main toxic signs of overdose include an alcohol-like intoxication and CNS and respiratory depression.

The Office of the Harris County Medical Examiner reported 13 cases with the presence of 6-MAM in 1999, 26 cases in 2000, 23 cases in 2001, and 21 cases up to October 2002. Carisoprodol was present in 42 cases in 1999, 54 cases in 2000, 66 in 2001, and 61 in 2002, up to October 2002. Meprobamate was detected in 34 cases in 1999, 55 cases in 2000, 65 cases in 2001, and 64 cases in 2002, up to October 2002.

This presentation will discuss the individual and simultaneous abuse of the heroin and carisoprodol in Harris County. Forensic data from one case involving simultaneous abuse of both substances will also be presented.

SOURCE OPTIONS FOR LC/MS OF COMPOUNDS OF TOXICOLOGICAL INTEREST

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The key to any successful LC/MS or LC/MSⁿ experiment, using atmospheric pressure sources, is the production of ions prior to the mass analysis. Electrospray ionization (ESI), chemical ionization (APCI) and photo-ionization (APPI) are the most common and most reliable atmospheric pressure sources to date. All three sources are effective at ionizing certain analytes. It is rare, though, that any one source will be able to effectively ionize all analytes, which may be of interest to any one or group of analysts. In general ESI excels at analytes with acid or base functionality, APCI for analytes containing heterocyclic functionality and APPI for less easily ionized materials such as dioxins and halogenated aromatic species. This talk will focus on the characteristics of each ionization source.

ROLLING WITH EVE -MDEA- IN HARRIS COUNTY, TEXAS

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Methylenedioxy-N-ethylamphetamine (MDEA) belongs to a group of common designer drugs (phenethylamines) used at all-night parties known as “raves”. Similar to 3,4-methylenedioxymethamphetamine (MDMA), it is a synthetic drug with both stimulant and hallucinogenic effects. Although commonly found at night clubs, recent research indicates its use at college campuses, high schools, shopping malls and private residences.

The Controlled Substance Laboratory recently received its first submission of MDEA in over a decade in the form of a clandestine tablet. Its confirmation, including the presence of adulterants, was performed by GC/MS. The implementation of testing for MDMA, MDEA and other similar drugs in our laboratory has proven to be a useful tool in the determination of abuse patterns for growing “club drugs” in the local area.

WORKFLOW MANAGEMENT IN THE TOXICOLOGY LAB

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Most tox labs are part of a medical examiner agency. Compared to Crime Labs the work in tox labs is more specialized and specific tests are done on much smaller number of specimen. I have also been told that tox labs do more tests on a given specimen than a crime lab does.

Some tox lab chiefs I have met have expressed the opinion that the LIMS systems they have seen do not really met the needs of a tox lab. However this does not mean that a tox lab cannot benefit significantly from the use of computers. The specific areas where computer technology can be of help in the tox lab are:

- Review of medical examiner case data prior to work assignment for a case
- Bar code use for chain of custody purposes
- Assigning Screens to lab technicians and production of work sheets
- Assigning of Quants to lab technicians and production of worksheets
- System generated reminders if tests become overdue
- Review and approval of results and production of the tox report
- Statistics and departmental performance review

One tox lab technician told me recently: “In my opinion the biggest benefit of using a computer system, is that we can track the number of positives we get for certain drugs and the levels. I have had pathologists come up to me and ask what levels we commonly see for a drug, and without a computer system I literally have to go back by hand and check all the cases I've done for that drug--then go look up cause of death in the computer. Also, it is invaluable for when someone asks for how many deaths we can attribute to a drug we've had in a certain time period. Again, without a computer system we have to go back through the cases by hand and look up levels and causes of death. To be able to print it with a query and be done with it immediately is great.”

The presentation will include a demonstration of a possible computer implementation of workflow management for a tox lab.

CLOBENZOREX: FIRST SUBMISSION TO HARRIS COUNTY MEDICAL EXAMINERS OFFICE

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Clobenzorex (Asenlix, Finedal, Rexigen) is an N-substituted derivative of amphetamine used since 1970 as an appetite suppressant. The drug is supplied as the hydrochloride salt of the D-(+)-enantiomer in 30 mg capsules for oral administration. It is manufactured in Mexico, but banned in the European and United States markets. Clobenzorex is metabolized via N-dealkylation to D-(+)-amphetamine. Two thousand seven hundred and forty-two unmarked green and white capsules weighing 562.72 gm. were seized from a twenty year-old white female by a Harris County law enforcement agency and submitted to the Controlled Substance Laboratory for analysis.

The capsules were analyzed by chemical spot tests, ultraviolet and infrared spectrophotometry and gas chromatography/mass spectroscopy. This presentation will discuss the physical properties of clobenzorex and its identification in the submitted capsules.

PROPOXYPHENE AND NORPROPOXYPHENE CARDIOTOXICITY

Jeff Wise, B.S.¹, Stephen K. Wilson, M.D.², and Ashraf Mozayani, Pharm. D., Ph.D., D-ABFT^{1,2}

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Propoxyphene is a synthetic narcotic analgesic and is administered either alone (Darvon) or in combination with drugs such as acetaminophen (Darvocet). Toxicity due to propoxyphene is not as common today as it was in the early seventies but it is still with us. However, dangers presented by the more toxic metabolite norpropoxyphene are sometimes overlooked. Norpropoxyphene has a longer half-life in plasma (30-36 hours) than propoxyphene (6-12 hours) and also exerts an effect on the cardiac QRS interval. A study reviewing over 200 propoxyphene poisoning cases found that 41% of the cases involved an abnormal ECG. Further studies show that both propoxyphene and norpropoxyphene have an affinity for the HERG cardiac potassium channels. This affinity may contribute to the cardio toxicity of these drugs.

This presentation will discuss the interactions of propoxyphene and norpropoxyphene in the cardiac system and effects on cardiac conductance. A case of a 27 year old female who suffered an overdose of a propoxyphene/acetaminophen preparation in Harris County (Houston) Texas will be reviewed. In this case GC/MS analysis provided confirmation and quantization of both propoxyphene and norpropoxyphene in blood, liver and stomach content samples following basic extractions.

TISSUE DISTRIBUTION OF QUETIAPINE IN EIGHT MEDICAL EXAMINER CASES

Jay Hopenwasser, B.S.¹, Ashraf Mozayani, Pharm. D., Ph.D., D-ABFT^{1,2}, Harminder S. Narula, M.D.², Douglas H. Posey, M.D.², Delbert W. Van Dusen, M.D.², Paul W. Shrode, M.D.², Stephen K. Wilson, M.D.², Jeremy Harbin, B.S.², and Terry J. Danielson Ph.D.²

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Quetiapine is a new atypical antipsychotic that has been available in the United States since 1997. It is a preferred antipsychotic drug due to its reduced affinity for the central nervous systems dopamine binding sites. Distribution of quetiapine was determined in postmortem blood, liver, bile, urine, vitreous humor, spleen, brain, muscle, and stomach contents from eight cases encountered at the Harris County Medical Examiner's Office during 2001 and 2002. Quetiapine was isolated from liquid samples and tissue homogenates by a basic liquid-liquid 1-chlorobutane extraction. Quantitation was by high pressure liquid chromatography on a C-8 ODS column with acetonitrile:0.1M ammonium hydroxide (60:40, pH 10) mobile phase and a photodiode array detector set at 258 nm. Prochloroperazine was used as the internal standard. Control solutions prepared to contain known amounts of quetiapine were assayed in parallel to case samples. Quetiapine was not considered a contributing factor in any of these deaths.

Table 1: Amounts of Quetiapine (mg/L or mg/kg, total mg in stomach contents) in Post Mortem Tissues from Eight Harris County Medical Examiner Cases (n.t. = not tested)

Tissue	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8
Blood	Present	19.85 mg/L	2.7 mg/L	n.t.	0.15 mg/L	1.3 mg/L	2.7 mg/L	0.37 mg/L
Liver	1.42 mg/kg	12.6 mg/kg	2.8 mg/kg	4.83 mg/kg	1.3 mg/kg	3.29 mg/kg	9.5 mg/kg	2.2 mg/kg
Bile	n.t.	161.5 mg/L	46.22 mg/L	n.t.	10.1 mg/L	16.43 mg/L	16.54 mg/L	n.t.
Vitreous	<0.05 mg/L	n.t.	0.11 mg/L	n.t.	0.06 mg/L	0.08 mg/L	n.t.	0.15 mg/L
Spleen	n.t.	81.92 mg/kg	n.t.	0.43 mg/kg	n.t.	n.t.	n.t.	n.t.
Brain	n.t.	40.96 mg/kg	n.t.	0.49 mg/kg	n.t.	n.t.	n.t.	n.t.
Muscle	n.t.	25.28 mg/kg	n.t.	0.17 mg/kg	n.t.	n.t.	n.t.	n.t.
Urine	n.t.	n.t.	n.t.	0.12 mg/L	4.82 mg/L	3.04 mg/L	3.06 mg/L	0.89 mg/L
Stomach	0.85 mg	n.t.	63 mg	2.28 mg	1.3 mg	25 mg	208.05 mg	0.065 mg

FATAL OVERDOSE BY BUPROPION, MIRTAZAPINE, VENLAFAXINE, ZOLPIDEM, AND ETHANOL

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This is a case of a fatal overdose of a 44 year old suicidal white woman. Toxicology tests indicated the following amount of drugs in her body:

	Ethanol	Zolpidem	Bupropion	Mirtazapine	Venlafaxine
Liver	0.02 g/100g	17.6 mg/kg	0.48 mg/kg	103.2 mg/kg	
Spleen	0.04 g/100g				
Muscle	0.04 g/100g				
Stomach Contents		40 mg/L	>500 mg/L	287.5 mg/L	812 mg/L

The novel class of drugs in this case were Bupropion, Mirtazapine, and Venlafaxine. Bupropion is classified as a second generation antidepressant that is a selective serotonin reuptake inhibitor (SSRI). Mirtazapine and Venlafaxine are third generation antidepressants that have functions of their own. Mirtazapine is a “designer” antidepressant that is a 5-HT antagonist, while Venlafaxine blocks the reuptake of 5-HT and norepinephrine (NE). Zolpidem is a non-benzodiazepine of the imidazopyridine class. In past cases SSRIs and Zolpidem have been shown to cause impaired concentration, continuing aggravated depression, and manic reaction. In addition, alcohol is known to cause a change in behavior in combination with Zolpidem. SSRI antidepressants have been used in the past to treat alcoholism, which could suggest the woman had alcohol problems. The effect of the interaction of these drugs will be examined to determine the exact effect the combination of drugs had on the woman’s suicide.

AMITRIPTYLINE, CITALOPRAM, AND ALCOHOL -A DEADLY INTERACTION

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This case involves the interaction of two classes of antidepressants and alcohol. In this case the deceased was a 43-year-old male and the cause of death was a multiple-drug interaction. Amounts of ethanol, amitriptyline, nortriptyline and citalopram were determined in tissues and fluids and are shown in Table 1.

Table 1: Ethanol (g/dL) and antidepressant levels in blood (mg/L), liver (mg/kg) and stomach (mg/L) in a multiple drug overdose.

	Ethanol	Amitriptyline	Nortriptyline	Citalopram
Blood	0.25	0.78	1.4	0.32
Liver	nt	36.7	29.4	nt
Stomach	nt	>2.5	nt	>6.25

Overdoses with tricyclic antidepressants, such as amitriptyline and nortriptyline, have been linked to cardiac arrhythmias. Citalopram is a serotonin reuptake inhibitor with low potential for toxicity, when taken alone. This presentation will discuss the combined effects of these antidepressant drugs in the presence of ethanol.

INTRODUCING A NEW GENERATION OF QUADRUPOLE GC/MS

Trisa Robarge

ThermoFinnigan

trisa.robarge@thermo.com

Today's toxicologists are faced with expectations of finding drugs and toxins in a variety of matrices, with smaller sample volumes and at lower concentrations. ThermoFinnigan's Trace DSQ is a single quadrupole mass spectrometer designed with a number of enhancements that can enable the toxicologist to overcome these challenges. Its innovative design encompasses an off-axis analyzer with a curved pre-filter that leads to increased sensitivity. With a scan range of 1-1050 mass units, and scan speeds from 0.0001-10000 amu/s, the Trace DSQ is unique among single quadrupole instruments. Its suitability as a tool for the modern toxicologist will be discussed, with emphasis on sensitivity, productivity, versatility and reproducibility.

Charles Tripp Appreciation Award



Nomination Form

Candidates Name: _____

Organization: _____

Position: _____

Years of SAT membership: _____

Please detail in the space below the contributions the above candidate has made in the field of Toxicology and in service to the Southwestern Association of Toxicology:

The Board of the Southwestern Association of Toxicologists has established the Charles Tripp Appreciation Award to honor at least one member a year (at the discretion of the board) for outstanding service. Consider the following criteria:

- a. Professional contributions to the field of Toxicology
- b. Contributions and Service to SAT
- c. Years of membership
- d."Coming through in a Pinch"

Any member can submit the name of a deserving member to the board using the form above.

Galveston Vendors

UTAK Laboratories, Inc. – Carol Civita, utakcontrols@worldnet.att.net

SGE Incorporated – Larry Ballard, lballard@sge.com

Varian, Inc. – John McDonald, john.mcdonald@varianinc.com
Lesley Taylor, lesley.taylor@varianinc.com
Bridget Alderman, bridget.alderman@varianinc.com

VertiQ Software, LLC – Rolf Kessel, President, rkessel@ix.netcom.com

Immunoanalysis – Jim Soares, jsoares@immunoanalysis.com

United Chemical Technologies – Elizabeth Fleming, efleming@unitedchem.com

Agilent Technologies – Joe Blossman, Sales Representative, joe_blossman@agilent.com
Joseph L. Hedrick, presenter, joe_hedrick@agilent.com
Daron Decker, Supplies Division daron_decker@agilent.com
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ThermoFinnigan – Bob Swaim, Sales Representative, rswaim@thermofinnigan.com

Cozart Bioscience Inc. – Shawn Magsig, shawn@cozart.biz

Perkin Elmer – Jerry Maine, jerry.maine@perkinelmer.com

Cerilliant Corporation (Break) – Mitzi Rettinger, mitzi_rettinger@cerilliant.com

MEMBERSHIP



APPLICATION

Thank you for your interest in the Southwestern Association of Toxicologists. We are a regional scientific organization, serving primarily the states depicted in our logo above. All of our members are actively engaged in forensic, clinical, or environmental toxicology, or are students with an interest in toxicology.

New members of S.A.T. must:

- ❖ Be actively engaged in the field of toxicology, or be an undergraduate or graduate student interested in chemistry, toxicology, or the forensic sciences
- ❖ Obtain recommendation/sponsorship from at least two individuals who are currently members. The membership committee may accept professional references from non-members pending review of other circumstances.
- ❖ Enclose non-refundable \$30 application fee (this will serve as your first year's dues should you be accepted)

Name: _____
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Job Title: _____ Organization: _____

EDUCATION

College or University	Dates Attended (mm/yy)		Degree Earned	Major Field
	From	To		

Dissertation Title (if applicable): _____

Dissertation Advisor (if applicable): _____

PROFESSIONAL EXPERIENCE

Employer (most recent first)	City, State	Job Title	Dates		Supervisor
			From	To	

ACHIEVEMENT AND DISTINCTION

Please list any publications, patents, certifications, honors or awards, etc. (attach extra sheets if necessary): _____

I certify that the above information is correct to the best of my knowledge.

Applicant's Signature

Date

SPONSOR #1

SPONSOR #2

Name (please print): _____ Name: _____

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S.A.T. member: Yes No S.A.T. member: Yes No

Additional Instructions:

If the applicant does not know two full members of S.A.T., the sponsors should be professional references. For those applicants, please include your curriculum vita along with this application. All applications are submitted to the Board of Directors at each semi-annual meeting (April and November). Pending acceptance, dues will begin with the next fiscal year (July).

Mail completed applications along with the non-refundable \$30 application fee to:

Brenda Snodgrass
S.A.T. Membership Committee Chair
519 Fleetwood Dr.
Norman, OK 73072