



# Society of Forensic Toxicologists, Inc.

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## ToxTalk

**VOLUME 21, No. 1**

**MARCH 1997**

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H. Chip Walls, B.S. (Past President)  
Joseph R. Monforte, Ph.D., DABFT  
(ToxTalk Editor)

### 1997 ANNUAL MEETING HOSTS

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**EDITORIAL BOARD:** H. Chip Walls, B.S., Jim Wigmore, B.Sc., Carl Selavka, Ph.D., Daniel Isenschmid, Ph.D.

**PUBLISHER:** Patricia Mohn-Monforte

### IN THIS ISSUE

**REGULAR FEATURES:** Professional Calendar ☼ Career Opportunities ☼ Drugs in the News  
☼ Blutalkoholkonzentration ☼ From the Editor's Desk ☼ Elmer Gordon

**TECHNICAL NOTES:** CASE NOTES: Cyproheptadine intoxication and incidental findings  
(Levine, Isenschmid, Hepler) Zolpidem and driving impairment (Goodall)

**OF SPECIAL INTEREST:** Toxicology-related internet sites (Goldberger) ☼ 1997 Annual  
Meeting preliminary information ☼ In Memoriam: John Spikes

**INSERTS:** 1997 Salary Survey ☼ ERA Announcement ☼ 1997 SOFT Meeting Materials

### FROM THE EDITOR'S DESK . . . Joseph R. Monforte, Ph.D., DABFT

I am pleased to announce the addition of Daniel Isenschmid, Ph.D., to the **ToxTalk** editorial staff. Dan has been a consistent contributor to **ToxTalk** and is a welcome addition to the staff. His main area of focus will be case reports, so if you want to co-ordinate submissions through Dan, I am certain he will welcome your suggestions. The remainder of the **ToxTalk** editorial staff remains intact. My thanks to Carl Selavka, Jim Wigmore and Chip Walls for their consistently useful, reliable and timely contributions.

Dan and Brad Hepler have devised a salary survey for this issue. I encourage all of you to respond as quickly as possible so that the results may be published in the next issue of **ToxTalk**. Please remember, the survey will be of value only if a sufficient number of responses are received.

This issue also contains a lot of information relative to the 1997 SOFT Annual Meeting to be held in Snowbird, Utah. It promises to be another great meeting - so be certain to register early. ☼

**ToxTalk** is mailed quarterly (bulk mail) to members of the *Society of Forensic Toxicologists, Inc.* It is each member's responsibility to report changes of address to the SOFT mailing address (Mesa, AZ - above). Non-members may now receive **ToxTalk** for \$15 per calendar year. Make your check payable to SOFT, and mail it to the **ToxTalk** Editor.

All members and others are encouraged to contribute to **ToxTalk**. Mail material to :

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**DEADLINES:** Feb. 1, May 1, Aug. 1, and Nov. 1.

**NEXT DEADLINE:** May 1, 1997

SOFT is a supporting organization of the American Board of Forensic Toxicology

# PRESIDENT'S MESSAGE by Vickie Watts, M.S.

Hello to all from sunny Arizona. It has been so pleasant talking to everyone and keeping the internet lines busy with our e-mail.

A list of committees and chairs is identified below. I want to thank those involved for continuing on or accepting these new positions. As you will see, I have set up a number of ad hoc committees. The issue of redesigning the SOFT logo has been brought to my attention by a number of members. This committee will draft a redesign logo for the Board. If approved, we will submit the draft logo in **ToxTalk** to the membership for a vote in October at the annual meeting. The same is true for the SOFT internet web site. It is past time that with our national status we have an informative web site on our organizations. The final ad hoc committee worked on a SOFT hospitality suite location for the New York AAFS meeting. We were able to secure a beautiful atrium in the meeting hotel and had a great reception with a wide scope of nonmembers attending. SOFT members entertained both SOFT and AAFS international toxicologists along with new, first meeting forensic toxicologists.

I have asked the 1997 SOFT committee chairs to come up with a foreseeable goal that can be accomplished this year. At the recent February, interim Board meeting, we voted to implement the Policies and Procedures Committee as a SOFT standing committee. With a tremendous amount of work this year from Bill's committee, we will have a copy of SOFT Policy and Procedures ready for the October, 1997, annual meeting. Also, while Bruce had taken the initiative on the SOFT logo and Internet Web site, he will need interested committee members to assist in these projects. The ERA committee, chaired by Dave Moody, has redefined the ERA letter of information sent out to potential applicants based on the changes to this award voted at the Denver Board meeting. Please take time to read over Dave's information on the changes to the ERA award and the new announcement included in **ToxTalk**.

The Meeting Resource Committee has announced previously that at the 1998 meeting we will again join our TIAFT colleagues in Albuquerque, New Mexico, during the week of Balloon Fest. At the recent Board meeting, we were informed that the 1999 meeting will be in the northeast, hosted by Jeanne Beno. As a final but very important note, we are all looking forward this year to our annual meeting at the Snowbird ski resort in the mountains outside of Salt Lake City. The preliminary program enclosed with this issue of **ToxTalk** will give you an idea of how exciting the program and week-long series of events that our meeting hosts, Dennis Crouch and David Moody, have planned.

I look forward to serving you and continuing the tradition of SOFT's commitment to the profession. If you have suggestions or ideas which will enhance the activities of SOFT, please feel free to contact me at any time.

Warm hugs to all from sunny Arizona. ☺

## 1997 SOFT COMMITTEES AND CHAIRS

By-Laws - Kurt Dubowski, Ph.D.

Budget, Finance & Audit - James Valentour, Ph.D.

Membership - Marilyn Heustis, Ph.D.

Nominating - H. Chip Walls

ToxTalk - Joseph Monforte, Ph.D.

Publication (JAT Special Issue) - Alphonse Poklis, Ph.D.

Education Research Award - David Moody, Ph.D.

Ad Hoc Committees:

SOFT Logo Redesign - Bruce Goldberger, Ph.D.

SOFT Internet Web Site - Bruce Goldberger, Ph.D.

Meeting Resource Committee - Joseph Saady, Ph.D.

Professional Stds & Accreditation - Graham Jones, Ph.D.

Health and Safety - Daniel Isenschmid, Ph.D.

Drugs and Driving - H. Chip Walls

Continuing Education - H. Chip Walls

Policy & Procedures - William Anderson, Ph.D.

Copyrighting SOFT Materials - Mark Lewis

SOFT Hospitality AAFS - Mike McGee, Beth Marker, Ph.D.

### INTERESTED IN SERVING ON A SOFT COMMITTEE?

Contact President Vickie Watts

Tel: 602-831-8091

Fax: 602-839-9106

e-mail: [toxilady@aol.com](mailto:toxilady@aol.com)

## PLAN AHEAD FOR SOFT '97

*Cliff Lodge, Snowbird, Utah*

**October 5-6 (Sunday-Monday) - Workshops**

**October 7-9 (Tuesday - Thursday) - Scientific Sessions**

**Hosts: Dennis Crouch and David Moody Ph: 801-581-5117 Fax: 801-581-5034**

**E-mail: [//lysine.pharm.utah.edu/~dcrouch/soft97.html](mailto://lysine.pharm.utah.edu/~dcrouch/soft97.html)**

# TREASURY NOTES

The SOFT treasury is in new hands. As of January 1, 1997, our new treasurer is Robert Zettl. Mr. Zettl may be contacted as follows:

Phone/fax: 303-795-1654 (#99 to fax or leave message)  
Work phone: 303-692-3296 (new number)  
E-mail: Robert.Zettl@state.co.us

Thanks are extended to Dr. Saady for his excellent dedication and skillful management of the treasurer's responsibilities the past four years. Dues payments and other functions will continue to be handled by the SOFT business office.

Treasurer Zettl reminds you that the 1997 annual dues notices have been mailed to all members in good standing. If you have not received your dues notice, please contact the SOFT Administrative Office at 602-839-9106 (phone and fax).

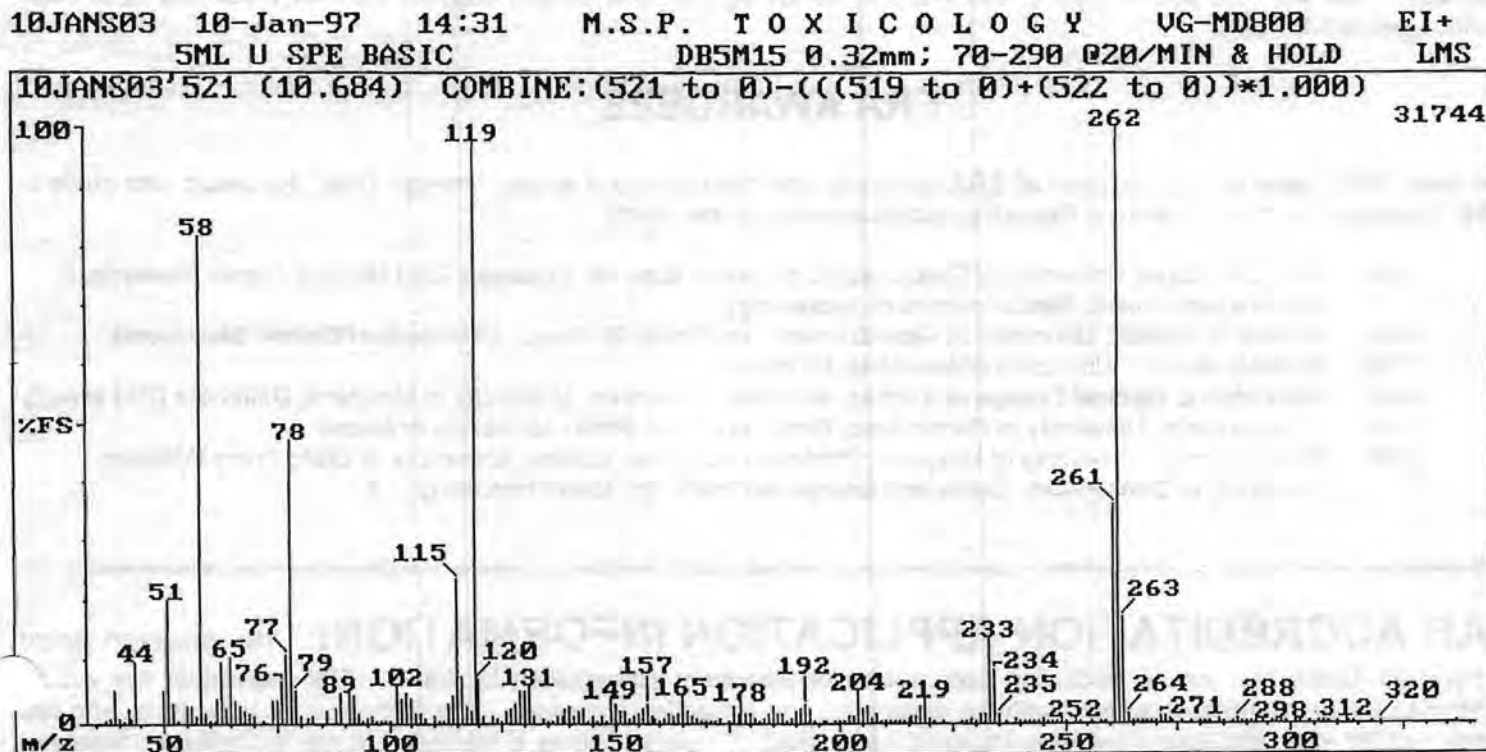
## IS ANYONE FAMILIAR WITH THIS COMPOUND?

Refer to figure below. This was seen in a urine specimen from a 30-year-old, living, male subject. It is from the basic fraction of an SPE column. The suspect was arrested for kidnapping and felony assault. Positive drug findings in the urine and blood are amphetamine, methamphetamine, phenylpropanolamine, and ephedrine. The unknown compound was not seen in the blood. A tetrabromophthalein ethyl ester in CH<sub>2</sub>Cl<sub>2</sub> (TBP) color test was positive in the urine showing a purple color.

The spectrum is an EI GC/MS with an RRT of 0.93 to diazepam. No other compound was identified to explain the positive TBP. Any ideas? Please contact:

Lauren Marinetti-Sheff, M.S., Michigan State Police, Toxicology Sub-unit. TX: 517-336-6191 FX: 517-336-6511

*Editor's note: We'll ask Lauren to inform us of any responses so we may share them with you in the next ToxTalk.*



# A Closer Look at: EDUCATIONAL RESEARCH AWARD (ERA)

Submitted by David Moody, Ph.D., ERA Committee Chair

The idea for an educational award to be sponsored by SOFT and to encourage academic training and research in areas related to forensic toxicology was conceived in 1978 by Dr. Vincent Lynch of St. John's University. This idea was approved by the SOFT Board of Directors in December, 1978. With a grant from Hoffman LaRoche, the first award was made in 1980 to John H. Hebb of the University of Maryland. During that December meeting, the Board also established a committee to review applications, make recommendations for awardees, and solicit funding. Since 1988, the size of the committee was established at 3 members plus the current president of SOFT. The members of the 1997 committee are: Dr. Barbara Manno, LSU Medical Center in Shreveport; Dr. Daniel Isenschmid, Office of the Wayne County Medical Examiner in Detroit; Dr. David Moody (Chair), University of Utah in Salt Lake City; and SOFT President, Vickie Watts.

The award has evolved in both size and scope. First referred to as the SOFT Education Award, in 1982 it was given its current name, the SOFT Educational Research Award (ERA). In 1986, support for the award was broadened to include a portion of membership dues and donations from members; the annual award could not be made from interest on principal from the ERA endowment. This was broadened further in 1988 to include portions of general income of the society. The award has grown from \$500 for a single candidate to multiple awards of \$500-\$1,000. The profits of the 1987 SOFT Annual Meeting, held in Key Biscayne, Florida, and hosted by Dr. Leonard Bednarczyk, were the first funds in an amount more than \$10,000 available to the ERA.

Over the past 4 years, the committee has received 1 to 6 applications per year and has awarded from 1 to 4 awards each year. Last year, awards were presented to:

Robert Joseph, University of Maryland, *"Investigation of drug incorporation into hair"*

Matthew Slawson, University of Utah, *"Correlation of phencyclidine incorporation with melanin content in hair"*

Tracy Williams, University of Connecticut, *"Detection of synthetic anabolic steroids and their metabolites"*

George Behonick, St. John's University, *"Esterified non-oxidative metabolites of ethanol in hair"*

Although use of the award was not specified, it has been a long-standing practice to encourage use of the funds for travel to an annual meeting of SOFT. Due to the timing of the awards, the announcement did not always allow the awardee time to plan on attending the SOFT meeting during the year of the award. In part, due to these factors, the committee has proposed that the award and announcement be restructured. In brief, it would be acknowledged that the ERA award is intended for travel expenses related to the SOFT Annual Meeting. Conditions of the award would include research suitable for presentation at an upcoming meeting, and the new deadline of May 1st with an announcement July 1st would be such that the awardees could make plans to attend and present their findings at the SOFT Annual Meeting that same year.

The award will not be set at a consistent grant of \$750. The new ERA announcement is an insert in this issue of **ToxTalk**. I ask that you post a copy of this insert at an appropriate location and suggest that you personally encourage qualified persons to apply.

## ERA AWARDEES

The June, 1990, issue of **ToxTalk** listed all ERA recipients from the first award in 1980 through 1988. No award was made in 1989. Following are the Educational Research Awards received in the 1990's.

- 1990 Nancy R. Haley, University of Rhode Island, Kingston; Gary W. Kunsman, LSU Medical Center, Shreveport; and MaryAnn Suero, Illinois Institute of Technology
- 1992 William B. Walker, University of Saskatchewan; and Phillip M. Kemp, LSU Medical Center, Shreveport
- 1993: Amanda Jenkins, University of Maryland, Baltimore
- 1994 Karla Moore, Medical College of Virginia; and Amanda Jenkins, University of Maryland, Baltimore (2nd award)
- 1995 Gina Cassella, University of Connecticut, Storrs; and John Pablo, University of Miami
- 1996 Robert Joseph, University of Maryland, Baltimore; Matthew Slawson, University of Utah; Tracy Williams, University of Connecticut, Storrs; and George Behonick, St. John's University

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**LAB ACCREDITATION APPLICATION INFORMATION:** The American Board of Forensic Toxicology, Inc., is accepting applications for laboratory accreditation by ABFT. The application fee will be nominal to pay for expenses involved with the application and inspection processes. The first group of inspectors, who are reimbursed for expenses only, have been identified and trained. If your laboratory is interested in this accreditation program, contact: ABFT Administrative Office, P.O. Box 669, Colorado Springs, CO 80901-0669 (Telephone: 719-636-1100)

**Gamma Hydroxybutyrate (GHB):** The *Arizona Republic* recently published an AP article containing a warning relative to the use of Gamma Hydroxybutyrate (GHB), which is often promoted to teenagers over the Internet as an aphrodisiac or an "easy high." The chemical has allegedly been used as a "date rape" drug. GHB has been implicated in dozens of hospitalizations and at least three deaths.

A Texas high school student died in August, 1996, after someone slipped the chemical into her soft drink at a dance club. A Virginia woman in her 20's was in a presumed drunken-driving crash. However, toxicological testing detected GHB and no ethanol. Three Massachusetts college students were hospitalized after trying GHB. Two of the students fell into a coma, but recovered. Last fall, California doctors reported having to resuscitate Hollywood nightclub patrons who stopped breathing after taking the drug, and GHB is also believed to be one of several drugs that sickened dozens of concert goers at a New Year's Eve concert in Los Angeles.

GHB is known by the street names "cherry meth," "liquid X" and "liquid ecstasy." The drug is odorless and nearly tasteless and is commonly distributed as a white powder or clear liquid that can be mixed into a drink. It sells for about \$10 a vial.

GHB was developed as a surgical anesthetic, but because of the many side effects it was abandoned. In 1990 the FDA began investigating reports that bodybuilders were abusing GHB as an alternative to steroids. In 1991 the FDA declared it illegal to manufacture or sell GHB for any purpose. After an initial lull, the FDA states that GHB is on the rise again. Since 1995 FDA prosecutors have begun 45 investigations of underground GHB manufacturing or distribution, 12 of which have resulted in convictions so far.

According to *Baselt*, effects of GHB include drowsiness, euphoria, dizziness, nausea, visual disturbances and unconsciousness. Serious adverse reactions have included hypotension, bradycardia, respiratory depression, seizures and coma. Analysis in biological specimens has been accomplished by flame ionization and electron capture gas chromatography.

**Methamphetamine:** A September 27, 1996, *USA Today* article described the federal government's concern that the abuse of methamphetamine is rapidly spreading. Historically associated with California, there is concern that methamphetamine use is making its way toward the east coast. Examples cited were: in Southern Iowa the number of people charged with methamphetamine-related crimes has tripled since 1993; in Nebraska, where the drug's use is up a reported 220%, authorities have tracked a steady increase in methamphetamine arrests since 1993; in Missouri, nearly four times the number of methamphetamine laboratories have been shut down by police as were last year, up from 44 to 171.

The above was underscored by an article in the January 28, 1997, issue of the *Arizona Republic*. A local drug testing laboratory reported that methamphetamine use increased by 35% from 1994 to 1995. Another Arizona lab found that self-reports of methamphetamine as the drug of choice tripled during 1995, and 95% of employees using employee-assistance programs reported methamphetamine as their primary problem. It was also reported that methamphetamine use among Arizona children has doubled since 1991, with 17.3% of high school seniors admitting they have tried the drug.

The U.S. Senate has approved legislation that would restrict access to chemicals used to make methamphetamine. The legislation, which was pending in the house, also would increase the maximum penalty from 10 to 20 years in prison for possession of the materials used to make the drug. ♪

## ERA FUND REPORT FOR 1996

*Submitted by Joseph Saady, 1995-96 SOFT Treasurer*

POST A COPY OF THE

<b>\$62,213.08</b>	<b>ERA Balance 12/31/95</b>		
	\$53,000.00	US Treasury Bill	
	9,203.08	checking account interest	
<b>+ 3,382.84</b>	<b>ERA Fund Income 1996</b>		
	888.00	Donations	
	1,387.75	Interest on \$25,000 U.S. Treasury Bill	
	1,107.09	Interest on checking account	
<b>-2,500.00</b>	<b>ERA Fund Expenses 1996</b>		
	750.00	ERA No. 30: Robert E. Joseph, Jr.	
	750.00	ERA No. 31: Matthew H. Slawson	
	500.00	ERA No. 32: Tracy M. Williams	
500.00	ERA No. 33: George S. Behonick		
<b>+ 882.84</b>	<b>ERA Fund Net Gain 1996</b>		
<b>\$60,095.92</b>	<b>ERA Balance 12/31/96</b>		

**NEW EDUCATIONAL**

**RESEARCH AWARD**

**ANNOUNCEMENT**

**ENCOURAGE QUALIFIED**

**PERSONS TO APPLY!!**



# Utah 1997

## 27th Annual Meeting

### October 5-9, 1997



**Transportation:** Snowbird is 29 miles (a 40 minute drive) from the Salt Lake International Airport. Transportation to Snowbird can be arranged by the airport shuttle, taxi or rental car.

**Air** - Delta Air Lines is the official airline for the meeting. Delta is offering meeting attendees a 5% discount on domestic fares. To make reservations, call Delta Air Lines at (800) 241-6760 or call Clawson Travel at (801) 582-0303 or (800) 825-2976 or FAX (801) 581-1938. Mention the name of the meeting and refer to File#V0502. Attendees requiring international flights will obtain the best fare from their local travel agent.

**Airport Shuttle** - You may arrange an airport shuttle directly by completing the attached lodging form. The cost is \$17, each way. The shuttle will pick you up at an arranged time.

**Car Rental** - Hertz, Inc. is offering meeting participants special rental car rates that include unlimited mileage. The rates are guaranteed for one week before and one week after the actual meeting dates. For reservations, please contact Hertz at (800) 654-3131. Refer to #17672.

**Daily from Snowbird** - A daily shuttle service will be available from the Cliff Lodge to Salt Lake City. A 24 hour advance reservation is required.

**Tours:** A number of local agencies are available to assist in organizing pre- or post-meeting tours. These include:

*Adventours* offers local tours that pick up at Snowbird. Rates shown are per person. Tour rates and times may vary. For information call (801) 288-2118.

- Salt Lake City - 2 person minimum, \$22, Mon.-Sat., 10:00am-2:30pm (a Sunday tour includes the Mormon Tabernacle Choir, check times).
- Park City - 3 person minimum, \$27, Tues., Thurs., Sat. & Sun, 2:30 pm-6:00 pm.
- City Tour plus Salt Lake Cruise - 6 person minimum, \$42, Wed. - Sat., 10:00am-5:00pm.
- City & Bingham Mine Tour plus Salt Lake Cruise - 6 person minimum, \$52, Wed -Sat., 8:00am-5:00pm.

*Le Bus* - offers daily trips to Wendover, the closest Nevada gambling destination. The bus leaves from downtown at 9:00 am and returns at 3:00pm. Cost is \$9 per person. Call (801) 975-0202 or (800) 366-0288.

*Hyde Encore Tour and Travel* can be contacted for information about tours to Yellowstone, Jackson Hole and Southern Utah destinations, such as Arches, Bryce and Zion National Parks. Call (801) 966-4242.

The Salt Lake Tourist Information Center, (801) 534-1101 and the Utah Travel Council, (801) 538-1080 can provide additional information on tours, local restaurants and sites.

# SNOWBIRD INFORMATION

## The Snowbird Advantage:

- Only 29 miles from Salt Lake International Airport.
- An unparalleled setting amid the peaks of the Wasatch Range, offering year-round recreational opportunities!
- Snowbird's pedestrian village offers easy walking between lodging, dining, and other facilities.
- SOFT 97 is being held at the Cliff Lodge Conference Center.

## SNOWBIRD LODGING:

### CLIFF LODGE:

- *Bedrooms* at \$89 (1-4 persons) offer either a canyon or mountain view. Each room has two queen-size beds and full bath.
- *Deluxe bedrooms* at \$138 (1-2 persons) have one king-size bed, dressing area, full bath, one double size sofa bed, wet bar, a balcony, and a small refrigerator.
- *One bedroom suites* at \$225 (1-6 persons) have a deluxe bedroom and a hotel bedroom. Some also have a balcony and dressing area.
- *Two-bedroom suites* (1-8 persons) at \$361 have a bedroom plus a deluxe bedroom.
- *Dormitory* accommodations have four twin beds and a full bath. The price is \$26/bed.

Additional amenities: Heated pools, hot tubs, sauna and steam room, health and beauty spa, bellman and valet service, 3 restaurants and lounges, safe-deposit boxes, room service, in-room babysitting, retail shops, game room and laundry facilities.

### LODGE at SNOWBIRD and the INN:

- Five-minute walk from the Cliff Lodge.
- *Bedrooms* at \$72 (1-4 persons) offer a full bath, two queen beds, dressing area and exterior balcony.
- *Efficiencies* at \$72 (1-4 persons) have completely furnished kitchens, a full bath, an exterior balcony, one queen or king sofa bed with one double wall bed or two queen wall beds.
- *Studios* at \$72 (1-2 persons) have a complete furnished kitchens, a living and dining area, a king or queen convertible sofa bed, full bath, an exterior balcony and a fireplace.
- *One-bedroom condo or Studio Lofts* at \$147 (1-6 persons) have complete furnished kitchens, living and dining areas, fireplaces, a king or queen convertible sofa bed, two full baths, adjoining or loft bedrooms with two queen or double beds and a dressing area.
- *One-bedroom condo with loft* at \$217 (1-10 persons) have complete furnished kitchens, living and dining areas, fireplaces, king or queen convertible sofa beds, one loft bedroom with two double or queen beds and a private bedroom with two queen beds.

Additional amenities: Saunas, heated pool, laundry facility, in-room baby-sitting, ice machine, masseuse, game room, whirlpool, steam room and health spa.

## RESTAURANTS

- Cliff Lodge: Aerie Restaurant & Lounge, Keyhole Junction & Cantina and Summit Cafe.
- Lodge at Snowbird: Lodge Club Bistro & Lounge
- Iron Blossom: Wildflower Ristorante & Lounge
- Snowbird Center: Steak Pit, Forklift, Rendezvous, Birdfeeder, Pier 49 Pizza and Rocky Mountain Chocolate Factory.

# Case Notes: Cyproheptadine Intoxication and Incidental Findings

Cyproheptadine, a 5-HT and H<sub>1</sub> antagonist, is sold under the trade name "Periactin." Chemically, it is in the piperidine class of antihistamines, with a methylpiperidine group attached to a dibenzocycloheptene backbone. Its indications and contraindications are the same as those for most antihistamines with CNS sedative properties. The pharmacokinetics of cyproheptadine have not been well studied. According to the Physicians Desk Reference (1994 ed.) no detectable amounts of the parent drug were detected in the urine of patients receiving chronic 12-20 mg daily doses. The principle metabolite found in human urine has been identified as a quaternary ammonium glucuronide. The following cases describe acute and incidental findings in which cyproheptadine was detected in blood, urine or bile specimens of postmortem cases.

- Dan Isenschmid

## An Intoxication with Cyproheptadine

*Submitted by: Barry Levine, Ph.D., DABFT, Office of the Chief Medical Examiner, 111 Penn St., Baltimore, MD 21201*

A case was presented to this Office of a 28 year old black male with a history of intravenous drug abuse who allegedly overdosed on his girlfriend's "Ativan." No anatomic cause of death was identified at autopsy. The heart blood ethanol concentration was 0.09 g/dL. No lorazepam was identified in either the blood or the urine when tested by high performance liquid chromatography. Comprehensive testing for abused and therapeutic drugs in the blood and urine identified one peak on the base screen which eluted after the tricyclic antidepressants, but prior to codeine. Mass spectral analysis showed that the compound had a base peak of m/z=287 and other prominent ions at m/z=215 and 286. Subsequent review of a mass spectral library identified the compound as cyproheptadine. The heart blood contained 0.47 mg/L of cyproheptadine; review of the literature indicated that following therapeutic use of cyproheptadine, only trace amounts of the parent drug are identified in the blood. Therefore, the medical examiner concluded that the cause of death in this case was ethanol and cyproheptadine intoxication.

## Incidental Findings of Cyproheptadine in Medical Examiner Cases

*Submitted by: Daniel Isenschmid, Ph.D., and Bradford Hepler, Ph.D., Wayne County Medical Examiner's Office, 1300 E. Warren, Detroit, MI 48207*

Statistics from the past 2 years have identified 3 cases in which cyproheptadine was detected in medical examiner cases at our office. Two of these cases are so recent that toxicology has not yet been completed in the blood. However, in both cases cyproheptadine (parent) was detected in the urine along with cocaine and metabolites (presumptive RIA findings in the blood). The first case was a fire death (COHb = 68%). Additional findings in this case, so far, included diphenhydramine in the urine and a heart blood ethanol concentration of 0.36 g/dL. The second case included findings of codeine, propoxyphene, norpropoxyphene, methadone and metabolites and triprolidine in the urine. Blood quantitation was pending; however, RIA findings were positive for cocaine and morphine (specific). The original death certificate in this case (currently congestive cardiomyopathy and diabetes mellitus) will, not doubt, be amended.

The third case (from 1995) is that of a 36-year-old black female who was found dead in her apartment. Her only medical history was systemic lupus erythematosus. Her initial cause of death was dilated cardiomyopathy and morbid obesity. Toxicological analysis revealed the following drug concentrations (mg/L) in blood: cocaine (0.036), benzoylecgonine (2.3), ethyl cocaine (0.013), morphine (0.45), codeine (0.0222), 6-acetylmorphine (<0.005), hydroxyzine (0.25), tramadol (1.8), O-desmethyltramadol (0.099), and cyproheptadine (0.091). In addition to these findings, alprazolam and norcyproheptadine were found in the bile. The revised DC listed the immediate cause of death as drug abuse. The manner was undetermined.

The surprising finding regarding these three cases is that cyproheptadine was not the primary agent involved in the cause of death of these individuals, yet parent drug was identified in the urine or bile. This is in contrast to the expectations based on earlier reports. ☒



## CALL FOR CASE NOTES

Your case note should be about 1/2 page in length, no more than a full page. Material on a disk (using Microsoft Works/Word 2.0) may be mailed to:

**Joseph R. Monforte, Ph.D., DABFT, ToxTalk Editor**

**846 Smoke Dr. (H.P.), Prescott, AZ 86301-7347**

**- or FAX: 520-771-1625 (after 11:30 a.m., E.S.T.) E-mail: monforte@juno.com**

Other items of interest to SOFT members are also welcome.

**Next deadline: MAY 1, 1997**

**IMPORTANT NOTICE:** Dr. Monforte will be relocating in June. New mailing address and contact numbers (if available) will be published in the next issue of **ToxTalk**. The e-mail will remain the same.



# Case Notes: Zolpidem and Driving Impairment

Submitted by *Christine Goodall, B.S., Wisconsin State Laboratory of Hygiene, 465 Henry Mall, Madison, WI 53706*

Zolpidem (Ambien) is a nonbenzodiazepine hypnotic agent. In our laboratory it has been detected with increasing frequency over the past three years in postmortem and impaired driving cases.

In the period from May 1994 to November 1996, zolpidem was confirmed in 29 blood samples. Fifteen of the 29 were confirmed in drivers arrested for operating while intoxicated (OWI). The results including alcohol and other drugs follow.

Zolpidem (ng/mL)	Ethanol (g/100 mL)	Other Drugs Confirmed
388	Not detected	None Detected
542	Not detected	None Detected
275	Not detected	None Detected
113	Not detected	None Detected
240	0.019	None Detected
530	0.026	None Detected
442	Not detected	Fluoxetine
600	Not detected	Diazepam, nordiazepam
292	Not detected	Sertraline, amitriptyline, propoxyphene, phenobarbital
102	Not detected	Amitriptyline, fluoxetine, lorazepam, chlorpheniramine
Present	Not detected	Propoxyphene, loxapine
280	Not detected	Trazodone, carisoprodol, meprobamate
<100	0.061	Butalbital, lorazepam
Present	0.29	Sertraline
135	0.286	Amitriptyline

The first four samples contained no other drugs or ethanol. The second group of four contained ethanol or low levels of drugs that would not be associated with serious impairment. The remaining samples contained multiple CNS depressants and therefore the zolpidem could not be considered as the major cause of impairment.

Summarizing the eight samples in which zolpidem appears to be the potential cause for impairment, the results ranged from 113-600 ng/mL with an average of 391 ng/mL. The therapeutic range is reported to be <300 ng/mL.

The death investigations included cases of drug overdose, self-inflicted gunshot wound and hanging. All overdose cases involved the use of one or more drugs in addition to the zolpidem. The range of zolpidem levels seen in overdose was <50-1300 ng/mL.

Zolpidem is easily extracted as a basic drug and analyzed by gas chromatography with nitrogen-phosphorus detector or mass selective detector. The expected retention time is similar to haloperidol or hydroxyzine. The molecular weight of zolpidem is 307 amu. The spectrum has a base peak at 235 amu with additional ions at 307, 219 and 92.

This drug is recommended for a single dose immediately before bedtime and only for short term treatment of insomnia. It should be administered with warnings against operation of a motor vehicle. Alcohol and zolpidem are additive in relation to impairment. ⚠

## JAT: SOFT SPECIAL ISSUE

**DEADLINE FOR COMPLETED MANUSCRIPTS: MARCH 24, 1997**

For further information, please contact Dr. Alphonse Poklis, Ph.D., DABFT (phone 804-828-0272, fax 804-828-7722)

*Reminder to reviewers: Return manuscripts to Dr. Poklis no later than April 21, 1997.*  
Authors must submit completed revised manuscripts by May 19th to meet printing deadlines.

Complimentary copies of the SOFT/JAT Special Issue will be available at the JAT booth at the 1997 SOFT Meeting.

# Toxicology-Related Internet Sites

Submitted by: Bruce A. Goldberger, Ph.D., University of Florida College of Medicine  
homepage: <http://www.med.ufl.edu/path/prod/faculty/bio/goldberg.htm>

## Government Organizations

Centers for Disease Control and Prevention — [www.cdc.gov](http://www.cdc.gov)  
Civil Aeromedical Institute — [www.cami.jccbi.gov/index.html](http://www.cami.jccbi.gov/index.html)  
Drug Enforcement Agency — [www.usdoj.gov](http://www.usdoj.gov)  
Federal Bureau of Investigation — [www.fbi.gov](http://www.fbi.gov)  
Food and Drug Administration — [www.fda.gov](http://www.fda.gov)  
Health and Human Services — [www.os.dhhs.gov:80/progorg/progorg.html](http://www.os.dhhs.gov:80/progorg/progorg.html)  
Institute of Science and Forensic Medicine, Singapore — [www.gov.sg/moh/isfm/index.html](http://www.gov.sg/moh/isfm/index.html)  
National Clearinghouse for Alcohol and Drug Information — [www.health.org](http://www.health.org)  
National Institute on Alcohol Abuse and Alcoholism — [www.niaaa.nih.gov](http://www.niaaa.nih.gov)  
National Institute on Drug Abuse — [www.nida.nih.gov](http://www.nida.nih.gov)  
National Institutes of Health — [www.nih.gov](http://www.nih.gov)  
National Highway Traffic Safety Administration — [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)  
National Library of Medicine — [www.nlm.nih.gov](http://www.nlm.nih.gov)  
Occupational Safety and Health Administration — [www.osha.gov](http://www.osha.gov)  
Office of National Drug Control Policy — [www.whitehouse.gov/WH/EOP/ondcp/html/ondcp.html](http://www.whitehouse.gov/WH/EOP/ondcp/html/ondcp.html)  
Substance Abuse and Mental Health Services Administration — [www.samhsa.gov](http://www.samhsa.gov)  
United Nations International Drug Control Program — [www.undcp.org](http://www.undcp.org)  
U.S. Department of Transportation — [www.dot.gov](http://www.dot.gov)

## Academic Institutions/Educational Sites

Adventures in Clinical Toxicology — [www.newcastle.edu.au:80/department/md/htas/toxpro.htm](http://www.newcastle.edu.au:80/department/md/htas/toxpro.htm)  
Centre for Behavioural and Forensic Toxicology — [www.cbft.unipd.it](http://www.cbft.unipd.it)  
George Washington Univ., Department of Forensic Sciences — [www.circ.gwu.edu/~forensic/about\\_us.html](http://www.circ.gwu.edu/~forensic/about_us.html)  
Global Health Network — [www.pitt.edu/HOME/GHNet/GHNet.html](http://www.pitt.edu/HOME/GHNet/GHNet.html)  
MedConnect — [www.medconnect.com](http://www.medconnect.com)  
Med TechNet — [www.medtechnet.com](http://www.medtechnet.com)  
The Poison Review — [toxikon.uih.uic.edu/toxikon](http://toxikon.uih.uic.edu/toxikon)  
Toxicology Corner — [www.njnet.com/~embbs/tox/tox.html](http://www.njnet.com/~embbs/tox/tox.html)  
Toxikon: Medical Toxicology — On-Line badger [uih.uic.edu/](http://uih.uic.edu/)  
University of Alabama at Birmingham — [w3.lhl.uab.edu/graduate/93-cj.html](http://w3.lhl.uab.edu/graduate/93-cj.html)

## Professional Organizations

American Academy of Forensic Sciences — [www.aafs.org](http://www.aafs.org)  
American Association for Clinical Chemistry — [www.aacc.org](http://www.aacc.org)  
American Association of Medical Review Officers — [www.aamro.com/index.html](http://www.aamro.com/index.html)  
American Board of Criminalistics — [www.criminalistics.com/ABC](http://www.criminalistics.com/ABC)  
American Chemical Society — [www.acs.org](http://www.acs.org)  
American College of Forensic Examiners — [www.mediastorm.net/acfe](http://www.mediastorm.net/acfe)  
American Society of Crime Laboratory Directors — [www.shadow.net/~datachem/asclcd.html](http://www.shadow.net/~datachem/asclcd.html)  
American Society for Mass Spectrometry — [www.asms.org](http://www.asms.org)  
California Association of Criminalists — [www.criminalistics.com/CAC/cachome.htm](http://www.criminalistics.com/CAC/cachome.htm)  
Center for Education and Drug Abuse Research — [www.pitt.edu/~mmv/cedar.html](http://www.pitt.edu/~mmv/cedar.html)  
Center for Substance Abuse Research — [www.bsos.umd.edu/cesar/cesar.html](http://www.bsos.umd.edu/cesar/cesar.html)  
Forensic Science Society — [www.demon.co.uk/forensic/index.html](http://www.demon.co.uk/forensic/index.html)  
National Forensic Science Technology Center — [www.shadow.net/~nfstc](http://www.shadow.net/~nfstc)  
The International Association of Forensic Toxicologists — [apf.cbft.unipd.it/tiaft](http://apf.cbft.unipd.it/tiaft)

*(continued next page)*

## Scientific Journals and Newsletters

The International Journal of Drug Testing — [www.stpt.usf.edu/journal](http://www.stpt.usf.edu/journal)  
Banolier, Evidence-Based Health Care — [www.jr2.ox.ac.uk:80/Banolier](http://www.jr2.ox.ac.uk:80/Banolier)  
Clinical Chemistry — [www.aacc.org/ccj/index.html](http://www.aacc.org/ccj/index.html)  
Forensic Science International — [www.elsevier.com/catalogue/SAB/130/05320/05320/505512/505512.html](http://www.elsevier.com/catalogue/SAB/130/05320/05320/505512/505512.html)

## Scientific Data

Mass Spectrometry Database — [www.ualberta.ca/~gjones/mslib.htm](http://www.ualberta.ca/~gjones/mslib.htm)

## "Illicit" Sites

A.C.S. Herbal Tea Company — [www.erinet.com/acsht](http://www.erinet.com/acsht)  
Cyberdelics — [www.subnet.co.uk/cybertonics](http://www.subnet.co.uk/cybertonics)  
Drug Information Resources — [kiwi.uwaterloo.ca/drug\\_info.html](http://kiwi.uwaterloo.ca/drug_info.html)  
"Hemp Web" — [hempweb.com](http://hempweb.com)  
High Times Magazine — [www.hightimes.com/~hightimes/welcome.html](http://www.hightimes.com/~hightimes/welcome.html)  
National Organization for the Reform of Marijuana Laws — [www.natlnorml.org](http://www.natlnorml.org)  
Paranoia — [www.paranoia.com/drugs](http://www.paranoia.com/drugs)  
"PiHKAL" — [www.hyperreal.com/drugs/pihkal](http://www.hyperreal.com/drugs/pihkal)

## Other Forensic Science Disciplines

Zeno's Forensic Page — [www.image.nrips.go.jp/~zeno/forensic.html](http://www.image.nrips.go.jp/~zeno/forensic.html) ☺

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**SEND WEBSITE INFORMATION TO ToxTALK**

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**LITERATURE CITATION:** McBay, AJ, "Legal aspects of drug testing: A review of relevant cases." *Int J Drug Testing* V1, 1996. Entire paper available on Internet: <http://big.stpt.usf.edu/~journal/legasp3.html> ☺

## Technical Notes: BLUTALKOHOLKONZENTRATION No. 16

*Submitted by: J.G. Wigmore, B.Sc., Toxicology Section, Centre of Forensic Sciences, Toronto, Ontario, Canada*

### PHARMACOKINETIC INTERACTIONS BETWEEN ALCOHOL AND ACETYLSALICYLIC ACID

K.B. Locher, H.J. Mallach, and A. Moosmayer, *Blutalkohol* 28:273-278, 1991.

*German title: Pharmakokinwtsche Wechselwirkungen zwischen Alkohol und Acetylsalicylsaure*

Twelve healthy subjects (ages 18-25 years) completed 3 experiments in a random, blind study on 3 different days. The subjects consumed either 0.75 g/kg alcohol alone, alcohol and 1000 mg of powdered acetylsalicylic acid (ASA), or ASA alone on an empty stomach. The alcohol was consumed within 20 minutes. Frequent blood and urine samples were collected, and the alcohol concentration was determined by the GC and ADH methods. Free salicylic acids and salicyluric acid as well as the conjugate and sulphate metabolites were measured.

There was no effect of ASA on the absorption or elimination of alcohol. Alcohol, however, caused a delay in the absorption of ASA and delayed its metabolism. Psychomotor tests were also conducted, and there was no increase in impairment due to combined use of ASA and alcohol compared to alcohol alone. ☺

**WHY DON'T YOU  
SUBMIT A CASE NOTE FOR THE NEXT ISSUE OF TOXTALK?**

# ELMER GORDON OPEN FORUM

## AN OPPORTUNITY FOR INFORMAL DIALOGUE

**IN MEMORIAM: JOHN J. SPIKES, SR., Ph.D., DABFT**

*Submitted by Dr. Vincent Papa*

Dr. John Spikes, Forensic Toxicologist, died January 4, 1997, at age 67. As well as full SOFT member, Dr. Spikes was an AAFS Fellow, ABFT Diplomate, and member of other scientific associations.

Dr. Spikes earned his Ph.D. in Pharmacology/Toxicology at the University of Texas while researching the chemistry and the effects of Gymodium breve toxin. During his employment with the Illinois Department of Public Health, Dr. Spikes was noted for his investigative work on deaths related to cyanide-laced Tylenol tablets in the 1980's. In 1986, Dr. Spikes joined the National Medical Service Laboratory team as toxicologist and expert witness until his retirement in December. He had the honor of serving on the FDA's Drug Abuse Advisory Committee and as advisor to the FBI's Forensic Science Research and Training Center. He held a number of faculty appointments and was a certified breath alcohol expert. Dr. Spikes had numerous publications and presentations covering analyses of such topics as primadone metabolites, post-mortem delta-9 tetrahydrocannabinol, arsenic, look-alike drugs, and DUI-related drugs and alcohol.

Moreover, throughout the years, Dr. John Spikes was directly responsible for a number of professionals entering the field of forensic toxicology, and all of us who were fortunate to have him as mentor, teacher, supervisor and/or colleague and friend will greatly miss him. ☘

## CAREER OPPORTUNITIES

*Positions available are listed for the consideration of SOFT members. There is no fee for this service. The information will be repeated in the next issue only if the information is confirmed by the person who submitted it.*

**RESPONSIBLE PERSON** SAMHSA-certified lab, combined FUDTL and Clinical Tox, Ph.D. or equivalent with RP experience. Contact: Tim Ashberry (501-202-1738) or Jerry Baugh (501-202-2767), Baptist Medical Center Laboratory, 9601 I-630, Exit 7, Little Rock, AR 72205.

**PART-TIME TOXICOLOGIST** 20+ hrs/wk, \$30.35-\$39/hr, 8 yrs experience, including 1 yr toxicological analysis at or above level of principal chemist. Educational training/degree may substitute for some experience. Contact Dr. Joel Milzoff, CT Dept of Public Health/Labs, Hartford, CT at Ph: 860-566-4258 or Fax: 860-566-6466. ☘

## PROFESSIONAL CALENDAR

**California Association of Toxicologists (CAT)** quarterly meetings and workshops. For information contact Vickie Watts at 602-644-2077, FAX 602-644-2478.

**American Academy of Forensic Sciences (AAFS)** annual meeting: Contact Brenda Papke, 719-636-1100.

**SOFT Annual Meeting: Oct. 5-9, 1997, Snowbird, Utah,** Dennis Crouch & David Moody, Co-Hosts.

**FUTURE SOFT MEETINGS: 1998** Albuquerque, NM, NGS Rao & Ronald Backer, Co-Hosts (Joint with TIAFT)

**Southern Association of Forensic Scientists:** April 16-19, 1997, Huntsville, AL. Spring meeting. Contact Martha Odom, AL Dept of Forensic Sciences, 716 Arcadia Circle, Huntsville, AL 35801. Telephone 205-539-1401

**5th International Congress of Therapeutic Drug Monitoring and Clinical Toxicology:** Nov. 11-14, 1997, Vancouver, British Columbia. Contact 5th International Congress, Events & Management Plus Inc., P O Box 1570, 190 Railway St, Kingston, Ontario, Canada K7L 5C8 (Tel: 613-531-9210, Fax: 613-531-0626) ☘

### REMINDER - S.O.F.T. CONTACT INFORMATION:

☎ **VOICE MAIL & FAX 602-839-9106**

✉ **MAILING ADDRESS P.O. Box 5543, Mesa, AZ 85211-5543**

# Toxicology-Related Internet Sites

Submitted by: Bruce A. Goldberger, Ph.D., University of Florida College of Medicine  
homepage: <http://www.med.ufl.edu/path/prod/faculty/bio/goldberg.htm>

## Government Organizations

Centers for Disease Control and Prevention — [www.cdc.gov](http://www.cdc.gov)  
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Drug Enforcement Agency — [www.usdoj.gov](http://www.usdoj.gov)  
Federal Bureau of Investigation — [www.fbi.gov](http://www.fbi.gov)  
Food and Drug Administration — [www.fda.gov](http://www.fda.gov)  
Health and Human Services — [www.os.dhhs.gov:80/progorg/progorg.html](http://www.os.dhhs.gov:80/progorg/progorg.html)  
Institute of Science and Forensic Medicine, Singapore — [www.gov.sg/moh/isfm/index.html](http://www.gov.sg/moh/isfm/index.html)  
National Clearinghouse for Alcohol and Drug Information — [www.health.org](http://www.health.org)  
National Institute on Alcohol Abuse and Alcoholism — [www.niaaa.nih.gov](http://www.niaaa.nih.gov)  
National Institute on Drug Abuse — [www.nida.nih.gov](http://www.nida.nih.gov)  
National Institutes of Health — [www.nih.gov](http://www.nih.gov)  
National Highway Traffic Safety Administration — [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)  
National Library of Medicine — [www.nlm.nih.gov](http://www.nlm.nih.gov)  
Occupational Safety and Health Administration — [www.osha.gov](http://www.osha.gov)  
Office of National Drug Control Policy — [www.whitehouse.gov/WH/EOP/ondcp/html/ondcp.html](http://www.whitehouse.gov/WH/EOP/ondcp/html/ondcp.html)  
Substance Abuse and Mental Health Services Administration — [www.samhsa.gov](http://www.samhsa.gov)  
United Nations International Drug Control Program — [www.undcp.org](http://www.undcp.org)  
U.S. Department of Transportation — [www.dot.gov](http://www.dot.gov)

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Centre for Behavioural and Forensic Toxicology — [www.cbft.unipd.it](http://www.cbft.unipd.it)  
George Washington Univ., Department of Forensic Sciences — [www.circ.gwu.edu/~forensic/about\\_us.html](http://www.circ.gwu.edu/~forensic/about_us.html)  
Global Health Network — [www.pitt.edu/HOME/GHNet/GHNet.html](http://www.pitt.edu/HOME/GHNet/GHNet.html)  
MedConnect — [www.medconnect.com](http://www.medconnect.com)  
Med TechNet — [www.medtechnet.com](http://www.medtechnet.com)  
The Poison Review — [toxikon.uih.uic.edu/toxikon](http://toxikon.uih.uic.edu/toxikon)  
Toxicology Corner — [www.njnet.com/~embbs/tox/tox.html](http://www.njnet.com/~embbs/tox/tox.html)  
Toxikon: Medical Toxicology — On-Line badger.uih.uic.edu/  
University of Alabama at Birmingham — [w3.lhl.uab.edu/graduate/93-cj.html](http://w3.lhl.uab.edu/graduate/93-cj.html)

## Professional Organizations

American Academy of Forensic Sciences — [www.aafs.org](http://www.aafs.org)  
American Association for Clinical Chemistry — [www.aacc.org](http://www.aacc.org)  
American Association of Medical Review Officers — [www.aamro.com/index.html](http://www.aamro.com/index.html)  
American Board of Criminalistics — [www.criminalistics.com/ABC](http://www.criminalistics.com/ABC)  
American Chemical Society — [www.acs.org](http://www.acs.org)  
American College of Forensic Examiners — [www.mediastorm.net/acfe](http://www.mediastorm.net/acfe)  
American Society of Crime Laboratory Directors — [www.shadow.net/~datachem/asclid.html](http://www.shadow.net/~datachem/asclid.html)  
American Society for Mass Spectrometry — [www.asms.org](http://www.asms.org)  
California Association of Criminalists — [www.criminalistics.com/CAC/cachome.htm](http://www.criminalistics.com/CAC/cachome.htm)  
Center for Education and Drug Abuse Research — [www.pitt.edu/~mmv/cedar.html](http://www.pitt.edu/~mmv/cedar.html)  
Center for Substance Abuse Research — [www.bsos.umd.edu/cesar/cesar.html](http://www.bsos.umd.edu/cesar/cesar.html)  
Forensic Science Society — [www.demon.co.uk/forensic/index.html](http://www.demon.co.uk/forensic/index.html)  
National Forensic Science Technology Center — [www.shadow.net/~nfstc](http://www.shadow.net/~nfstc)  
The International Association of Forensic Toxicologists — [apf.cbft.unipd.it/tiaft](http://apf.cbft.unipd.it/tiaft)

*(continued next page)*

## Scientific Journals and Newsletters

The International Journal of Drug Testing — [www.stpt.usf.edu/journal](http://www.stpt.usf.edu/journal)  
Bandolier, Evidence-Based Health Care — [www.jr2.ox.ac.uk:80/Bandolier](http://www.jr2.ox.ac.uk:80/Bandolier)  
Clinical Chemistry — [www.aacc.org/ccj/index.html](http://www.aacc.org/ccj/index.html)  
Forensic Science International — [www.elsevier.com/catalogue/SAB/130/05320/05320/505512/505512.html](http://www.elsevier.com/catalogue/SAB/130/05320/05320/505512/505512.html)

## Scientific Data

Mass Spectrometry Database — [www.ualberta.ca/~gjones/mslib.htm](http://www.ualberta.ca/~gjones/mslib.htm)

## "Illicit" Sites

A.C.S. Herbal Tea Company — [www.erinet.com/acsh](http://www.erinet.com/acsh)  
Cyberdelics — [www.subnet.co.uk/cybertonics](http://www.subnet.co.uk/cybertonics)  
Drug Information Resources — [kiwi.uwaterloo.ca/drug\\_info.html](http://kiwi.uwaterloo.ca/drug_info.html)  
"Hemp Web" — [hempweb.com](http://hempweb.com)  
High Times Magazine — [www.hightimes.com/~hightimes/welcome.html](http://www.hightimes.com/~hightimes/welcome.html)  
National Organization for the Reform of Marijuana Laws — [www.natlnorml.org](http://www.natlnorml.org)  
Paranoia — [www.paranoia.com/drugs](http://www.paranoia.com/drugs)  
"PiHKAL" — [www.hyperreal.com/drugs/pihkal](http://www.hyperreal.com/drugs/pihkal)

## Other Forensic Science Disciplines

Zeno's Forensic Page — [www.image.nrips.go.jp/~zeno/forensic.html](http://www.image.nrips.go.jp/~zeno/forensic.html)





# Utah 1997

## 27th Annual Meeting

### October 5-9, 1997

# REGISTRATION FORM



NAME \_\_\_\_\_ ORGANIZATION \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_ COUNTRY \_\_\_\_\_

PHONE \_\_\_\_\_ FAX \_\_\_\_\_ EMAIL \_\_\_\_\_

Check all that apply:

- SOFT MEMBER # \_\_\_\_\_     
  SOFT NONMEMBER     
  GUEST \_\_\_\_\_  
 New Member     
  First Annual Conference attended

**MEETING REGISTRATION**

Includes admission to all scientific sessions, Welcome Reception, Tuesday Happy Hour & Dessert, Wednesday evening social events, and three lunches (Tues, Wed, Thurs).

(Registration after September 5: add \$35. Onsite registration: \$205.00)

		<u>Member</u>	<u>NonMember</u>	<u>AMOUNT ENCLOSED</u>
	Includes admission to all scientific sessions, Welcome Reception, Tuesday Happy Hour & Dessert, Wednesday evening social events, and three lunches (Tues, Wed, Thurs). (Registration after September 5: add \$35. Onsite registration: \$205.00)	\$ 125.00	\$155.00	_____
WORKSHOP #1	Fundamentals of Alcohol Testing and Interpretation (10/5, 8:30am - 6:00 pm. Includes textbook.)	95.00	115.00	_____
WORKSHOP #2	The Pharmacology of Herbal Preparations (10/5, 8:30am - 12:30pm)	40.00	50.00	_____
WORKSHOP #3	Principles of Solid Phase Extraction (10/5, 2:00 pm - 6:00 pm)	40.00	50.00	_____
WORKSHOP #4	Why Sample Mass Spectra and Library Spectra Don't Match (10/6, 2:00 - 6:00 pm)	40.00	50.00	_____
WORKSHOP #5	Automated Sample Preparation for Chromatographic and Mass Spectral Analysis. (10/6, 8:30 am - 12:30 pm)	40.00	50.00	_____
WORKSHOP #6	Fetal and Pediatric Pharmacology. (10/6, 2:00pm - 6:00 pm)	40.00	50.00	_____
WORKSHOP #7	Forensic Applications of LC/MS. (10/6, 2:00 pm - 6:00 pm)	40.00	50.00	_____
ABFT Breakfast	(Diplomates and Forensic Toxicology Specialist only) (10/7, 7:30am - 9:00 am)	20.00		_____
Extra Tickets:	Welcoming Reception # _____	30.00		_____
	Happy Hour/Drinks # _____	25.00		_____
	Dessert/Drinks # _____	15.00		_____
	Mystery Dinner/Dance # _____	40.00		_____
Optional Thursday Evening Activity: Saints & Sinners # _____		17.00		_____

Includes roundtrip motorcoach transportation including tax, reserved seating at Mormon Tabernacle Choir rehearsal; walking maps of Micro-breweries, and option of attending both.

Souvenir hat if you register by July 1!

Meeting Sweatshirt size:  Large  X-Large  XX-Large \$20 for extra sweatshirts # \_\_\_\_\_ and sizes \_\_\_\_\_

**TOTAL :** \_\_\_\_\_

**PAYMENT METHOD:**

- Check payable to University of Utah  
 Government Purchase Order # \_\_\_\_\_ (Bill attn \_\_\_\_\_)  
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 Signature \_\_\_\_\_ Exp. Date \_\_\_\_\_

Send to:  
 Conferences, 2174 Annex  
 University of Utah  
 Salt Lake City, UT 84112  
 Phone: 801-581-5809  
 Fax: 801-581-3165

U.S. Dollars only.

Cancellations received by October 1 will be accepted minus a \$35 service charge. Be sure to get a cancellation number. Confirmed registrants who do not attend the conference or who cancel after October 1 are responsible for the entire registration fee.

ADA: Please list any special needs (including dietary) or contact Linda Williams at 801-581-5809 or <Lwilliams@admin.dcc.utah.edu> by September 15, 1997



# Utah 1997

## 27th Annual Meeting

October 5-9, 1997



### Instructions for Abstract Preparation

#### General Instructions:

The program committee solicits abstracts on all forensic toxicology topics, but is especially interested in papers on the analysis of drugs and metabolites in biofluids and tissues, drug interactions, drug metabolism, pharmacology, pharmacokinetics and case reports involving drug toxicity/overdose. An original and three copies of the abstract must be submitted on the official abstract form. Please also submit the abstract on a computer disk. Any IBM or Macintosh word processing format, or ASCII format can be accommodated. Please label the disc with the first author's name, IBM or Macintosh, and the word processing program utilized. The deadline for submission of abstracts is July 1, 1997 (no exceptions). The presenting author will be required to register for the meeting.

Scientific papers selected for presentation will be divided into two groups: Platform Presentations (15 min including questions, limit one per presenter) and Poster Presentations (4 ft high by 8 ft wide). Tack boards and thumb tacks will be provided. Only abstracts written in English will be considered.

#### Content of Abstract:

1. Author(s) name(s) and address(es)
2. Short specific title
3. Statement of the paper's objectives
4. Statement of experimental design
5. Statement of methods, if pertinent
6. Summary of results
7. Statement of conclusion
8. Acknowledgement of funding, if pertinent
9. Three key words

#### Sample Abstract:

Title: Type Upper and Lower Case. Use significant words descriptive of subject content.

Author(s) Name(s) and Address(es): Type Upper and Lower Case; spell out first and last name and use middle initial, e.g., David E. Moody. Specify presenting author with an asterisk (\*). Do not specify degrees.

Indent each paragraph three spaces. Type the entire abstract within the boxed area, single spaced in 12 point font. Do not use all capital letters. Capitalize and punctuate exactly as you wish the abstract to appear.

Key words: Type three key words or short phrases in upper and lower case.

#### Format of Abstract:

Your abstract must be typed and submitted in a neat and legible format following the instructions and style provided in the sample below. Type the entire abstract within the boxed area, single spaced with 12 point font. Type the title in the upper and lower case, followed by the author(s) name(s) and address(es). Use an asterisk to identify the presenting author. Separate the author(s) name(s) from the body of the abstract by a single blank line. Indent each paragraph three spaces. Identify three key words at the bottom of the abstract.

#### Notification of Acceptance:

All presenting author(s) will be notified of receipt of the abstract. Notification of acceptance of the abstract and selection of the type of presentation will be mailed or sent by facsimile no later than August 15, 1997.

#### Specific Instructions:

Complete the attached form and follow the sample provided below. Proferead all information provided. Send the original, three additional copies and an IBM or Macintosh disc with the abstract to:

Dr. David Moody  
Center for Human Toxicology  
BPRB, Rm 490  
University of Utah  
Salt Lake City, UT 84112





# Utah 1997

## 27th Annual Meeting

October 5-9, 1997

### Abstract of Paper



Presenting Author Name and Mailing Address:

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Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

SOFT Member       SOFT Non-Member

Presentation Preference:

Oral       Poster

Co-author(s), Address(es), Business Affiliation(s):

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Has this paper been presented before?

yes       no; if yes, where and when?

Available Audio-Visual Equipment:

35 mm slide & overhead projector and pointer.

Mail Address: Dr. David Moody  
Center for Human Toxicology  
BPRB, Rm 490  
University of Utah  
Salt Lake City, UT 84112

The abstract review committee reserves the right of final placement of the paper. The presenting author will be required to register for the meeting.

Signature of submitting author



# Utah 1997

## 27th Annual Meeting

### October 5-9, 1997

### Lodging



PLEASE CONTACT THE HOTEL DIRECTLY TO MAKE YOUR RESERVATIONS.

A photocopy of this form is acceptable. Preferred method of reservation is by telephone or fax or send reservation information to:

**Snowbird Cliff Lodge**  
 Central Reservations Department  
 Snowbird, Utah 84092

Telephone: 801-742-2222 or 800-453-3000  
 FAX: 801-742-3434 or 800-742-3434

FIRST NAME \_\_\_\_\_ LAST NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY/STATE/ZIP \_\_\_\_\_

COUNTRY \_\_\_\_\_ TELEPHONE \_\_\_\_\_ FAX \_\_\_\_\_

DATE OF ARRIVAL \_\_\_\_\_ TIME \_\_\_\_\_ DATE OF DEPARTURE \_\_\_\_\_ TIME \_\_\_\_\_

TOTAL NUMBER IN PARTY \_\_\_\_\_ NUMBER OF CHILDREN \_\_\_\_\_

Smoking  Non-Smoking

**RATES**

**Cliff Lodge:**

(Conference Headquarters)	Nightly, per room
___ Bedroom (1-4 persons)	\$89
___ Deluxe Bedroom (1-2 persons)	\$138
___ One Bedroom Suite (1-6 persons)	\$225
___ Two Bedroom Suite (1-8 persons)	\$361
___ Dorm Bed	\$26

**Lodge at Snowbird and the Inn:**

(Five-minute walk from the Cliff Lodge)	
___ Bedroom (1-4 persons)	\$72
___ Studio or Efficiency(1-2 persons)	\$72
___ One Bedroom Condo or Studio	
___ Loft (1-6 persons)	\$147
___ One Bedroom Condo with Loft (1-10 persons)	\$217

**Airport Shuttle**

\_\_\_ Shuttle service from/to airport \$17, each way

Air carrier \_\_\_\_\_ Date & Time of Arr./Dep. \_\_\_\_\_

Reservations must be made by Sept. 5, 1997, to receive conference rate. To secure the conference rates, tell the reservation operator that you will be attending the SOFT '97 Conference.

**Payment Method - Check one**

VISA/MasterCard  Am. Express  Diners/Carte Blanche  Discover  Check

Credit Card Number \_\_\_\_\_ Expiration Date \_\_\_\_\_

Check-in time is 4:00 PM; check-out time is 11:00 AM

**CANCELLATIONS:** Snowbird reserves the right to withhold entire deposit when cancellation is received by Snowbird within 48 hours of arrival date.

## SOFT, 97: Preliminary Meeting Schedule (revision: 2/19/97)

### Saturday, October 4, 1997

1:00pm - 6:30pm CAP Inspector Workshop (includes dinner)

### Sunday, October 5, 1997

8:00am - 5:00pm Registration  
7:30am - 8:30am Continental Breakfast  
8:30am - 12:30pm SOFT Board Meeting  
8:30am - 6:00pm Workshop 1 - Fundamentals of Alcohol Testing and Interpretation.  
8:30am - 12:30pm Workshop 2 - The Pharmacology of Herbal Preparations.  
2:00pm - 6:00pm Workshop 3 - Principles of Solid Phase Extraction.  
Evening NLCP Inspector Workshop

### Monday, October 6, 1997

8:00am - 7:00pm Registration  
7:00am - 8:15am Ion Trap User's Breakfast (informal)  
7:30am - 8:30am Continental Breakfast  
8:00am - 12:00n ABFT Examination  
8:30am - 12:30pm Workshop 4 - Why Sample Mass Spectra and Library Spectra Don't Match.  
8:30am - 12:30pm Workshop 5 - Automated Sample Preparation for Chromatographic and Mass Spectral Analysis.  
  
12:00n 5:00pm ABFT Board Meeting  
2:00pm - 6:00pm Workshop 6 - Fetal and Pediatric Pharmacology.  
2:00pm - 6:00pm Workshop 7 - Forensic Applications of LC/MS.  
6:00pm - 10:00pm Exhibitor set-up  
7:00pm - Welcoming Reception

### Tuesday, October 7, 1997

8:00am - 5:00pm Registration  
7:30am - 9:00am ABFT Breakfast  
8:00am - 9:00am Continental Breakfast  
9:00am - 10:45am Plenary Session  
11:00am - 12:00n ERA Platform Session  
12:00n - 1:30pm Buffet Lunch in Exhibit Area  
12:00n - 4:30pm Exhibits open  
1:30pm - 4:30pm Platform Session  
4:30pm - 6:00pm Free Time  
6:00pm - 8:00pm Happy hour & Appetizers in Exhibit Area  
8:00pm - 10:00pm Dessert & Elmer Gordon

### Wednesday, October 8, 1997

8:00am - 5:00pm Registration  
8:00am - 10:00am Poster Session / Continental Breakfast  
9:30am - 4:00pm Exhibits open  
10:00am - 12:00n Platform Session  
12:00n - 1:30pm Buffet Lunch in Exhibit Area  
1:30pm - 3:00pm Business meeting  
3:00pm - 7:00pm Free Time  
7:00pm - Murder Mystery Theater, Dinner & Dance

### Thursday, October 9, 1997

8:00am - 3:30pm Registration  
8:00am - 10:00am Poster Session / Continental Breakfast  
9:30am - 1:30pm Exhibits open  
10:00am - 12:00n Platform Session  
12:00n - 1:30pm Buffet Lunch in Exhibit Area  
1:30pm - 3:30pm Platform Session  
1:30pm - Exhibit breakdown  
3:30pm - Open or early departure  
Evening Optional Downtown activities: Saints (Tabernacle practice) & Sinners (Pub Crawl)

### Friday-Sunday, October 10-12, 1997

See Available Travel Packages for Tours to Scenic Sites

Note: Anyone planning an auxiliary meeting/event needs to contact the meeting hosts ASAP.

## WORKSHOPS

### **WORKSHOP #1: Fundamentals of Alcohol Testing and Interpretation.**

Coordinator: Yale Caplan, Ph.D., National Center for forensic Sciences.

Forensic alcohol analysis is one of the most frequently performed of all forensic analyses. All states within the US have statutes regulating operation of motor vehicles under the influence of alcohol. This workshop will focus on the pharmacology of ethyl alcohol, disposition of alcohol into various pre- and post-mortem tissues, analytical techniques, and state and federal regulations regarding alcohol use. The workshop fee includes a copy of the new edition of "Medicolegal Aspects of Alcohol determination in biological Specimens", edited by James Garriot, Ph.D.

### **WORKSHOP #2: The Pharmacology of Herbal Medicines.**

Coordinator: Diana Wilkins, Ph.D., University of Utah.

The use of plants for medicinal purposes extends back to earliest recorded history. Today, about 80% of the world's population relies to some extent on various herbal remedies. This workshop will discuss the prevalence and toxicity of the more widely used herbal preparations.

### **WORKSHOP #3: Principles of Solid Phase Extraction.**

Coordinator: Glynn Chaney, M.S., United Chemical Technologies, Inc.

SPE has become a key tool in drug identification, confirmation and quantitation. This technical workshop will focus on both theoretical and practical aspects of the extraction of abused drugs from urine, blood, serum, plasma and tissues by SPE. A brief history of SPE will be followed by an in-depth description of sorbent functionalities and extraction protocols.

### **WORKSHOP #4: Why Sample Mass Spectra and Library Spectra Don't Match.**

Coordinator: Larry Bowers, Ph. D., Indiana University

A major use of MS in toxicology is to increase confidence in the identification of unknown compounds. Identification criteria require agreement of the intensity of "diagnostic ions." This course will review mass spectral interpretation to help define "diagnostic ions". Library matching algorithms and factors that affect the quality of a library match will be discussed.

### **WORKSHOP #5: Automated Sample Preparation for Chromatographic and Mass Spectral analysis.**

Coordinator: Rodger L. Foltz, Ph. D., University of Utah.

Automated techniques for preparing biological samples for analysis by GC, LC and MS have reached the stage of development where they deserve consideration by all toxicology laboratories that perform repetitive analyses. This workshop will provide registrants with an appreciation of the capabilities and advantages of various commercial robotic systems. It will include presentations by both vendors and users.

### **WORKSHOP #6: Fetal and Pediatric Pharmacology.**

Coordinator: Ralph Lugo, Pharm.D., University of Utah.

The pharmacologic principles that operate in pregnant women, the fetus and the rapidly maturing infant can be quite different than in adults. This workshop will present basic principles of pharmacology in the special context of perinatal and pediatric therapeutics. Pharmacokinetics and pharmacodynamics of drugs in pregnancy will be reviewed.

### **WORKSHOP #7: Forensic Applications of LC/MS.**

Coordinator: Rodger L. Foltz, Ph. D., University of Utah.

LC/MS has been relatively infrequently used by forensic toxicology laboratories. The high cost of instrumentation and lack of familiarity with current capabilities of LC/MS using atmospheric pressure ionization techniques are probable contributing factors. This workshop will attempt to show why LC/MS is destined to become more widely used than GC/MS in forensic laboratories.



# Society of Forensic Toxicologists, Inc.

P.O. Box #5543, Mesa, AZ 85211-5543 • Telephone/FAX: 602-839-9106

## Educational Research Awards

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Thomas F. Simonick, B.S.  
ex officio:  
H. Chip Walls, B.S. (Past President)  
Joseph R. Monforte, Ph.D., DABFT  
(ToxTalk Editor)

### 1997 ANNUAL MEETING HOSTS

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--dcrouch/soft97.html

**Description:** The education of specialists in the field of forensic toxicology continues to be a challenge. Forensic toxicologists are scientists who engage in the analysis of body fluids and tissues for the presence of drugs and chemicals and interpret these analytical results for judicial purposes. The ever-increasing sophistication of analytical methodologies and the enhanced knowledge of underlying physiological and pharmacological factors governing our understanding of the effects of these substances promise to add information to the judicial process that was not thought possible just a few years ago.

The Society of Forensic Toxicologists is dedicated to continuing effective education in this field and actively supports research projects that advance the foundations of the science in academic settings. The award will recognize students pursuing advanced degrees whose research has progressed to the point of presentation to the members of SOFT.

**Eligibility:** The Educational Research Award (ERA) is designed to recognize students pursuing advanced degrees (Ph.D. and M.S.) with research in an area relevant to forensic toxicology.

**Award:** An award of \$750 will be made to offset travel expenses to the SOFT Annual Meeting. Awardees may reapply.

**Deadline:** May 1. (Successful applicants will be announced by July 1)

### Application Materials:

1. Resume of student.
2. Copy of Abstract to be presented at Annual meeting. The abstracts of ERA awardees will be forwarded to the program committee.
3. Description of research (research proposal, supplemented with current findings)
4. Cover letter from the research advisor providing background information about the student, the proposed research, and the advisor's or institution's willingness to receive and administer funds.

### Submission Address:

**E.R.A. Chairman**  
c/o S.O.F.T. Administrative Office  
P.O. Box 5543  
Mesa, AZ 85211-5543

**S.O.F.T. 1997 SALARY SURVEY: Please Submit Only ONE Survey per Laboratory**  
***The Identity of the participants and the Laboratories SHALL REMAIN CONFIDENTIAL***

Please return response in care of: TOXTALK: SOFT Salary Survey, 846 Smoki Dr. (HP), Prescott AZ 86301-7347; Please NOTE We will only evaluate the data received if the total number of laboratory responses received equals or exceeds n= 10 in each specific category.

As a result of continuing member interest and the importance that information of this nature carries in a vocational context, we are once again surveying salaries and need as wide a response as possible to make the information useful. In this survey, as in 1992, we are looking at forensic toxicology sub-specialties as well. Realizing that titles may differ among (and even within various sites of the same organization), for the purpose of this survey please fit your lab's hierarchy into the job descriptions as close as possible to those noted below. If there are different levels or types of supervisors and/or analysts within your organization, please break them out in the space provided.

POSITION (Job Description / Responsibilities)	ANNUAL SALARY RANGE	CURRENT ANNUAL SALARY	#YEARS AT PRESENT POSITION	POST- MORTEM TOX %	HUMAN PERFOR- MANCE TOX %	WORK- PLACE DRUG TESTING %	FULL OR PART TIME
1. LABORATORY DIRECTOR: (Manages ALL Lab services; Tox Lab Only: ___ YES ___ NO)	\$ _____ - _____	\$ _____	_____	%	%	%	F P
2. CHIEF TOXICOLOGIST: (Manages Tox Lab ONLY)	\$ _____ - _____	\$ _____	_____	%	%	%	F P
3. TOXICOLOGY SUPERVISOR: (Daily Lab Operation, super. Chemists, QC etc. reports directly to #1 or #2)	\$ _____ - _____	\$ _____	_____	%	%	%	F P
	\$ _____ - _____	\$ _____	_____	%	%	%	F P
	\$ _____ - _____	\$ _____	_____	%	%	%	F P
4. TOXICOLOGY CERTIFYING SCIENTIST: (Reviews lab section data; or C.S. in NLCP/CAP lab)	\$ _____ - _____	\$ _____	_____	%	%	%	F P
	\$ _____ - _____	\$ _____	_____	%	%	%	F P
5. ANALYST/CHEMIST (Bench Work Requires Some Supervision)	\$ _____ - _____	\$ _____	_____	%	%	%	F P
	\$ _____ - _____	\$ _____	_____	%	%	%	F P
	\$ _____ - _____	\$ _____	_____	%	%	%	F P
6. ACCESSIONER/ LAB AIDE (Accessions / logs, samples washes glassware, maintains inventories etc.)	\$ _____ - _____	\$ _____	_____	%	%	%	F P
	\$ _____ - _____	\$ _____	_____	%	%	%	F P

7. TYPE OF LABORATORY: \_\_\_\_\_ GOVERNMENT \_\_\_\_\_ NON-GOVERNMENT

To make this survey as accurate as possible, PLEASE submit only one detailed survey per laboratory site. Members working at more than one lab site should prepare a survey for EACH laboratory. Make additional copies of this survey or attach sheets as needed.