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EDITORIAL BOARD: H. Chip Walls, B.S., Jim Wigmore, B.Sc., Daniel Isenschmid, Ph.D., DABFT, Vincent Papa, Ph.D.

PUBLISHER: Patricia Mohn-Monforte

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OF SPECIAL INTEREST: Interim SOFT Board Meeting & SOFT/TIAFT '98

INSERTS*: '98 SOFT/TIAFT Meeting Materials

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

On page 9 of the previous issue of *ToxTalk* (Volume 22, March 1998) there appeared a summary of an article entitled "Marijuana and Actual Driving Performance," submitted by Art McBay. The *ToxTalk* article incorrectly stated that driving tests were conducted in city traffic and on highways at speeds up to 26 miles per hour. It should have stated that the driving tests were conducted at speeds up to 62 miles per hour. Please note the correction. &

VISIT THE SOFT WEBSITE: www.soft-tox.org

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*. Please mail your contribution to:

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

42408 N. Sombrero Rd, Cave Creek, AZ 85331-2821

Telephone: 602-595-MOHN (6646) Fax: 602-595-MONF (6663) - after 11 a.m. E.S.T. please

E-mail: monforte@juno.com

DEADLINES: Feb. 1, May 1, Aug. 1, and Nov. 1. **NEXT DEADLINE:** August 1, 1998

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

PRESIDENT'S MESSAGE by Joseph Saady, Ph.D., DABFT

I THE ROOM CRUNCH

We are running out of rooms for the SOFT Annual Meeting in Albuquerque. The Hilton is sold out, and the Fairfield is 50% sold out. The local committee in Albuquerque has obtained the maximum number of rooms from the hotels during this busy week. Reserve your room **now**, if you wish to attend!

II EMPLOYMENT IN TOXICOLOGY - THIS MAY BE AS GOOD AS IT GETS

If you expect that I have performed a thorough analysis of this subject, then read no further! I have not! But I do have colleagues throughout this country who have discussed their situations and tribulations related to this issue with me. As one who has changed employment within the past two years, I wish to reflect on this issue.

Corporate downsizing, realignment, re-engineering, restructuring, consolidation, merger, etc.

All of these synonyms mean one thing. Employees lose their jobs and thus their lives are disrupted. The remaining employees work longer hours and harder to "take up the slack." The remaining employed are acutely aware of the very real possibility of losing their job and are, therefore, under greater mental stress to perform better and for longer hours. Work pressures are consuming more of our lives. Let's face the reality. As professionals, an attack on our work, our job, our livelihood goes to the very core of who we are.

The workplace has changed!

It has not been that many years ago when employers had a sense of responsibility and protection for the employee. Employees on the other hand had a sense of loyalty and dedication toward the employer. These ideas are more of the exception than the rule now. Exceptional work is frequently rewarded with additional burdens, for little or no additional monetary compensation.

We are reading in the news that there are currently more people employed than ever before. But for toxicologists, it appears that the salaries are weak, and that there are more lower paying jobs. Actually many other professions and industries are experiencing similar effects - with the exception of computer related jobs.

What can toxicologists do to protect themselves?

Learn! And learn constantly over your lifetime. Tackle tough problems, and find solutions. Create a situation where the employer needs you more than you need them. If you have experience and have a demonstrated ability to solve problems, you are a valuable asset to any company. Your reputation, the manner in which you conduct yourself, your resume, your skills and problem solving ability will stay with you. As companies outsource labor, many of our toxicologists have taken advantage of this opportunity in consulting services. Still others are finding ways to creatively use their toxicology background in forensically related fields.

The **Visioning Workgroup 1998** is now investigating (to the extent possible) the future of forensic toxicology. What are your ideas? Contact Dr. Carl Selavka at cayr@aol.com or by fax at (518) 457-9384.

And try to enjoy your job. This may be as good as it gets! ☺

PRESIDENT SAADY ENCOURAGES YOUR INPUT! You may . . . E-mail, fax, or write to Joseph J. Saady, Ph.D., DABFT
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REMINDER TO SOFT BOARD MEMBERS AND COMMITTEE CHAIRS

The SOFT Board Meeting will be held Tuesday, October 6th, at 6:30 p.m. Report forms and more specific information will be distributed. Please make every effort to submit your report by the stated date. For further information, contact President Saady. ☺

SOFT/TIAFT '98: ACT NOW!

This may be your last opportunity to make hotel reservations for the SOFT/TIAFT meeting. Space is very limited and will be reserved on a "first come" basis only. To qualify for conference rates, specify "SOFT" when making your reservations. Rates are not guaranteed after September 3rd. A third hotel has been added to try to accommodate attendees. Local phone numbers are listed below, the 800 national contacts may not recognize your SOFT discount.

Albuquerque Hilton (Congress Hotel) 505-884-2500: \$105 single/double; \$115 triple; \$125 quad

Fairfield Inn by Marriott (same compound as Hilton) 505-889-4000: \$89 single/double; \$99 triple; \$109 quad

Holiday Inn Mountain View (across the parking lot from the Hilton): 505-884-2511 \$99.95 single/double; \$109.95 trip/quad

Here are some important deadlines to remember:

July 1st	Abstracts must be submitted
July 1st	Free t-shirt with registration
Aug. 1st	Early registration. \$50 late fee applies after this date
Sept. 7th	Last day mail registrations will be accepted
Sept. 3rd	Hotel reservation <u>rate</u> guaranteed (but NOT room space)

This year, you have two registration options. The basic difference between the Mesa and Sandia registrations is that the Mesa does not include the following: Wednesday and Friday luncheons, Farewell Banquet, Workshop #6, and the published Congress Proceedings. Additional information can be obtained by writing to:

SOFT-TIAFT 1998, P O Box 40711, Albuquerque, NM 7196-0771

or contact: N.G. Rao (SOFT) Phone: 505-841-2562 e-mail: nrao@state.nm.us (THIS IS NEW)
Ron Backer (SOFT) 915-561-8851 toxmantx@aol.com
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Report of Interim Meeting of the SOFT Board of Directors

Submitted by Michael L. Smith, Ph.D., DABFT, SOFT Secretary

President Joseph Saady presided over the meeting held February 11, 1998, in San Francisco, CA, during the annual meeting of the American Academy of Forensic Sciences. Committee reports were given and are highlighted. Kurt Dubowski's Bylaws report indicated that there were no new bylaws since the last meeting and that a complete set of bylaws will be available soon in hard copy and electronic format. Marilyn A. Huestis, last year's secretary, announced that SOFT added 78 new members in 1997 bringing total membership to 562; 25 charter, 420 full, 88 associate, 19 retired and 10 student members. 1998 Secretary Michael Smith reported that Dr. Kenneth Sun has replaced Deb Rector on the membership committee. Joseph Monforte, ToxTalk editor, reviewed journal deadlines then thanked editorial staff; Chip Walls for "The Journal Club", Jim Wigmore for "Blutalkaholkonzentration", and Dan Isenschmid for "Case Notes". Vince Papa will soon introduce a new section called "Drugs in the News." Brad Hepler and Dan Isenschmid, co-editors for the 1998 SOFT/Journal of Analytical Toxicology Special Issue, indicated that some manuscripts were already received and that deadlines were Mar 9 for abstracts and Mar 23 for completed papers. The Board approved up to \$7500 to assist with publication. H. Chip Walls, chair of the Drugs & Driving Committee, announced that the Benzodiazepine monograph is in final form and a Methamphetamine monograph by Barry Logan is underway. JCETT requested money to fund the lending library and web-site. The board recommended that a clear concept of the library and web-site be developed and then presented at the next board meeting. Bruce Goldberger, chair of the SOFT Web-site committee, announced that upcoming features of the web-site would be to include "Introduction to Forensic Toxicology" by Baselt & Cravey in the site, educational links to other resources and a link to an employment exchange.

Hosts or their representatives presented plans for future meetings. The Board approved future meeting plans and locations. The list of locations and hosts are as follows: 1998 Albuquerque, NM, N.G.S. Rao, Ron Backer, Vina Spiehler (TIAFT representative); 1999 San Juan, Puerto Rico, Flor Mattos (represented by Luz Droz and Rosa De Jesus); 2000 Waukegan, WI, Steve Wong; 2001 New Orleans, LA, Pat Pizzo; 2002 Detroit, MI, Dan Isenschmid and Brad Hepler. Workshops for the 1998 meeting will be listed in the next ToxTalk. Two special features of the meeting will be a seminar on herbal medicines and the International Balloon Festival. Rooms reserved to date were 160 with 290 remaining. Hosts strongly encouraged early reservations. After completion of committee issues, the Board met in closed session to discuss additional business. ☺

Case Notes: VITREOUS HUMOR 6-ACETYLMORPHINE

Submitted by Joseph J. Saady, Ph.D., DABFT, Terry M. England, BS and James C. Valentour, PhD, DABFT, Virginia Division of Forensic Science, 700 North Fifth Street, Richmond, VA 23219

Frequently, heroin users are found dead at varying times after using the substance. There is seldom any history associated with such deaths and "eye witnesses" are rarely found. The medical examiner submits biological tissues to the forensic toxicologist in the hope that toxicological findings will enable the determination of the cause of death.

In blood specimens, the forensic toxicologists can rarely detect the parent drug heroin because of the rapid metabolism. 6-Acetylmorphine (6-AM) is sometimes found, but the metabolite morphine is found most often (Goldberger, 1993; Jenkins, 1994). Blood morphine concentrations vary considerably in cases of death (Richards, 1976). Documentation of heroin use by finding 6-AM would facilitate the Medical Examiner in determining the cause of death.

Recently, Jenkins showed that the use of cerebrospinal fluid enabled the identification of 6-AM in 30 of 65 cases where 6-AM was not identified in the corresponding blood specimen (Jenkins, 1998). Preliminary data in our study (Table 1) demonstrate that vitreous humor (VH) 6-AM determinations provide a more sensitive heroin marker than the corresponding blood specimen. The table compares cases in fourteen deaths where morphine blood and VH concentrations range from 0.01 to 0.61 mg/L and 0.01 to 1.1 mg/L, respectively. 6-AM concentrations in blood and VH ranged from not detected (nd) to 0.03 and nd to 2.0 mg/L, respectively. 6-AM was identified in blood in 5/12 cases (42%) and in VH 9/12 (75%). Case K was a documented overdose of morphine sulfate tablets (MS Contin). All deaths were purported to be drug related. We are continuing to collect data on VH 6-AM concentrations.

References:

Richards, R., Reed, D. and Cravey, R., Death from intravenously administered narcotics: a study of 114 cases, *J. Forensic Sci.* 21:467-482, 1976.

Jenkins, A. and Lavins, E., 6-acetylmorphine detection in postmortem cerebrospinal fluid, *J. Anal. Tox.* 22:173-175, 1998.

Goldberger, B., Darwin, W., Grant, T., Allen, A., Caplan, Y. and Cone, E., Measurement of heroin and its metabolites by isotope-dilution electron impact mass spectrometry, *Clin. Chem* 39:670-675, 1993.

Jenkins, A., Keenan, R., Henningfield, J. and Cone, E., Pharmacokinetics and pharmacodynamics of smoked heroin, *J. Anal. Tox.* 18: 317-330, 1994. ☼

TABLE 1.

Concentrations found in blood (BLD) and vitreous humor (VH) expressed in mg/L

VICTIM	MORPHINE		6-AM	
	BLD	VH	BLD	VH
A	0.16	0.01	0.03	0.04
B	0.01	0.02	nd	nd
C	0.12	0.02	0.01	0.03
D	0.04	0.03	nd	0.01
E	0.02	0.01	nd	nd
F	0.04	0.01	nd	nd
G	0.05	0.02	0.01	0.03
H	0.22	0.46	nd	nd
I	0.02	0.04	nd	0.02
J	0.05	0.04	nd	0.01
K	0.61	0.05	nd	nd
L	0.19	0.02	0.01	0.03
M	0.08	0.10	nd	0.02
N	0.08	1.1	0.01	2.0

MEETING REGISTRATION NOTICE

Subtitle: Don't blame us later if you don't read this!

ARE YOU WAITING FOR THE NEXT ISSUE OF TOXTALK BEFORE MAILING YOUR SOFT/TIA MEETING REGISTRATION FORM? TAKE NOTICE - IT WILL COST YOU \$50 MORE. (The next issue will be mailed after the August 1st deadline for early registration. So why wait? And don't forget the free T-shirt for registrations received by July 1st. ☼

Case Notes: Strikingly High Concentrations of THCA in Urine: Misapplication of "Medicinal Marijuana" Through Improper Self-Diagnosis and Dosing?

Submitted by: *Connie D. Dunn, Ph.D., Air Force Drug Testing Laboratory, Brooks A.F.B., TX 78235*

Controversial legislation regarding distribution of marijuana for medical use through "cannabis clubs" was debated and passed in California and Arizona as Propositions 215 and 200, respectively. Studies have indicated medicinal value for marijuana. This was followed by a plethora of articles in popular literature touting marijuana's medicinal use. Consequently, marijuana and synthetic marijuana medications such as dronabinol or Marinol may be prescribed as an antiemetic for patients suffering from severe nausea and appetite depression as a consequence of chemotherapy or AIDS wasting syndrome. Proponents for medicinal marijuana have suggested its use as a treatment for glaucoma, and due to analgesic and antispasmodic properties, migraine headaches, multiple sclerosis, arthritis, or several other illnesses. This undercurrent of support for marijuana may lead to misapplication through improper self-diagnosis and dosing.

A white male age 19 selected randomly for urine drug testing under Department of Defense (DoD) urinalysis protocols (1,2,3) produced urine samples that revealed the presence of cannabinoid metabolites. Subsequent GC/MS confirmation testing demonstrated the metabolite 11-nor-delta-9-tetrahydrocannabinol-9-carboxylic acid (THCA) in his urine at levels well above the DoD positive cutoff level of 15 ng/mL.

Three samples were collected under the applicable DoD test protocols. The first sample was collected under the "random test" protocol. This sample was positive for the presence of THCA at a level of 304 ng/mL. The second sample was collected thirteen days later under "voluntary" protocol (as part of an investigation of possession/use of marijuana in his military dormitory). This sample was positive for THCA at 1713 ng/mL. A final sample collected 14 days later under the "random" protocol was also positive for THCA at 6533 ng/mL. These results are unusually high.

When questioned, the individual reported that he smoked the marijuana frequently for "medical reasons" as a self-treatment for nausea (including uncontrollable vomiting). He sought formal medical treatment for extreme fear, stress, and anxiety that he felt triggered the nausea. [He did not report marijuana use initially while discussing his symptoms.] Treatment protocol was psychotherapy and a regimen of three drugs: Prozac (Fluoxetine Hydrochloride), Paxil (paroxetine hydrochloride) and Klonopin (clonazepam). Despite these interventions, the individual felt no relief from his chief complaints of panic, anxiety, nausea and weight loss of 15 pounds. After evaluations by both psychologists and psychiatrists, he was diagnosed with Panic Disorder with Agoraphobia, and Cannabis Abuse per DSM IV criteria.(4)

The Diagnostic and Statistical Manual of Mental Disorders, Fourth edition (DSM IV) notes that when taken in high doses, "...cannabinoids have psychoactive effects that can be similar to those of hallucinogens...and individuals who use cannabinoids can experience adverse mental effects that resemble hallucinogen-induced "bad trips." These range from mild to moderate levels of anxiety...to severe anxiety reactions resembling panic attacks..." (5)

1. Department of Defense Directive 1010.1, Military Personnel Drug Abuse Testing Program.
2. Department of Defense Instruction 1010.16, Technical Procedures for the Military Personnel Drug Abuse Testing Program.
3. Air Force Instruction 44-120 Medical Drug Abuse Testing Program.
4. Diagnostic and Statistical Manual of Mental Disorders, Fourth edition (DSM IV) of the American Psychiatric Association, Donnelley & Sons, 1994.
5. Ibid.

The author gratefully acknowledges support and advice provided by Amy Dreifus, J.D. and Vincent Papa, Ph.D. The opinions expressed herein are strictly those of the author and are not to be construed as reflecting the views, policies, or positions of the Department of Air Force, the Department of Defense, or the U.S. Government. ♪

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 (preferably using Microsoft Works/Word 4.0) may be mailed or faxed to:

Joseph R. Monforte, Ph.D., DABFT, ToxTalk Editor, 42408 N. Sombrero Rd., Cave Creek, AZ 85331-2821.
Or fax: 602-595-MONF (6663). The e-mail address is : monforte@juno.com

Other items of interest to SOFT members are also welcome.

Next deadline: August 1, 1998

Case Notes: Comparison of Postmortem Heart and Peripheral Blood Ethanol Concentrations

Submitted by: Dan Isenschmid, PhD and Bradford Hepler, PhD

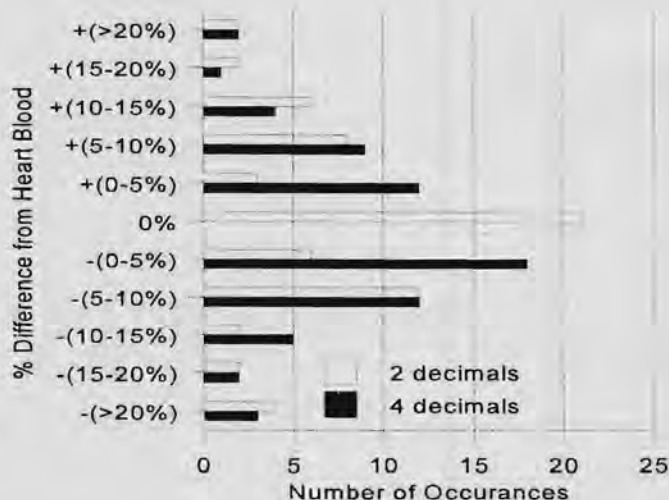
In 1987 Prouty and Anderson published a report comparing postmortem heart and femoral blood ethyl alcohol concentrations (J. Anal. Tox. 11: 191-197). We recently performed a similar study on a total of 68 fluoridated heart blood and peripheral (venous) blood specimens which had a mean ethyl alcohol concentration at or above 0.05 (% w/v) in order to confirm the earlier reported findings at our office. All analyses were performed in duplicate using standard GC headspace procedures. Ethyl alcohol concentrations were compared in these specimens using both four and two decimal places (reported value). All data was truncated at the last integer. The findings of this study are summarized in Table 1 and Figure 1.

Table 1: Peripheral Blood Ethanol Concentrations Compared Against Heart Blood Ethanol Concentrations (N= Number)

Deci- mals	N (%) within 10%	N (%) within 15%	N (%) within 20%	N (%) > 20%	N (%) > Heart Conc.	N (%) < Heart Conc.	N (%) = Heart Conc.	Mean % Diff. (N=68)	Mean % Diff. (excluding cases > 20%)
4	51 (75%)	60 (88%)	63 (93%)	5 (7.3%)	28 (41%)	40 (59%)	N/A	+0.36	-0.98
2	50 (74%)	58 (85%)	62 (91%)	6 (8.9%)	21 (31%)	26 (38%)	21 (31%)	+1.48	+0.42

The mean percent difference in peripheral blood concentrations for all cases studies was <2.0% regardless of decimal places used. If cases where heart and peripheral blood concentrations differing by more than 20% were excluded, the % difference was less than 1%. Although peripheral blood concentrations were less than heart blood concentrations in a slight majority of cases, the mean percent difference did not suggest any biases.

Figure 1: Percent Difference in Peripheral Blood Ethanol Concentrations Compared With Heart Blood Ethanol Concentrations



In cases for which reported heart and peripheral ethyl alcohol concentrations differed by more than 20% vitreous humor and urine ethyl alcohol concentrations were compared to both blood specimens. These findings are summarized in Table 2. Blood specimens marked with an asterisk (*) appear to be most consistent with vitreous humor and/or urine ethyl alcohol concentrations based on previously established vitreous humor and urine to heart blood ratios of 1.1 and 1.3, respectively. If no asterisk appears a determination could not be made. None of these cases involved trauma. Peripheral blood volumes collected in cases 3-6 were between 4 and 7 mL suggesting that some salting out and/or evaporation may have occurred. However, no pattern could be established that would suggest one blood specimen is preferable over another based on comparison with vitreous humor and/or urine ethyl alcohol concentrations based on the small population of discrepant blood specimens. No attempt was made to determine the absorptive state of ethyl alcohol in the decedent.

The data from this study suggests that either heart blood or peripheral blood are suitable for postmortem analysis and that both specimens do not need to be assayed routinely. The data does not support that one specimen is preferable over another. However, blood specimens collected from two different sources may result in one blood specimen providing meaningful results when the quality of the other blood specimen is called into question.

Table 2: Comparison of Data in Cases Where Differences in Heart and Peripheral Ethyl Alcohol Concentrations Exceeded 20%

Case	1	2	3	4	5	6
Heart. Blood	.14	.08 *	.10	.36 *	.14	.08
Periph. Blood	.18 *	.17	.06	.21	.11	.03 *
Vitreous Humor	.22	.10	.08	.39	.14	.02
Urine	.22	.09	.12	.35	.18	n/a
Cause of Death	multiple drug intoxication	smoke and soot inhalation	heroin toxicity	ASCVD and acute alcohol intoxication	smoke and soot inhalation	hypertrophic cardiomyopathy
Manner of Death	accident	accident	accident	accident	accident	accident

* (see discussion)

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"DRUGS IN THE NEWS"

submitted by Joseph R. Monforte, Ph.D., DABFT

In April, 1998, Smith Kline Beecham released workplace drug testing statistics for nearly 5 million specimens tested in calendar year 1997. Five per cent of the specimens tested positive, compared to 5.8 per cent in 1996. Marijuana was detected in 60 per cent of the positive specimens, an increase from 54 per cent in 1996; cocaine was detected in 17 per cent of the positive specimens, a decrease from 23 per cent in 1996.

Send your material for "Drugs in the News" to [ToxTalk](#) . ⓧ

ABFT NEWS

The Annual ABFT Breakfast will once again be held during the SOFT Annual Meeting on Thursday Oct. 8th. The latest registration form includes this event. If you have already registered for the meeting, please complete another form for the breakfast only. New certificants and those certificants who have successfully requalified will be presented certificates at this event. Only persons currently certified by ABFT may attend. For further information contact ABFT President Yale Caplan (e-mail: ForTox@aol.com; phone: 410-486-7486; fax: 410-653-4824).

Congratulations to Philip Kemp, Ph.D., DABFT (Chief Toxicologist, Office of the Medical Examiner - State of Oklahoma, Oklahoma City) who successfully completed the required examination in February and qualified for certification by the American Board of Forensic Toxicology as an ABFT Toxicologist (Diplomate).

To date, the following **ABFT Diplomates have successfully requalified in 1998**: Stuart Bogema, Daniel Brown, Donna Bush, Joyce Chang, Donald Hoffman, Reng-Lang Lin, Fred McClure III, Angela Springfield, John Vasiliades, Wagdy Wahba, and Mark Young. New certificates will be presented at the ABFT Annual Breakfast.

The ABFT Laboratory Accreditation Program has certified a fourth Medical Examiners' laboratory: Erie County, Buffalo, NY - Dr. Robert Osiewicz. To receive specific laboratory accreditation information, please contact the ABFT Administrative Office.

Forensic toxicologists with a doctorate or masters degree who are interested in **certification by the American Board of Forensic Toxicology** should contact: ABFT Administrative Office, P.O. Box 669, Colorado Springs, CO 80901-0669 Telephone: 719-636-1100 ⓧ

DRUGS IN THE NEWS: A REVIEW OF HEROIN - A New Epidemic?

Submitted by: Vincent M. Papa, Ph.D. Air Force Drug Testing Laboratory, Brooks AFB, Texas 78235

Recently television newsmagazines such as 20-20 and Dateline, and newspapers throughout the country (U.S., Today, etc.) have focused attention on a new heroin epidemic. In Plano, Texas (a suburb of Dallas), eight teenagers and young adults had deaths linked to heroin during a recent six-month period. DEA reports have highlighted influx of certain types of heroin. The use of heroin in the United States is on the rise according to federal sources (deaths occurring in the teenage population have focused public attention to the problem). After nearly two decades in which the number of addicts was stable at about 500,000, that number has grown to at least 600,000. According to the latest statistics, an increasing number of 8th, 10th and 12th graders have used heroin. The number of emergency room episodes due to heroin intoxication have increased steadily in the years 1990 to 1995 and the percent of arrested adults on heroin or other opiates has increased in the major metropolitan areas.

Heroin (diacetylmorphine) was first synthesized from morphine and is now classified in the USA as a Schedule 1 drug. Worldwide, it has been used in such mixtures as Brompton's Cocktail and has been administered to addicts on a controlled basis. In the 1960's, the number of heroin addicts rose dramatically. The cheap price of heroin and its easy availability were major contributors to its increased use.

A new form of Mexican heroin called black tar is reported to be 40 times more potent (based on heroin content) than traditional forms of heroin and has been responsible for many deaths nationwide. Heroin use in some areas of the southern United States is multigenerational with the sons of fathers and grandfathers often addicted.

Illicit heroin varies in chemical and physical appearance between different countries or regions of origin. The percentage of heroin, acetylcodeine, 6 acetylmorphine, noscapine, papaverine and the color of samples have been used to classify heroin's origin as Southeast Asia, India, Pakistan, Iran, Turkey, Mexico, Near East, or Nigeria. Some heroin of Middle East origin is 92 % pure. This is in stark contrast to other street heroins, which are less than 4 % pure. Middle Eastern heroin, like other heroins, can be snorted along with the traditional routes of oral, rectal and intravenous administration. Heroin is often sold in packets of 200-400 mg of powder or as spoons containing the equivalent of 1- 1.5 g (heroin is often classically diluted and cut with many substances including quinine, procaine, lidocaine, mannitol, dextrose, lactose, talc and baking soda). A single dose unit consisting of 3 - 16 mg of heroin can be less than \$ 10. Throughout the years when the cost of heroin increased or street supply of heroin was drastically diminished, many drug addicts have used substitutes including T's and Blues (Tripelethamine and Pentazocine) and Loads (Glutethimide and Codeine).

Over the years, a number of researchers have studied heroin pharmacokinetics. Tress et al. demonstrated that a 5-mg intravenous heroin injection resulted in a plasma morphine concentration of 0.035 mg/L after 25 minutes and a 13 mg intravenous injection resulted in an increase to 0.082 mg/L of plasma morphine concentration in a heroin dependent subject (1). Cone showed that nasal insufflation of 12 mg of heroin by 6 adults produced plasma levels averaging 0.016 mg/L heroin at 0.08 hours, 0.014 mg/L 6-acetylmorphine at 0.08-0.17 hours and 0.019 mg/L morphine at 0.018-1.5 hours, with elimination half lives averaging 0.07, 0.22 and 2.8 hours, respectively (2).

Heroin has high lipid solubility and rapidly passes through the blood brain barrier. In vitro studies (3) have shown that heroin is rapidly deacetylated in whole blood to 6-acetylmorphine (half-life, 9 minutes), and 6-acetylmorphine is further hydrolyzed to morphine at a slower rate (half-life, 38 minutes). The first reaction is catalyzed by blood esterases while the second occurs in the liver. Olendorf (4) clearly showed that the percentage uptake of heroin by rat brain tissue was 68 % after intra-arterial injection of heroin in rats. This is significantly higher than for methadone and codeine. In his studies, Way (5) indicates that heroin persists in the brain for a few minutes, whereas 6-acetylmorphine and morphine are present in the brain for up to 30 minutes. Furthermore, others have demonstrated that heroin has little affinity for the opiate brain receptor; consequently, 6-monoacetylmorphine, morphine and morphine 6-glucuronide are responsible for the effects of heroin (6).

While complications of intranasal abuse among teenagers as shown in the Dateline and ABC television presentations are few, chronic intravenous abuse may result in liver disease, pulmonary hypertension and peripheral nerve lesions (7,8,9). Postmortem fluid and tissue concentrations of morphine in victims of heroin overdose can vary considerably depending upon the prior narcotic history of the subject. Liver, bile, kidney and urine concentrations (expressed as total morphine) may be more representative of past exposure to the drug, while blood concentrations expressed as free morphine may be more representative of recent exposure. Baselt (10) and Garriott (11) demonstrated that interpretation of the effects of heroin administration from absolute postmortem blood morphine concentrations can present a problem because concentrations of addicts dying from traumatic causes like gunshot wounds and vehicular accidents were shown to be equal or greater than overdose situations. It is, therefore, highly suggested that the forensic pathologist carefully consider all the case data before rendering a cause of death determination.

Immunoassays such as the EMIT, RIA and On-Line assays have limited cross reactivities to heroin and 6-monoacetylmorphine. The RIA assay has a cross reactivity of 156% for codeine and ethylmorphine with significantly lower reactivities for 6-acetyl morphine (80%), dihydromorphine (73 %) and 3-morphine glucuronide. However, the Roche On-Line assay has a cross reactivity of 199% and 178% for codeine and dihydrocodeine, and cross reactivities of 80% and 73% for 6-acetylmorphine and dihydromorphine, respectively. Forensic and other laboratories use 6-MAM as a marker for heroin use.

Many researchers have developed gas chromatographic assays for heroin and its metabolites using flame-ionization, nitrogen-phosphorus and electron-capture detectors. Wu-Chen and others developed more specific tests (12) using gas chromatographic-mass spectrometric methods for biological specimens that are subjected to acid or enzyme hydrolysis. Linear ranges are 1 ng/ml to over 100 ng/ml. High Pressure Liquid Chromatographic (HPLC) methods have appeared in the literature allowing for the simultaneous determination of heroin metabolites and their conjugates.

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The author gratefully acknowledges the support and helpful comments of James J.Kuhlmann, Ph.D. The opinions expressed herein are strictly those of the author and are not to be construed as reflecting the Views, policies, or positions of the Department of the Air Force or the Department of Defense. ☼

NUMBER CRUNCHING: SOFT ROSTER

Full: 420 Charter: 25 Associate: 88 Student: 10 Retired: 19 TOTAL: 562 ☼

Technical Notes: BLUTALKOHOLKONZENTRATION No. 21

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

The Effect of Hypersalivation on the Breath Alcohol Concentration M. Tsokos and N. Bilzer. *Blutalkohol*, 34:405-412, 1997. *German title: Zum Einfluss von Hypersalivation auf die Atemalkoholkonzentration*

Seven female and 8 male subjects (ages 21-30 yrs) consumed 0.6 g/kg ethanol within 25 mins. after a 6-hr fast. Blood and breath samples were collected at 30, 50, 70, and 90 minutes after the end of drinking. BACs were determined by ADH and GC methods and BrACs by the Sieman's Alcomat, an IR instrument.

The BrACs were determined before and after forced hypersalivation. The hypersalivation was induced by rinsing the mouth with 15 mL of 100% lemon juice or by dabbing the sour taste buds with 0.5 mL of citric acid. At 30 mins. the mean BAC was 0.079 g/100mL, the mean BrAC (before hypersalivation) was 0.074 g/100mL, and the mean BrAC (after hypersalivation) was 0.063g/100mL.

The Authors conclude that the slight reduction in BrAC after hypersalivation is due to the diffusion of alcohol from the breath into the saliva during exhalation. ☼

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ELMER GORDON OPEN FORUM

AN OPPORTUNITY FOR INFORMAL DIALOGUE

MAKE A COPY OF THIS PAGE and take it to your "Significant Other"

SO-SOFT: Considering bringing your SO (Significant Other) to Albuquerque? Some SOFT members have brought their spouses or other guests to SOFT Annual Meetings, and many of these SO's have developed rewarding relationships among each other as they banded together to enjoy themselves while you were attending meetings. If your SO-SOFT will be attending the Albuquerque meeting and would like to hang out with the group, have her/him contact Pat Monforte via monforte@juno.com or ToxTalk. Pat is the self-appointed matriarch of SO-SOFT by virtue of seniority (Albuquerque will be her 20th consecutive SOFT meeting). *[Repeated from last issue.]*

ATTENTION A.B.F.T. DIPLOMATES AND FORENSIC TOXICOLOGY SPECIALISTS: The ABFT Annual Breakfast will be held on Thursday, October 8th, during the SOFT meeting. You may register on the new SOFT/TIAFT Meeting registration form in this issue of ToxTalk. If you have already registered for the meeting, send a second registration for the breakfast only. Only persons currently certified by the American Board of Forensic Toxicology may attend.

CHECK YOUR 1998 SOFT DIRECTORY. A few copies have missing pages. If your copy is incomplete, contact the SOFT Administrative Office at 602-839-9106 (phone or fax). ☒

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. If you have a job position available, FAX (602-595-6663) or E-MAIL (monforte@juno.com) to ToxTalk or mail to: Dr. Joseph Monforte, ToxTalk Editor-42408 N. Sombrero Rd., Cave Creek, AZ 42408-2821.

Forensic Toxicologist: PharmChem Labs, Menlo Park, CA, has immediate opening for Ph.D., ABFT or ABCC-Tox certified or eligible. Generous compensation relative to experience. Relocation package available. Great career opportunity for qualified candidates. Contact Neil Fortner 800-446-5177 x217 or e-mail: neil_fortner@pharmchem.com

Forensic Toxicologist: Dept Criminal Justice Services, Div of Forensic Sci, Roanoke, VA, seeks Ph.D. in toxicology or related, approved field; ABFT Diplomate or eligible required; expert witness experience preferred. Must have valid driver's license and pass background security check. Employee must provide own transportation for required overnight travel. For application form (#10-012) and further information, contact Gene Colburn 804-786-8730 or web page www.state.va.us/~dcjs/forensic/ ☒

PROFESSIONAL CALENDAR

SOFT MEETING: October 5-9, 1998, SOFT/TIAFT, Albuquerque, New Mexico. Co-Hosts Drs. NGS Rao and Ronald Backer. For information contact Dr. NGS Rao, 505-841-2562, FAX: 505-841-2543, e-mail: NRAU@STATE.NM.US.

FUTURE SOFT MEETINGS:

1999:	San Juan, Puerto Rico
2000:	Milwaukee, WI
2001:	New Orleans, LA

American Academy of Forensic Sciences (AAFS) annual meeting: February 15-20, 1999, Orlando, FL; February 21-27, 2000, Reno, NV. Contact Brenda Papke, 719-636-1100. ☒



SOFT/TIAFT 1998
October 5-9, 1998
Albuquerque, New Mexico, USA



URGENT NEWS

The Albuquerque Hilton is fully booked. Some rooms remain at the Fairfield Inn (next door to the Hilton) and the Mountain View Holiday Inn (across the street from the Hilton).

Please call the hotels directly and ask for the front desk reservations. Refer to the SOFT/TIAFT meeting to receive the discounted rates.

Fairfield Inn (505) 889-4000

Mountain View Holiday Inn (505) 884-2511



SOFT/TIAFT 1998
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PROGRAM UPDATE - JUNE 1998

SATURDAY, 3 OCTOBER 1998

Pre-Conference Tours: Acoma Pueblo; City Tour/Indian Cultural Center; Sandia Peak Tram Ride and Mountain Trails; Jemez Springs Mountain Area; Bandelier National Monument.
CAP Inspector's Workshop

SUNDAY, 4 OCTOBER 1998

Pre-Conference Tours: Balloon Festival Mass Ascension at Dawn; Albuquerque City Tour (morning)
Workshops: **TIME: 1:30 P.M. TO 5:30 P.M.**
Workshop # S1 Expert Witness Testimony: Aspects from Other Nations, M. Corbett, Ph.D.
Workshop # S2 Is Hair Analysis Racially Biased, D. Kidwell, Ph.D.
SAMHSA NLCP Inspector's Workshop, Sunday Evening

MONDAY, 5 OCTOBER 1998

Time: Workshops 1, 2 & 7 - 8:00 A.M. to 12:00 Noon
Workshop # 1 Pharmacology and Analytical Toxicology of Drugs in Saliva
Workshop # 2 Current Applications of Thin Layer Chromatography in Forensic Toxicology
Workshop # 7 Rohypnol Detection, S. Salamone, Ph.D.
Time: Workshops 3, 4 & 5 - 1:30 P.M. to 5:30 P.M.
Workshop # 3 Analytical and Interpretive Challenges with Amphetamine Analogs
Workshop # 4 Practical Aspects of CI/MS for Drugs of Abuse Analysis
Workshop # 5 Case Histories In Forensic Pathology.
Welcoming Reception

TUESDAY, 6 OCTOBER 1998

Workshop # 6 Medical Traditions in the Four Cultures: "Herbs of the Curanderos" at Rancho de las Golondrinas and "The Scalpel and the Silver Bear" in Santa Fe. Free afternoon in Santa Fe

WEDNESDAY, 7 OCTOBER 1998

Plenary Session
Scientific Sessions, Oral and Poster
Exhibits Open
Presidents Reception and Buffet Dinner
Elmer Gordon Forum

THURSDAY, 8 OCTOBER 1998

ABFT Annual Breakfast
Scientific Sessions, Oral and Poster
Exhibits Open

FRIDAY, 9 OCTOBER 1998

Scientific Sessions, Oral and Poster
SOFT Business Meeting
TIAFT Business Meeting
Farewell Banquet

SATURDAY, 10 OCTOBER 1998

Post Congress Tours: Taos Pueblo; White Sands and Carlsbad Caverns



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WORKSHOP ABSTRACTS

SATURDAY, 3 OCTOBER 1998 TIME: 3:00 PM TO 9:00 PM

COLLEGE OF AMERICAN PATHOLOGIST (CAP) FUDT INSPECTOR WORKSHOP
REGISTRATION WILL BE 2 PM TO 3 PM, CONTACT NANCY LOWE AT
847-832-7470 FOR ADDITIONAL INFORMATION.

SUNDAY, 4 OCTOBER 1998 TIME: 1:30 PM TO 5:30 PM

WORKSHOP #S1 - EXPERT WITNESS TESTIMONY:
ASPECTS FROM OTHER NATIONS

This workshop is based on the principle that other nations have differing cultures that evolve unique legal systems. Therefore, forensic toxicologists in other nations have differing approaches in conducting their examinations and presenting evidence as an expert in their judicial forum. Presentations will be made by forensic toxicologists from other nations about their practices, current developments, and aspects of recent influential cases. The workshop will conclude with a panel discussion, including some audience participation.

SUNDAY, 4 OCTOBER 1998 TIME: 1:30 PM TO 5:30 PM

WORKSHOP #S2 - IS HAIR ANALYSIS RACIALLY BIASED?

Testing hair for drugs of abuse is becoming increasingly popular in both the forensic and commercial sectors. Within the past few years, concerns have been raised that hair testing could be affected by a matrix bias with black hair absorbing and retaining more drugs than lighter colored hair. Under certain experimental conditions, differences in concentrations of cocaine in various hair types were especially pronounced and this has been attributed to binding of the cocaine to melanin. Because of this effect, darker haired individuals may be more readily identified as drug users by hair analysis than individuals with lighter colored hair. In contrast to these studies, other have reported that no bias is observed in actual practice. Thus there is disagreement in the scientific literature on this subject. For this workshop, ten leading scientists, active in hair analysis research, will present a short summary of their results on the effects of hair type on drug incorporation. A balance of individuals from both the academic, governmental, and commercial arenas will participate. These presentations will be followed by a roundtable discussion where the audience will have the opportunity to comment and raise questions. The outcome of the roundtable discussion will be a set of recommendations in two areas (1) does racial bias exist? (2) if it exists, what procedures can be employed in the testing laboratories to level the playing field. This workshop is underwritten in part by the Division of Workplace Programs at the Substance Abuse and Mental Health Services Administration and will be transcribed. The verbatim transcript will be made available on their world wide web site at www.health.org/pubs/dtab.htm along with other discussion on hair analysis.

SUNDAY, 4 OCTOBER 1998 TIME: SUNDAY EVENING

SAMHSA NLCP INSPECTORS WORKSHOP: OPEN ONLY TO NLCP
INSPECTORS AND REQUIRES PRE-REGISTRATION CONTACT
DONNA BUSH, Ph.D., AT 301-443-6014.

MONDAY, 5 OCTOBER 1998 TIME: 8:00 AM TO 12:00 NOON

WORKSHOP #1 - PHARMACOLOGY AND ANALYTICAL
TOXICOLOGY OF DRUGS IN SALIVA

Saliva has been proposed and evaluated as an alternate biological specimen for drug analysis. A major challenge with this matrix has been its limited quantity, low analyte concentration and short surveillance window (detection time). This workshop will present pharmacokinetic and pharmacodynamic data for a variety of drugs of abuse and nicotine in controlled dosing studies. In addition, empirical data from the life and health insurance industry will be presented. Also, incorporated into these presentations, will be an overview of the analytical methodologies utilized in these studies.

MONDAY, 5 OCTOBER 1998 TIME: 8:00 AM TO 12:00 NOON

WORKSHOP #2 - CURRENT APPLICATIONS OF THIN-LAYER
CHROMATOGRAPHY IN FORENSIC TOXICOLOGY

Thin-layer chromatography provides a powerful tool to the toxicologist for screening or confirming drugs and drug metabolites in forensic or clinical samples. The workshop will present this rather simple technique from extraction to detection, and how it can compete in solving questions that are problematic for other instrumental chromatographic methods. Separation and identification of many different sympathomimetic amines, opiates will be featured along with discussion of computer augmented identification of TLC data.

MONDAY, 5 OCTOBER 1998 TIME: 8:00 AM TO 12:00 NOON

WORKSHOP #7 - ROHYPNOL DETECTION

There has been a recent surge of interest in the U.S. and countries of Central and Western Europe in the detection of flunitrazepam (Rohypnol) in alleged "date" rape cases. This workshop will cover aspects of the pharmacodynamics and pharmacokinetics of flunitrazepam.

Highlights:

- Excretion patterns of flunitrazepam in patients who have taken low, medium and high doses
- Methods to increase immunoassay sensitivity
- GC/MS procedures to identify flunitrazepam
- Results from a nationwide case study on the use of flunitrazepam and other drugs in alleged "date" rape cases.

MONDAY, 5 OCTOBER 1998 TIME: 1:30 PM TO 5:30 PM

WORKSHOP #3 - ANALYTICAL AND INTERPRETIVE CHALLENGES
WITH AMPHETAMINE ANALOGS

Analysis of Amphetamine analogs remains one of the more difficult assays in forensic toxicology. This workshop will review some old and new methods of analysis and d,l isomer differentiation. Actual forensic cases both post-mortem and employee drug testing will be presented.

MONDAY, 5 OCTOBER 1998 TIME: 1:30 PM TO 5:30 PM

WORKSHOP #4 - PRACTICAL ASPECTS OF CI/MS
FOR DRUGS OF ABUSE

Chemical Ionization Gas Chromatography Mass Spectrometry (CI-GC-MS) has become increasingly popular in the forensic toxicology laboratory due to the advent of bench-top systems, increased sensitivity over electron impact procedures, and ease of molecular ion identification. This workshop will include practical advice on setting up both positive and negative ion chemical ionization systems, discuss the advantages and disadvantages of CI-GC-MS and include applications such as the determination of drugs of abuse in alternative matrices, identification of doping agents and detection of compounds used in drug abuse treatment. Attendees should gain practical information applicable to operation of their own CI instruments.

MONDAY, 5 OCTOBER 1998 TIME: 1:30 PM TO 5:30 PM

WORKSHOP #5 - CASE HISTORIES IN FORENSIC
PATHOLOGY AND TOXICOLOGY

Case histories in Forensic Pathology and Toxicology will be presented and discussed by forensic pathologist. The circumstances of death and selected autopsy and toxicology results will be available in the form of case histories for review by the workshop participants in advance of the workshop. Each case history will have questions for the participants to consider prior to the discussion and analysis by the forensic pathologists. These cases present diagnostic or interpretive difficulties and dilemmas confronting forensic pathologist in determining cause and manner of death.

TUESDAY 6 OCTOBER 1998 TIME: 8:00 AM TO 5:30 PM

WORKSHOP #6 - MEDICAL TRADITION IN THE FOUR CULTURES

The workshop will be held in Santa Fe, New Mexico and registration includes round trip transportation and continental breakfast and lunch. In the morning attendees will hear lectures on "Herbs of the Curanderos" and "The Scalpel and the Silver Bear" combining Western and Traditional Navajo medicine. The afternoon will be free time to walk, shop and/or visit museums in Santa Fe.



SOFT/TIAFT 1998
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Registration Information

There are two types of registrations: the **Sandia Registration** and the **Mesa Registration**. The Mesa Registration is a basic fee in keeping with traditional SOFT meetings. The Sandia Registration is an all-inclusive fee in keeping with traditional TIAFT meetings. Both types of registrations are fully described below. There is also a description of Workshop # 6 and the Accompanying Person Registration. Everyone has the choice to choose either registration regardless of membership. Attendees using the Mesa Registration may purchase the accompanying persons registration package on the Sandia Registration form or any individual tickets as desired.

Mesa Registration

The basic meeting registration includes admission to all scientific sessions, copy of Abstracts book, the Welcoming Reception, the Presidents Reception and buffet dinner, Thursday Luncheon and all coffee breaks.

Sandia Registration

The basic meeting registration includes admission to all scientific sessions, copy of the Abstracts book, the Welcoming Reception, the Presidents Reception and buffet dinner, the Wednesday, Thursday and Friday Luncheons, the Farewell Banquet, Workshop # 6, the published Congress Proceedings and all coffee breaks.

Accompanying Persons Registration

This registration includes the Welcoming Reception, the Presidents Reception and buffet dinner, the Banquet and Workshop # 6 (trip to Santa Fe).

Workshop # 6

This workshop, "Medical Traditions in the Four Cultures" includes round-trip transportation, morning lectures on Herbs and Plants of the Curenderos at Rancho de las Golondrinas and on combining Western and Traditional Navajo medicine in Santa Fe, continental breakfast and lunch. The afternoon will be free to walk, shop or visit museums in Santa Fe.

Payment Deadlines

A late fee of \$50 will be charged on all registration received after August 1, 1998. No mail registrations accepted after September 7, 1998. Payment by credit cards or business checks drawn on a USA bank, International Bank Check or Money Order. All funds must be paid in US dollars. Make payable to SOFT/TIAFT 98. Cancellation of Registration: 70% refund if canceled prior to July 10, 1998; 50% refund if canceled prior to Sept. 7, 1998; No refund if canceled after Sept. 7, 1998.

Hotel Reservations and Air

Reservations for rooms should be made directly with the hotel. Because the meeting is being held during the week of Balloon Festival attendees are advised to reserve rooms and flights as early as possible. After July 1 no accommodations can be assured. Early departure fees possible. Contact Fairfield Inn at (505) 894-4000 and ask for Front Desk Reservations or Mountain View Holiday Inn at (505) 884-2511 and ask for Front Desk Reservations. For conference rates specify SOFT. American Airlines is offering attendees a 5% discount on domestic fares. Call 1-800-433-1790 and refer to TIAFT ABQ group name and "AN NUMBER" 5708UA.

Tour Reservations

Requests for Pre- and Post Conference Tours will be forwarded to the local tour companies. The Conference organizers take no responsibility for pre- or post-conference tours. Tour companies pick up at the Albuquerque Hilton Hotel.



SOFT/TIAFT 1998
October 5-9, 1998
Albuquerque, New Mexico, USA
Mesa Registration



NAME _____ Degree _____

Last First

Title/Agency _____

Address _____

Telephone _____ Fax _____

Guest(s) _____ E-mail _____

Member: SOFT _____ TIAFT _____ Both _____ Non-Member _____

	<u>SOFT/TIAFT</u> <u>MEMBER</u>	<u>NON-</u> <u>MEMBER</u>	<u>TOTAL</u> <u>ENCLOSED</u>
Basic Meeting Registration includes admission to all scientific sessions, Abstracts book: the Welcoming Reception, the Presidents Reception and buffet dinner, Thursday Luncheon and all coffee breaks.	\$125	\$175	\$ _____
Workshop # 1 Pharmacology and Anal. Tox. of Drugs in Saliva	\$40	\$75	\$ _____
Workshop # 2 Current Applications of TLC in Forensic Toxicology	\$40	\$75	\$ _____
Workshop # 3 Analytical Challenges with Amphetamine Analogs	\$40	\$75	\$ _____
Workshop # 4 Practical Aspects of CI-MS for Drugs	\$40	\$75	\$ _____
Workshop # 5 Case Histories In Forensic Pathology	\$40	\$75	\$ _____
Workshop # 6 Traditional Medicine in the Four Cultures	\$75 per person x _____ people		\$ _____
Workshop # 7 Rohypnol Detection	\$40	\$75	\$ _____
Workshop #S1 Expert Witness Testimony: Aspects from Other Nations	\$40	\$75	\$ _____
Workshop #S2 Is Hair Analysis Racially Biased	\$40	\$75	\$ _____
ABFT Breakfast (Diplomats Only)	\$20	\$20	
Full-Time Student or Daily Registrant Permits attendance at scientific sessions only Wed, Thurs, or Friday. Fee is per each day.	\$30	\$50	\$ _____
Published Congress Proceedings	\$30	\$40	\$ _____
Extra Tickets: Welcoming Reception	\$25	# of tickets	\$ _____
Presidents Reception/ Dinner (Wed.)	\$25	# of tickets	\$ _____
Farewell Banquet (Fri.)	\$40	# of tickets	\$ _____
Luncheon (Wed.)	\$20	# of tickets	\$ _____
Luncheon (Thurs.)	\$20	# of tickets	\$ _____
Luncheon (Fri.)	\$20	# of tickets	\$ _____

Meeting T-Shirts (free if registered by July 1) Large _____ X-Large _____ XXLarge _____ \$ _____
 May not be available after Aug 1, 1998. \$15 each for extra shirts. _____ # Extra Shirts

Late Fee: For all registrations received after Aug 1, 1998 \$50 \$ _____
 No mail registrations accepted after September 7, 1998: Payment personal or business checks drawn on a USA bank, International Bank Checks or Money Order. All funds must be paid in US dollars. Make payable to SOFT/TIAFT 1998.

Total \$ _____

For payment by credit card include: Type of Card: Visa / Master Charge
 Card No _____ Expiration Date _____

Signature _____

Mail to: SOFT/TIAFT 1998, PO Box 40711, Albuquerque, NM 87196-0711 USA



SOFT/TIAFT 1998
October 5-9, 1998
Albuquerque, New Mexico, USA
LODGING



Name _____

Address _____

City/State/ZIP _____ Country _____

Telephone # _____ Fax # _____

Arrival Day/Date/Time _____ Departure Day/Date _____
 (Please note check-in time of 3 pm) (Please note check-out time of 12:00 pm)

Total number in party _____ Would you like to request a non-smoking room? Yes No
 There is no charge for children under 18 when they occupy the same room as their parents.

Please indicate Accommodations Requested:

Fairfield Inn by Marriott
1760 Menaul Blvd., N.E.
Albuquerque, New Mexico 87102
tel (505)889-4000

Mountain View Holiday Inn
2020 Menaul Blvd., N.E.
Albuquerque, New Mexico 87107
tel (505) 884-2511

No. of Rooms		Rates
_____	Single Occupancy	\$ 89.00
_____	Double occupancy	\$ 89.00
_____	Triple occupancy	\$ 99.00
_____	Quad occupancy	\$109.00

No. of Rooms		Rates
_____	Single Occupancy	\$ 99.95
_____	Double Occupancy	\$ 99.95
_____	Triple Occupancy	\$109.95
_____	Quad Occupancy	\$109.95

Bedding request (please circle) One bed Two beds
 Special request _____

Bedding request (please circle) One bed Two beds
 Special request _____

Please send deposit to hotel directly (See above for Hotel Address). Reservations must be guaranteed by a deposit, or an accepted credit card number and signature.

Guaranteed by _____ Check _____ Credit Card Card Type: _____
 Credit Card # _____ Expiration Date _____

I understand that I am liable for one night's room and tax, which will be deducted from my deposit or credit card in the event that I do not arrive or cancel 72-hours in advance.

Signature _____

ALL RESERVATIONS MUST BE IN BY SEPTEMBER 3, 1998
 Reservations received after this date will not be guaranteed room availability or the conference rate.



SOFT/TIAFT 1998
October 5-9, 1998
Albuquerque, New Mexico, USA
Sandia Registration



NAME _____ Degree _____
 Last First
 Title/Agency _____
 Address _____
 Telephone _____ Fax _____
 Guest(s) _____ E-mail _____
 Member: TIAFT _____ SOFT _____ Both _____ Non-Member _____

	<u>SOFT/TIAFT</u> <u>MEMBER</u>	<u>NON-</u> <u>MEMBER</u>	<u>TOTAL</u> <u>ENCLOSED</u>
Basic Meeting Registration includes admission to all scientific sessions, Abstracts book, Welcoming Reception, Presidents Reception and buffet dinner, Wednesday, Thursday and Friday Luncheons, the Farewell Banquet, Workshop # 6, the published Congress Proceedings and all coffee breaks	\$275	\$325	\$ _____
Workshop # 1 Pharmacology and Anal. Tox. of Drugs in Saliva	\$40	\$75	\$ _____
Workshop # 2 Current Applications of TLC in Forensic Toxicology	\$40	\$75	\$ _____
Workshop # 3 Analytical Challenges with Amphetamine Analogs	\$40	\$75	\$ _____
Workshop # 4 Practical Aspects of CIMS for Drugs	\$40	\$75	\$ _____
Workshop # 5 Case Histories In Forensic Pathology	\$40	\$75	\$ _____
Workshop # 7 Rohypnol Detection	\$40	\$75	\$ _____
Workshop # S1 Expert Witness Testimony: Aspects from Other Nations	\$40	\$75	\$ _____
Workshop # S2 Is Hair Analysis Racially Biased	\$40	\$75	\$ _____
ABFT Breakfast (Diplomats Only)	\$20	\$20	\$ _____
Full-Time Student or Daily Registrant	\$30	\$50	\$ _____

Accompanying Person Registration includes the Welcoming Reception,
 Presidents Reception and buffet dinner, the Banquet and Workshop # 6 (Santa Fe).
 \$175 \$ _____

Extra Tickets: Welcoming Reception	\$25	# of tickets	\$ _____
Presidents Reception/ Dinner (Wed.)	\$25	# of tickets	\$ _____
Farewell Banquet (Fri.)	\$40	# of tickets	\$ _____
Luncheon (Wed.)	\$20	# of tickets	\$ _____
Luncheon (Thurs.)	\$20	# of tickets	\$ _____
Luncheon (Fri.)	\$20	# of tickets	\$ _____

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 May not be available after Aug 1, 1998. \$15 each for extra shirts. _____ # Extra Shirts

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Total \$ _____

For payment by credit card include: Type of Card: Visa / Master Charge
 Card No _____ Expiration Date _____

Signature _____

Mail to: SOFT/TIAFT 1998, PO Box 40711, Albuquerque, NM 87196-0711, USA



SOFT/TIAFT 1998
October 5-9, 1998
Albuquerque, New Mexico, USA



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 alternative biofluids and tissues such as hair, sweat, saliva, skin, vitreous, breast milk, meconium, etc. and in papers relating drug concentrations to performance impairment, drug interactions, drug metabolism, pharmacology and pharmacokinetics. Platform presentations will be 15 min including questions and Poster Presentations will be 4 ft high by 3.25 ft wide. Tack boards and thumb tacks will be provided.

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 or by attachment to an e-mail message to tiaft98@aol.com. Electronic submissions must be in IBM word processing format (MS Word for Windows preferred) or ASCII format. Please label the disk with the first author's name and the word processing program utilized. **The deadline for submission of abstracts is July 1, 1998.** The presenting authors of all papers will be required to register for the meeting. Only abstracts written in English will be considered.

Content of Abstract

1. Author(s) names and addresses
2. Short Specific Title
3. Statement of paper's objectives
4. Statement of methods, if pertinent
5. Statement of results
6. Statement of conclusion

Sample Abstract:

Title: Type Upper and Lower Case. Use Significant Words Descriptive of Subject Content

Author(s) Names and Addresses: Type Upper and Lower Case; Spell Out First and Last Names, Use Middle Initial.
e.g. Vina R. Spiehler

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

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

Format of Abstract

Abstracts must be typed and submitted in a neat 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 upper and lower case, followed by the author(s) names and addresses. Use an Asterisk (*) to identify the presenting author. Separate the author(s) names 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 submitting authors 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 fax or e-mail no later than September 1, 1998.

Specific Instructions

Complete the attached form and follow the sample provided below. Proof-read all information provided. Send the original, three additional copies and an IBM disk with the abstract to:

Mailing Address: SOFT/TIAFT 1998
422 Tustin Ave.
Newport Beach, CA
USA 92663

E-mail Address: TIAFT98@aol.com
or spiehleraa@aol.com



SOFT/TIAFT 1998
October 5-9, 1998
Albuquerque, New Mexico, USA



Abstract of Paper
Deadline for Submission July 1, 1998

Presenting Author, Name and Mailing Address:

Telephone: _____

Fax: _____

E-mail address _____

Presentation Preference: () Oral () Poster

Affiliation: () SOFT () TIAFT () Neither

Co-authors(s), Address(es), Business Affiliations

Do you intend to submit the Full manuscript for inclusion in the PROCEEDINGS? () YES () No

Has this paper been presented before? () Yes () No

Where and When? _____

Available Audio-visual Equipment: 35 mm slide projector and pointer.

The abstract review committee reserves the right of final placement of the paper. The presenting authors of all papers are required to register for the meeting.

Signature of submitting author

