



ToxTalk

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Happy 30th Anniversary, ToxTalk!!!

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☛ INSERT: 2006 SOFT Annual Meeting "Call for Papers"

**SOFT 2006 Annual Meeting
AUSTIN, TEXAS
October 2 – 7, 2006**



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 to 5304 Widener Strip, Midland, TX 79707. Subscriptions expire each January.

DEADLINES: Feb. 1, May 1, July 15, and Nov. 1

(Note July 15 deadline instead of Aug 1.)

NEXT DEADLINE: before MAY 1, 2006



SOFT 2006 Annual Meeting

AUSTIN, TEXAS

October 2 – 7, 2006



Welcome to the Home of SOFT 2006 – Austin, TX

We are excited to have SOFT come to Austin in 2006 for its first visit to Texas. The meeting will be held at the Hilton Austin beginning Tuesday, October 2nd through Saturday October 7th. The meeting will begin one day later in recognition of Yom Kippur. The hotel is located near the lively "6th Street" dining and entertainment area with museums, the State Capitol, lake trails and shopping within walking distance. The "Dillo" trolley system provides transportation to each of these venues at no cost for those desiring less exercise. The final social event will be an evening at the beautiful new Texas History Museum. The heart of our organization is the science. We are planning a stimulating and informative collection of workshops, posters and platform presentations.

Weather

The remnants of a hot Texas summer can last into October, but the average daytime highs are in the 70's. The Hilton pool is outside and Barton Springs (Brrr...) is open year around so you may want to bring the swim gear or some shorts for a walk along Town Lake. Lows should be in the 50's or higher.

Hotel Accommodations

The meeting will be held at the Hilton Austin located downtown at 500 East 4th Street. The direct telephone line is 512-482-8000. Room rates for the convention will be \$125 single/double.

The Hilton has set up a direct reservation link on the SOFT website.

If reserving by phone - use code "SFT"

Airport and Transportation

Austin-Bergstrom International airport is located less than 10 miles from downtown. Taxi cabs or shuttles are the primary mode of transportation from the airport to hotels. Parking fees at the Hilton are \$11 to \$16 (self park vs. valet). Transportation in the downtown area, including the campus of the University of Texas is provided at no cost via the "Dillo" trolley system.

Explore Austin

Relax, Refresh, And Rejuvenate! Whether you enjoy being active by hiking, boating, cycling or golfing or you just want to chill by the lake, you'll find a lot to do in this friendly, eclectic city. Surrounded by the Texas hill country and its sparkling rivers and lakes, Austin is the seat of state government, and is home to seven universities, a vast array of museums, galleries, and shops as well as local and state parks. Nicknamed "The Live Music Capital of the World" its varied music venues will have you tapping your feet. After all, it is host to two internationally attended festivals - South by Southwest Film and Music conference as well as Austin City Limits. A few of the local points of interest include the Capitol, Lyndon Baines Johnson Presidential Library and Museum, Barton Springs, Zilker Botanical Gardens, Lady Bird Johnson Wildflower Center, and the "SOCO" district which helps maintain the "Keep Austin Weird" motto. Sunset viewing from the Oasis restaurant on Lake Travis is always a treat. Less than two hours away, experience wineries, popular state parks, and one of Texas' first German settlements, Fredericksburg. Plan extra leisure time when you visit because AUSTIN is a place you'll want to EXPLORE.

SOFT 2006 COMMITTEE MEMBERS

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For meeting updates, go to

www.soft-tox.org

SOFT 2006 ANNUAL MEETING

October 3 – 7, 2006 (Tuesday through Saturday)
AUSTIN, TEXAS - "Live Music Capitol of the World"

Austin Hilton Hotel

Host: Rod McCutcheon

PRELIMINARY PROGRAM

Sunday, October 1, 2006

- Pre-Conference Tours
- Satellite Organization Meetings

Monday, October 2, 2006

- Pre-Conference Tours
- Satellite Organization Meetings
- Registration Opens (2:00pm – 6:00pm)

Tuesday, October 3, 2006

- Continental Breakfast (7:00am – 8:30am)
- Registration (7:00am – 6:00pm)
- Workshops (8:00am – 5:00pm)
- Lunch – on your own
- Board mtgs., Committee mtgs., Exams
- Dinner – on your own

Wednesday, October 4, 2006

- Continental Breakfast (7:00am – 8:30am)
- Registration (7:00am – 6:00pm)
- Workshops (8:00am – 5:00pm)
- Lunch – on your own
- Board mtgs., Committee mtgs., Exams
- Exhibits Setup (noon– 5:00pm)
- Exhibits Open (6:30pm – 8:00pm)
- Welcoming Reception (6:30pm – 8:00pm)
(Reception in Exhibit Hall)
- Elmer Gordon Forum (8:00pm – 10:00pm)
- Nite Owl Reception (10:30pm – 12:30am)

TO APPEAR IN THE NEXT ISSUE OF TOXTALK:

**Call for papers & Registration Worksheet
Workshop Program**

Thursday, October 5, 2006

- SOFT Fun Run/Walk (6:30am – 8:00am)
- Continental Breakfast (7:00am – 08:30am)
- Registration (7:30am – 5:30pm)
- Exhibits open (9:30am – 3:30pm)
- Plenary/Scientific Session (8:30am – 10:00pm)
- Poster Session (10:30am – noon)
- Lunch with Exhibitors (noon– 1:30pm)
- Scientific Session (1:30pm – 3:00pm)
- SOFT Business Meeting (3:30pm – 5:30pm)
- "A Taste of Austin" Reception
Exhibitor's Happy Hour (6:00pm – 7:30pm)
- "Explore Austin" (on your own; 7:30 - ??)

Friday, October 6, 2006

- Continental Breakfast (7:00am – 8:30am)
- Registration (7:00am – 5:00pm)
- Exhibitor Feedback Meeting (8:00am – 9:30pm)
- Exhibits open (9:30am – 1:30pm)
- Plenary/Scientific Session (8:30am – 10:00pm)
- Poster Session (10:30am – noon)
- Lunch with Exhibitors (noon– 1:30pm)
- Exhibits breakdown (1:30pm – 3:30pm)
- Scientific Session (1:30pm – 3:00pm)
- Poster Session (3:30pm – 5:00pm)
- Presidents Reception (6:30pm – 10:30pm)

Saturday, October 7, 2006

- Continental Breakfast (7:30am – 9:00am)
- Registration (7:30am – 9:00pm)
- Closing Scientific Session (9:00am – 11:00am)
- NSC Executive Board (11:30am – 1:30pm)
- NLCP Inspector Training (2:00pm – 6:00pm)
- Post-Conference Tours

ATTENTION VENDORS

We look forward to seeing our "regulars" in Austin – you know who you are and what to do! However, if you have not participated in a SOFT meeting and wish to take advantage of an opportunity to present your products and/or services to hundreds of forensic toxicology professionals representing laboratories from all over the world, contact SOFT Exhibit Coordinator Lisa O'Dell at NomadLee9@aol.com for details. ☺

ToxTalk Welcomes New Editor for "DRUGS IN THE NEWS"

Dwain Fuller, BS, D-FTCB, TC-NRCC

University of Texas Southwestern Medical Center at Dallas Dwain.Fuller@UTSouthwestern.edu

Dwain Fuller has more than twenty years experience in forensic toxicology. He has worked in postmortem toxicology, human performance toxicology and urine drug screening as the director of a SAMHSA lab. Mr. Fuller is currently with the University of Texas Southwestern Medical Center at Dallas where he is assigned to the Veterans Affairs North Texas Health Care System as the Assistant Technical Director of the toxicology lab. Dwain has been a member of SOFT since 1997 and is also a member of the Southwestern Association of Toxicologists and AAFS. Welcome aboard!

Please show your support by sending appropriate materials found in newspapers, magazines, on-line (public domain) to Dwain before each **ToxTalk** deadline. ☒

CALL FOR PAPERS JAT / SOFT SPECIAL ISSUE 2006

2006 JAT / SOFT Special Issue Editor: Marc LeBeau, Ph.D.
(marc.lebeau@ic.fbi.gov)

Complete author guidelines can be found at the JAT website (www.jattox.com) or from their editorial office at (847) 647-2900 ext. 1302. All manuscripts for this Special Issue must be submitted through the JAT website. There will be an option in a dropdown menu for submission to the "Special Issue", so please make sure you select that option when submitting your manuscript. Details appeared in the previous issue of **ToxTalk**. **Deadlines:**

March 16, 2006: Title and Abstract Submission Due

March 30, 2006: Completed Manuscripts Due ☒

OTHER REMINDERS FOR SOFT MEMBERS

☒ **SOFT DUES WERE DUE 01/01/06** - If you have not already done so, please pay your dues - online payment is preferred.

☒ **If you have not received your dues notice** - contact the SOFT Administrative Office at info@soft-tox.org

☒ **All SOFT website passwords have been reset** - The process to obtain your new password is straightforward. Please follow the link to the "Members Area", <http://www.soft-tox.org/?pn=memberhome>, and follow the link to "I forgot my password". The rest is obvious.

☒ **If you have a new e-mail address** - send SOFT WebMaster Bruce Goldberger a message and he'll update the database from the administrative interface (bruce-goldberger@ufl.edu). ☒

2006 MEMBERSHIP DIRECTORY

ToxTalk should include the 2006 Membership Directory in the next issue.

Contact the SOFT Administrative Office with any information corrections by April 1

EDUCATIONAL RESEARCH AWARD AND YOUNG SCIENTIST MEETING AWARD DEADLINES REVISED

Award: An award of **\$1,000 plus a complimentary basic SOFT meeting registration fee** will be made to offset travel expenses to the 2006 SOFT Annual Meeting (Austin, TX, Oct. 2-7, 2006)

Deadline: **April 7, 2006** Successful applicants will be announced by June 1st

Application Materials: See the SOFT website for details, instructions and forms. www.soft-tox.org

Submission Address: Philip Kemp, Ph.D., DABFT, SOFT Awards Committee Chairman, Office of the Chief M.E., 901 N. Stonewall, Oklahoma City, OK 73117 ☒

DEADLINE FOR NEXT ISSUE OF TOXTALK: MAY 1, 2006

HAPPY 30th ANNIVERSARY, TOXTALK!

Submitted by Patricia Mohn-Monforte, ToxTalk Publisher

As **ToxTalk** begins its 30th year as the official newsletter of the Society of Forensic Toxicologists, I searched the "Monforte Library" and found early editions of our beloved publication. The following information has been gleaned from 3 early issues of **ToxTalk**. More excerpts are noted throughout **ToxTalk**.

ToxTalk Editor Jesse Bidanset was the first editor of **ToxTalk**. Dr. Bidanset began what I believe might be the very first official issue of **ToxTalk** with these words: "Not another newsletter! Each of the professional organizations we belong to, manufacturers we deal with, and publishers who somehow got our name on their mailing list bury us in newsletters. As with all our reading material, some are read carefully, others are scanned, and many are "filed". My hope is that this newsletter will reflect the preamble to our constitution and by-laws." The current Editor Joseph Monforte agrees.

Recap of the Minutes of the SOFT Annual Meeting – October 1976, New York City: The name "Society of Forensic Toxicologists" was officially adopted, rather than the previously used National Society of Forensic Toxicologists. The 1977 meeting would be held during a 3-day cruise from Miami to Nassau. The status of the new ABFT was discussed, and the importance of certification was stressed. The 1977 SOFT Board would consist of President Leonard Bednarczyk, Vice-President Robert Blanke, Secretary Yale Caplan, Treasurer Thomas Manning, Board Members Robert Simon, Jane Speaker, June Jones, Thomas Rejent and Joseph Monforte. Drs. Bednarczyk, Sunshine and J. Speaker lead a discussion emphasizing the importance of continuing education at all levels of the field. "The problems involved in accreditation of individual laboratories was left for further discussion for the Executive Board." The standing committees were Nominating, Membership, Certification and By-Laws. The requirements for Full and Associate Membership were determined and are the same today! Dues were \$20 annually.

SOFT Treasurer's Report 9/76-9/77:

Balance from 1976	\$1,205.	Total expenses	\$1,339.
1976 meeting income	58.	Balance 9/1/77	\$1,376.
1977 dues and apps.	840.	Proposed 1977-78 Budget	
1977 meeting income	600.	Income	\$1,400.
Total Income	\$2,703.	Expenses	\$1,600.
		Deficit	\$200.

The first official SOFT Membership Roster was established 8/01/77. The 63 members are noted here to honor those who are the roots of this organization, many of whom made significant contributions to SOFT over the years. Some of the "new guys" are now the "old guys" and still active in SOFT: Joseph Balkon,* Randall Baselt, Milton Bastos,* Raymond Bath, Leonard Bednarczyk,* Eleanor Berman,* Robert Blanke, Thomas Brown, Yale Caplan, Shui-Chin Chen, Wellon Collom, Joseph Costa, Jesse Bidanset, Robert Cravey, Walter Decker, Frank Dolejsi, Kurt Dubowski, Herman Ellenberger, Patricia Field, Arthur Fisk, June Jones,* Richard Coumbis,* Fred Fochtman, Philip Giaquinta, Elmer Gordon,* Erich Gressman, A.E.D. Hall, Donald Hoffman, Larry Howard, Mark Lewis, Gerald Kananen, John Kenhart, Irene Kintzel, John Koefoed, Thomas Kubic, Nicholas Lappas, Joseph Monforte, Robert Osiewicz, Alice Peltz, Thomas Manning,* Arthur McBay,* H. Horton McCurdy, Richard McGarry, Robert Messina, I.J. Mofteh, Leon Rozin, Michael Schaffer, Paul Schweda, Richard Pinder, Richard Prouty, Thomas Rejent, D.W. Robinson, Robert Simon, K.D. Singh, Everett Solomons, Jane Speaker, Wan Sun, Russel Tye, James Valentour, Wagdy Wahba, Louis Williams, Charles Winek and A. Wong. (*known to be deceased)

Thomas Regent reported the **Education Committee** planned four different programs in 1978: 2 in Chicago and 2 in Atlanta.

Joseph Monforte published the results of a **questionnaire (ABFT)** regarding: 1) Method of Recertification, 2) Components of Point System, and 3) Certification.

Two "local SOFT meetings" were held in New York in 1977, the first at St. John's University on 7/22/77 to discuss propoxyphene, and on 9/9/77 a seminar on the determination of toxic metals was presented at the NYC MEO. These were meetings sponsored by SOFT as established by the Executive Board.

The theme at the 1977 **SOFT "Midwest Section"** meeting in Chicago in December was *Back to Basics*.

The first **ToxTalk** Editor, Dr. Bidanset, deserves a great deal of credit. **ToxTalk** began before the birth of word processors and e-communication. The minutes, by-laws, roster, and everything else included in the early editions of **ToxTalk** were hand typed. Good job, Jesse and Joanie (Mrs. B)! ☺

The oldest **ToxTalk** in our possession was probably published in 1977 and notes it is the last newsletter to be distributed to non-official members. If anyone has copies of earlier editions, please send original or a copy to Pat Monforte, ToxTalk Publisher, 5304 Widener Strip, Midland, TX 79707. *Thanks.*

ToxTalk will feature other "blasts from the past" in future issues as space permits.



CALL FOR CASE NOTES:



Section Editor: Matthew Barnhill, Ph.D. mbarnhilljr@worldnet.att.net

Five Instances of DUI in South Florida

Submitted by Robert M. White, Ph.D., Naples, FL 34108

We report the urine test results in five DUI cases in Florida. These cases arose either from observed erratic or improper driving, or from motor vehicle accidents. Florida law permits conviction based on the mere presence of a controlled substance (or a metabolite of a controlled substance) in the driver's urine, *provided* that there is corroborating evidence of impairment, e.g., DRE examination or failed field sobriety test. The routine test panel consists of ethyl alcohol, amphetamines, barbiturates, benzodiazepines, cannabinoids, opioids, phencyclidine, cocaine, methaqualone and methadone. A positive alcohol result triggers a glucose screen as well.

Note that in one of these cases (Case IV) the possibility existed that any impairment was due to diphenhydramine, which is not controlled, rather than to the effects of alprazolam. However, specific testing failed to disclose the presence of any detectable level of diphenhydramine in the urine. In all cases initial screening was by immunoassay, and confirmation/quantitation was by GC/MS (full scan for alprazolam, SIM otherwise). The subjects' ages were not available.

	Driver	Urine EtOH (g/dl)	Other Drug (ng/ml)
Case I	Male	0.03	THC-COOH, 105
Case II	Female	Negative	Butalbital, 8020 Nordiazepam, 2060 Oxazepam, 395
Case III	Male	Negative	THC-COOH, 160 Alprazolam, Present
Case IV	Male	Negative	Alprazolam, Present
Case V	Female	0.03	Methamphetamine, 15075 Amphetamine, 1670

High Blood Alprazolam Concentration in a Driver

Submitted by Nicola K. Sagerman and Dwight D. Flammia, Virginia Department of Forensic Science, Richmond, VA 23219

A blood sample from a Virginia driver arrested for driving under the influence had an alprazolam concentration equal to 0.82 mg/L, which is approximately 40 times greater than reported therapeutic concentrations. The average postmortem blood concentration from seven apparent suicides by alprazolam reported in the literature is 0.55 mg/L (1). The blood sample was negative for other alkali-extractable drugs, ethanol, and drugs of abuse.

The driver was observed by local police at 10:00 p.m. driving 45 mph in a 55 mph posted zone, weaving, and running off the road. After stopping the vehicle, the driver said he was on his way to work and thought it was 9:00 a.m. Upon exiting the car, the driver was swaying and falling down and could not stand without using the car for support. The driver appeared soiled, dirty, and mumbled when he talked. The driver was then instructed to perform several field sobriety tests. The driver was able to recite the alphabet from A to S as instructed. However, during the one leg stand he could not maintain balance without using his arms for balance and could not complete the test while counting out loud to 30. During the nine step heel-to-toe walk and turn test, the driver missed heel to toe on all steps and took 14 steps in each direction instead of nine.

An empty bottle of Xanax® was found in the car, and the driver stated that he was prescribed alprazolam for anxiety; however, he did not know how much or the time of his last dose.

1. R.C. Baselt. *Disposition of Toxic Drugs and Chemicals in Man*, 6th ed. Biomedical Publications, Foster City, CA, 2002, pp 33-36.

U.S. Army Captain Faces Dishonorable Discharge after Positive Cocaine Test

Submitted by Cecilia M. Rosales, M.D., and Uttam Garg, Ph.D., DABFT, Children's Mercy Hospitals and Clinics, and University of Missouri Kansas City School of Medicine, Kansas City, Missouri

In a recent issue of Drug Detection Report, a case of a navy electrician who faced possible dishonorable discharge after a positive cocaine test was reported (1). The subject claimed that the cocaine positive test was due to his consumption of "coca tea". The report states that the San Diego Reference Laboratory tested two varieties of coca tea, "mate de coca," and found cocaine and its metabolites in the tea. Furthermore, the report describes that after drinking only one cup of the coca tea, the two laboratory employees tested positive for approximately one and one-half days. We had a similar case submitted to our laboratory.

A U.S. Army captain tested positive for cocaine after a routine urine test for drugs of abuse. He was accused of using cocaine and faced court proceedings. An investigation found that the captain was consuming tea labeled as "mate de coca," a popular infusion in South America made from coca leaves.

The tea bags were submitted to our laboratory for cocaine analysis. The writing on the tea bags appeared to be in Spanish. On one side of the package was a label "mate de coca" with the image of a plant and the word "zurit". For cocaine and its metabolites extraction, a single tea bag was placed in 100 mL of boiling deionized water for 10 minutes. Gas-chromatographic mass spectrometric analysis for cocaine and its metabolites was performed on the tea extract with the following results.

Cocaine: 5.35 mg/tea bag
Ecgonine methyl ester: 0.64 mg/tea bag
Benzoylecgonine: 0.26 mg /tea bag

"Mate de coca" is a common infusion consumed in South American countries, especially in the Andes, to prevent altitude sickness. The coca tea is illegal in the US and the Drug Enforcement Agency has prohibited the import of the product as it contains cocaine.

Recently, the Jockey Club in Great Britain commissioned a research study to find the affect of coca tea on cocaine positive testing as several jockeys tested positive for benzoylecognine over the past few years. Urine samples collected at various time points within 24 hr after ingestion of a 250 ml infusion of Mate de Coca tea were positive for benzoylecognine (2). Also, in **ToxTalk** there is a report of detection of cocaine in oral fluid samples after the consumption of Bolivian coca tea (3).

It is apparent from these studies that certain coca teas contain enough cocaine that their consumption can cause a positive cocaine test. After the trial, the captain was acquitted of the charges and returned to service in the U.S. Army.

References:

1. Navy electrician faces dishonorable discharge after positive cocaine test. **Drug Detection Report** March 31, 2005, pg. 51.
2. Turner M, McCrory P and Johnston A. Time for tea, anyone? **Br J Sports Med.** 2005; 39(10):e37.
3. Detection of cocaine in oral fluid samples after the consumption of Bolivian coca tea and confirmation via GC-MS. **ToxTalk** 2003; 27:9. ♀

CALL FOR TOXTALK MATERIAL

ToxTalk dedicated e-mail address: SOFTToxTalk@aol.com

Specific items should be sent to the appropriate **ToxTalk** personnel as noted below.

EDITOR – Dr. Joseph R. Monforte at
SOFTToxTalk@aol.com

"New Drugs" – Daniel Anderson at
Danderson@lacoroner.org

"Case Reports"– Dr. Matthew Barnhill at
mbarnhilljr@worldnet.att.net

PUBLISHER – Patricia Mohn-Monforte at
SOFTToxTalk@aol.com

"Drugs in the News" – Dwain Fuller at
Dwain.Fuller@UTSouthwestern.edu

"Extrapolations" – Dr. Donald Kippenberger at
donald.kippenberger@us.army.mil

All other items should be sent to **SOFTToxTalk@aol.com**

Mailing address: 5304 Widener Strip, Midland, TX 79707. (Do NOT send items to the SOFT Administrative Office!)

Please send items for the next issue of ToxTalk before May 1, 2006.

The deadline for the 2006 # 3 issue has been changed from August 1 to July 15
to accommodate the 2006 meeting dates.

NEW DRUGS

Section Editor: Dan Anderson, M.S., Los Angeles County Dept. of Coroner, Los Angeles, CA
Danderson@lacoroner.org ([new](#))



Ramelteon (*Rozerem*TM)



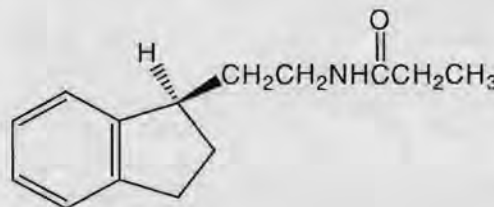
Submitted by Lauren L. Richards, M.S., Marshall University, Department of Pharmacology, Marshall University School of Medicine, Huntington, WV and James C. Kraner, Ph.D., Office of the Chief Medical Examiner, Charleston, WV.

Ramelteon was approved by the Food and Drug Administration in July 2005 as an orally active hypnotic for the treatment of transient and chronic insomnia in adults. Ramelteon, developed by Takeda Global Research and Development Center, has the first novel mechanism of action developed in 35 years in the field of sleep research. It is the first and only non-scheduled prescription sleep medication. Unlike other sleep agents, ramelteon shows no GABA or opiate receptor affinity. Its mechanism of action is that of a melatonin MT₁ and MT₂ receptor agonist. These receptors are located in the suprachiasmatic nuclei in the brain, which regulate the body's sleep-wake cycle. Recommended dosage is 8 mg. RozeremTM is distributed by Takeda Pharmaceuticals as a round, pale orange-yellow, film-coated, 8 mg tablets, with "TAK" and "RAM-8" printed on one side.



Chemistry

Ramelteon has a formula weight of 259.34 (C₁₆H₂₁NO₂). It is freely soluble in methanol, ethanol, and dimethyl sulfoxide. It is only slightly soluble in water and aqueous buffers pH 3 to 11. IUPAC name: (S)-N-[2-(1,6,7,8-tetrahydro-2H-indeno-[5,4-b]furan-8-yl)ethyl]propionamide.



Pharmacokinetics

Ramelteon reaches a peak plasma concentration in 0.5 to 1.5 hours (mean = 0.75) and has a volume of distribution of 73.6 L. Ramelteon is 70% protein bound to albumin. It undergoes oxidative metabolism to hydroxyl and carbonyl derivatives catalyzed primarily by CYP1A2 followed by glucuronidation, with minor involvement by CYP2C subfamily and CYP3A4. Ramelteon undergoes rapid, high first pass metabolism. This is supported by data indicating individuals taking ramelteon show substantial C_{max} and AUC variability with approximately 100% coefficient of variability. Less than 0.1% of the initial dose is excreted in the urine and feces combined as parent compound with 84% urinary recovery and 4% fecal recovery of radiolabeled ramelteon. Elimination was almost complete by 96 hours post-dose with no significant accumulation due to the short half-life of elimination of 1 to 2.6 hours. The major metabolite of ramelteon is M-II. M-II is active with one-tenth and one-fifth the binding affinity of the parent molecule for the MT₁ and MT₂ receptors, respectively. The metabolite circulates at a greater concentration than the parent compound, producing a 20-100 fold greater mean systemic exposure. The elimination half-life of M-II is 2 to 5 hours, independent of dose. ☞



“DRUGS IN THE NEWS” INCENTIVE:

A prize will be bestowed to someone submitting appropriate articles for the *Drugs in the News* section of **ToxTalk** between January 1 and July 7, 2006. Newly appointed *Drugs in the News* Editor Dwight Fuller will determine the winner and present the prize at the 2006 SOFT meeting in Austin. M. information will be printed in the next issue of **ToxTalk**. ☞

DRUGS IN THE NEWS

Drugs in the News Editor Dwain Fuller, BS, D-FTCB, TC-NRCC
University of Texas Southwestern Medical Center at Dallas
Dwain.Fuller@UTSouthwestern.edu Fax: 214-857-0735



Dextromethorphan (DXM) – Redux

Submitted by Dwain Fuller, BS, D-FTCB, TC-NRCC

The American College of Chest Physicians recently reported the following: **“Over-the-counter cough syrups generally contain drugs in too low a dose to be effective...”** This is in reference, for the most part, to the antitussive drug, dextromethorphan (DXM). This new revelation, along with existing problems, may bring to question the future of DXM as an over-the-counter product.

The greater controversy over DXM is being stirred by its increasing abuse, by teenagers in particular. Dr. Vincent Papa directed our attention to the abuse of DXM in this column in 2003. Since then more and more reports of abuse, and in some cases associated violent behavior, have been surfacing in the popular media.^{1,2,3} My first encounter with “Robotripping”, a name derived from Robitussin DM™, a popular cough remedy that contains DXM, was when I was asked by a prosecutor to comment as to the potential effects of DXM abuse in reference to a capital murder case here in Texas.

On March 26th, 2004, the defendant, Andre Thomas, who had a history of abusing Coricidin™ and alcohol, kicked in the door to his 20-year-old estranged wife’s apartment and subsequently stabbed her and “ripped out her heart”. Thomas then proceeded to the children’s bedroom where he stabbed and “ripped out the hearts” of his 4-year-old son and his wife’s 13-month-old daughter, fathered by another man. Thomas then placed the hearts in his pocket and went home. Upon his arrest, Mr. Thomas told police that he believed his wife to be Jezebel, his son to be the antichrist, and the 13-month-old girl to be a demon. Several days later while still in police custody, Mr. Thomas tore out his own eye while quoting Mark 9:47: “And if your eye causes you to sin, pluck it out. It is better for you to enter the kingdom of God with one eye than to have two eyes and be thrown into hell.”⁴

My subsequent research into DXM abuse yielded a surprising amount of information on the subject, with whole websites, both legitimate and clandestine, being dedicated to this phenomenon. Among the symptoms of DXM intoxication are elevated body temperature, sweating, dry mouth, itchy skin (Robo-itch), numbness, hallucinations, and dissociation. The symptoms can be very much like those experienced under the influence of LSD, and some articles also describe a DXM induced psychosis.^{5,6,7}

The prosecutor in the case argued that Mr. Thomas committed the crimes as a result of psychosis induced by a willingly self-administered drug, which offers no defense to prosecution in Texas. While the defense argued that Mr. Thomas was insane at the time of the crime and had a long history of mental illness unrelated to drug abuse.

Was Mr. Thomas under the influence of a DXM induced psychosis at the time of the crime? Who knows? I was not retained in the case. The jury, however, rejected his insanity defense and sentenced him to death.

What we do know is that DXM is readily, legally, and inexpensively available to anyone of any age in over 120 over-the-counter preparations or in its pure form via the internet. The effects of DXM abuse, in particular those of hallucinations, numbness and dissociation are sought after by abusers. Some DXM abusers describe the experience as being dead and existing as only their thoughts.⁵ According to the American Association of Poison Control Centers, the number of calls involving abuse or misuse of DXM by teens has more than doubled between the years 2000 and 2003.⁸

In conclusion, with attacks on its efficacy for cough suppression and its increasingly obvious potential for abuse, we may soon see DXM either heading behind the counter with pseudoephedrine or off the market entirely.

1. <http://www.nbc-2.com/articles/readarticle.asp?articleid=3667&z=3&p=>
2. <http://www.kirotv.com/news/4413823/detail.html>
3. **Pittsburgh Tribune Review**, Wednesday, June 5, 2002
4. **The Herald Democrat** (Sherman, Texas)
5. **Am J Psychiatry** 157:304, Feb 2000
6. **Journal of Emergency Medicine**, Vol 17(2), 285-288
7. **Can Med Assoc J** 1992: 146 (7)
8. United States Department of Justice, **Intelligence Bulletin: DXM (Dextromethorphan)**, October 2004, Document ID: 2004-L0424-029

Send your *Drugs in the News* items to Dwain.Fuller@UTSouthwestern.edu Fax: 214-857-0735 and be eligible for a prize!

N Sativex®

Submitted by Robert Roussel and Donald Kippenberger

GW Pharmaceutical has developed a whole plant medicinal cannabis extract indicated for relief of symptoms of multiple sclerosis and for treatment of severe neuropathic pain. Bayer is marketing Sativex in the UK with the option to extend to other countries in Europe and Commonwealth countries such as Canada.

The drug is an extract from the marijuana plant containing delta-9-tetrahydrocannabinol (27 mg/ml, from Tetranabinex® - *Cannabis sativa* L. extract) and cannabidiol 25 mg/ml from Nabidiolex® - *Cannabis sativa* L. extract). The drug is provided in a spray pump that delivers 100 µl in each actuation.

The drug is administered as a Buccal spray. The excipients in the spray are anhydrous ethanol, anhydrous propylene glycol and peppermint oil.

The following is pharmacokinetic data provided from the web site:

Pharmacokinetics: Human Data: Summary of Pharmacokinetic Parameters for SATIVEX® in healthy volunteers – single doses. PK in two studies. The differences seen in the PK data may reflect the inter-subject variability and the conduct of the study.

Table 3: Mean Pharmacokinetic Parameters (GWPK0112)**

Treatment	Analyte	T _{max} (hrs) (n=12)	C _{max} (ng/ml) (n=12)	t _{1/2} (hrs) (n=12)	AUC _{0-t} (min* ng/ml) (n=12)	AUC _{inf} (min* ng/ml) (n=12)
SATIVEX®* under the cheek	CBD	1.63	2.50	1.44	408.53	427.33
	THC	1.63	5.54	1.76	808.78	837.25
	11-OH-THC	1.58	6.24	2.15	1522.09	1632.46
SATIVEX®* inside the cheek	CBD	2.80	3.02	1.81	384.13	407.79
	THC	2.40	6.14	1.34	751.23	770.62
	11-OH-THC	2.40	6.13	1.91	1293.14	1362.12

* 4 sprays (total 10.8mg THC – 10mg CBD)

** The pharmacokinetic data show great inter-subject variability. THC, CBD and 11-OH-THC appear in the plasma from about 30 minutes after dosing.

Have you recently read or heard a professional paper that you feel would be of particular interest to SOFT members? Submit to Extrapolations Editor Dr. Kippenberger at donald.kippenberger@amedd.army.mil or mail to him at 30325 Bridlegate Dr., Bulverde, TX 78163

TOXTALK LOOKS BACK . . . 1977: ABFT announced its first diplomates:

Mason, Backer, Bednarczyk, Caplan, Blanke, Slightom, Cravey, Christopoulos, Solomons, DalCortivo, Doedens, Standefer, Dubowski, Field, Mackell, Forney (Sr.), Harger Wimbish, Garriott, Jones, Jain, Giaquinta, Lowry, McHugh, Kier, McBay, Lynch, Moreland, Mule', Monforte, Protuty, Pirl, Vanberkon, Alstott, Regent, Winek, Sunshine, Speaker, Baselt, Poklis, Castorena, Hrynkiu, Tye, Hodnett, Manno, Wahl, Kazyak, Bath, Wallace, Kintzel, Kaishtha, Wilson, Morano, Bastos, Bidanset, Nakamura, Kenhart, Eberhardt, Hamilton and Reed.

The official ceremony would take place at the AAFS 1978 meeting in St. Louis, an event personally well remembered by me (Monforte) since it was my first forensic toxicology meeting and I was a new bride, which explains why Joseph Monforte does not appear in the early morning first official photo of ABFT Diplomates. ☹

SO-SOFT 2006

Submitted by Susie McKutcheon

Austin rocks!! Join us in the Hill Country for a "laid back" or active approach to the good life in Austin, Texas. Canoe or cruise Town Lake, swing a golf club at one of over 30 area public courses, visit art or history museums, or take a walking tour of historic homes and buildings. A day tour to historic Fredericksburg or to quaint Gruene with nearby discount shops may break your piggybank, but won't dampen your spirits. The daytime sunshine and opportunities for recreation in Austin will energize you for the nightlife. Live entertainment, incredible food, first class education, high technology and music are all fused together to make this cosmopolitan city a traveler's pick. You may see a famous singer or actor just around the corner. You pick the pace. There is something for everyone! See you in October!

Great websites: Austintexas.org
Traveltexas.com.

Publisher's notes: For those who may not know, SO-SOFT are the Significant Others who attend SOFT meetings. So please copy this page and page 2 and take them home to your Significant Other.

The January 2006 Continental Airlines in-flight magazine says Ginny's Little Longhorn is the best honky tonk in town and the best brisket is found at the Iron Works. The article claims Austin "has one of the most pristine running trails in the country." Sound like there will be a lot of ways for us to ~~get into trouble~~ have fun! ☺

INTERNATIONAL OUTREACH: REQUEST FROM BULGARIA

Recently, a Bulgarian family of 4 ate dinner (white bread, cabbage with rice, baked cucumbers, pig fat, salt, red pepper), and the adults consumed 100 ml of rakia (approx. 80 proof Bulgarian spirit) and 100 ml of red wine, each. They went to bed at approximately 22:30. The father woke around 5:45 with sharp abdominal pain, vomiting, diarrhea, headache, blurred vision and disorientation. Shortly thereafter, his wife experienced vomiting and sharp abdominal pain. Around 9:30 the emergency team was called and upon arrival found the woman dead, the man in a coma, and the 13- and 14-year-old children apparently healthy in the next room. Following are results of the clinical examination of the man, who survived:

Value	Result	Reference values	Value	Result	Reference values
pH	7,01	7,36 – 7,44	pCO ₂	23,8	35 – 45 mmHg
BE	- 24,5	- 2,3 - +2,3	BE _{ecf}	- 22,9	
BB	23,4	46 – 52 mmol/l	HCO ₂	5,9	21 – 25 mmol/l
pO ₂	113	75 – 100 mmHg	O ₂ sat	93,5	94 – 99 %
Blood Sugar	14,4	5,5 – 6,5			

Autopsy findings of the mother revealed bright red post mortal stains, oedema cerebri, bright red blood, gastritis erosiva, gastritis enteritis, and a blood carboxyhemoglobin (HbCO) above 60%. There were no traces of methyl alcohol (CH₃OH) in neither the food nor the alcoholic beverages. The source of the carbon monoxide (CO) is of unknown origin.

Question: Which chemical reaction will produce the CO group and cause the HbCO to be at the concentration level mentioned above? Direct your responses to: Nedyo Nedev, MD, Forensic Medicine at nedyo.nedev@gmail.com

Editor's Note: An attempt was made to contact the authors relative to the nature and evaluation of the heating system in the house. Prior to publication, no response had been received. ☹

TIME FOR ANOTHER SALARY SURVEY?

It has been many years since **ToxTalk** has published a salary survey. Would anyone be interested in undertaking the task of preparing and processing a salary survey based on job description for practicing forensic toxicologists and staff?

Contact SOFTToxTalk@aol.com

JXTALK LOOKS BACK . . . 1977 Job Ops: Technician (8 chemistry units) \$10,600, Toxicology Technologist (BA+ 6 mo tox experience or 2yr college + 2yr experience) \$12,500, Toxicologist (BA + 1 yr tox experience) \$15,800. ☹

ELMER GORDON OPEN FORUM

AN OPPORTUNITY FOR INFORMAL DIALOGUE

Congratulations, Mr. & Mrs. Stites! **Lisa O'Dell** and Bart Andrew Stites were married January 20, 2006, in Lake Tahoe, Nevada.

The **NFSTC website** (National Forensic Science Technology Center®) has been updated. Go to www.NFSTC.org.

ATTENTION STUDENTS: The Forensic Sciences Foundations offers an **Annual Emerging Forensic Scientist Award** to students within three years of completing formal training. Contact the American Academy Forensic Sciences. Awardees need not be members of AAFS. ☛

PROFESSIONAL CALENDAR

PREPARATIONS FOR FUTURE SOFT MEETINGS UNDERWAY

- 2006:** Tues., October 3 through Sat., October 7
(Delayed one day due to Yom Kippur on Monday)
Hilton Austin, 500 East 4th Street, Austin, TX
512-482-8000
Host: Rod McCutcheon, Chief Toxicologist
Bexar County Office of the Medical Examiner
San Antonio, TX
210-335-4040 rmccutcheon@co.bexar.tx.us
- 2007:** October 14-19, 2007
Research Triangle Park, North Carolina
Co-hosts: Jeri Roper-Miller and
Ruth Winecker
- 2008:** Phoenix, AZ– Vickie Watts
- 2009:** Oklahoma City, OK – Phil Kemp

March 12-17: PITTCON 2006, Orlando, FL. Contact 222.pittcon.org

April 2-6, 2006: Borkenstein Course "The Effects of Drugs on Human Performance and Behavior." Contact dlindsay@indiana.edu or www.indiana.edu/~lawactn

May 21-26, 2006 Borkenstein Course on Alcohol and Highway Safety: Testing, Research and Litigation. Contact dlindsay@indiana.edu or www.indiana.edu/~lawactn

JUNE 9&10: CALIFORNIA ASSOCIATION OF TOXICOLOGISTS, San Francisco, CA. Contact www.cal-tox.org or call 707-586-1143

Aug. 26-Sept. 1: THE INTERNATIONAL ASSOCIATION OF FORENSIC SCIENCES, Ljubljana, Slovenia. Contact info@iafs2006.com or go to www.tiaft2006.org

SOUTHWESTERN ASSOCIATION OF TOXICOLOGISTS (SAT). 3/16-18, Spring 2006 – Houston, TX, Marriott Medical Center Hotel; Fall 2006 Austin, TX (with SOFT) www.sat-tox.org

SOUTHWESTERN ASSOCIATION OF FORENSIC SCIENTISTS (SWAFS), Wichita, KS. Go to www.swafs.us ☛

TOXTALK LOOKS BACK . . . 1977 SOFT Meeting Cruise! The 1977 annual meeting was held aboard ship departing Miami on Friday afternoon and returning on Monday after disembarking in Nassau. The program featured round-table discussions and oral presentations in the areas of GC/MS, chromatographic separations, IA and GC detectors. The cabins ranged from \$280-\$390 each – for the entire event! Dr. Leonard Bednarczyk, 1977 SOFT President, coordinated arrangements while Drs. Everett Solomons and Horton McCurdy co-chaired the program. ☛

02/20/06



SOFT 2006 Annual Meeting

AUSTIN, TEXAS

October 2 – 7, 2006



CALL FOR PAPERS AND ABSTRACT SUBMISSION

ABSTRACT SUBMISSION DEADLINE IS JULY 1, 2006

General Information

The Program Committee solicits abstracts on all forensic toxicology topics including postmortem toxicology, forensic urine drug testing, analytical toxicology of drugs, pharmacology as related to forensic toxicology, pathology as related to forensic toxicology, pediatric and geriatric case reports, and the relationship between drug concentrations and performance impairment. Scientific papers selected for presentation will be divided into two groups: 15-minute platform presentations and poster presentations. The Program Committee will select appropriate abstracts from those **submitted by the July 1, 2006, deadline**. The presenting authors of all papers will be required to register for the meeting. Only abstracts written in English will be considered. The format for the preparation of the abstracts is on the submission form.

Platform (Oral) Presentations

ONLY 35-mm slides or LCD (PowerPoint) presentations will be accepted. Each presenter will be provided with 10 minutes to present their material and 5 minutes to answer questions. Platform presentations must cover the material reported in the abstract. Regardless whether 35 mm slides or LCD projection are used, information on the slides must be kept simple with plenty of open spaces between lines. Limit information on each slide to seven lines or less. Do not crowd the slide. Avoid backing up in slide lectures. If you need a slide twice, make duplicate slides. White on black, white on blue, blue on yellow or yellow on blue project best. Avoid red and blue or other non-contrasting color combinations. If using 35mm slides, it is highly recommended that you provide your own carousel.

LCD Projector – Policies and Procedures

An LCD projector will be available for use at this meeting. Any LCD format platform presentation **MUST** be submitted in advance (Deadline September 8, 2006) on 3.5-inch disk or by E-mail in Microsoft PowerPoint (IBM format only) to the Program Chair (contact information on abstract submission form). There will be **NO** exception to these requirements. All presentations will be pre-loaded and tested on a computer (and backup computer) provided by SOFT. You may bring your own laptop as an additional backup, however in order to improve flow between presentations this will only be used in the event of

unexpected technical problems. Slide projectors will be available for presenters who do not meet this deadline, or format requirement.

Poster Presentations

Each author selected for poster presentation will be provided with a 4' x 8' tack board on which to display material related to his or her presentation. Presenters must bring their own tacks. Authors have complete freedom to choose ways of displaying their information in figures, tables, text, photographs, etc; however, they should avoid crowding too much information into a limited space. The poster should be readable from a distance of 3 feet. Posters will be kept up for the designated period they are scheduled. Please be sure your poster is mounted prior to the presentation session and leave it mounted until the session ends. It will only be necessary for the author to be present at the poster for the presentation period noted in the program.

Abstract Submission

1. Online, through the SOFT website at <http://www.soft-tox.org>. The abstract itself is to be provided in Microsoft Word **ONLY** using the format described on the back of this form.
2. Electronically by e-mail at Fiona.couper@dc.gov. Be sure to provide all the information required on the back of this form in the body of your e-mail text. Be sure to type **ONE** of the disclosure statements in your-email. By submission of your abstract electronically, no signature is required for the disclosure. The abstract itself is to be provided as an attachment in Microsoft Word **ONLY** using the format described on the back of this form.

Disclosure Information (Please Read Carefully)

In order for AACC ACCENT credits to be provided for attendees to the SOFT 2006 Annual Meeting by the TDM/Toxicology Division of AACC each speaker must provide disclosure of potential bias or conflict of interest. This information is provided to any attendee who requests information concerning possible bias, conflict of interest or commercialism of any presentation. Please complete the information as it applies to you on the submission form.

Information to be provided with the Abstract

Please complete the following information only if you cannot submit your abstract by e-mail or on the website:

Presenting Author Name _____

Mailing Address _____

Telephone Number _____

Fax Number _____

E-mail _____

Co-author(s) Name(s) and Address(es) _____

Attach additional pages if necessary

Has this paper been presented before? Yes ___ No ___

If yes, where and when? _____

Select your presentation preference:

Platform ___ 35-mm () Powerpoint () Poster _____

Format of the Abstract

Type the title in upper and lower case letters. Separate the title from the authors by single blank line. Type the name(s) of the authors and, followed by the address(es) (affiliation, city, state, country) of the authors. For multiple addresses use a numerical superscript after the name. Use an asterisk (*) to identify the presenting author. Separate the author's names from the body of the abstract by a single blank line. Identify three key words at the bottom of the abstract. See example below:

The Analysis of Oobleck from Precipitation Collected in the World of Dr. Seuss

Cindy Lou Who*¹, Yertle Turtle², and Bartholomew Cubbins².

¹Whoville University, Whoville, MI, U.S.A.; ²Mulberry Street Consulting Group, Prairie of Prax, MN, U.S.A.

Indent each paragraph three spaces. Type the entire abstract single-spaced. Do not type in all capital letters. Capitalize and punctuate exactly as you wish the abstract to appear in the program. Do not double space after a period. The abstract should be limited to one 8 ½ x 11-inch page using Times New Roman font, size 12.

The abstract must contain the following information: (1) author(s) name(s) and affiliation, city, state, country; (2) short specific title; (3) statement of paper's objective; (4) statement of methods, if relevant; (5) statement of results; (6) statement of conclusion; (7) key words (three).

Key Words: Oobleck, Seuss, Precipitation

NOTIFICATION:

You will be notified of receipt of your abstract within two weeks of submission. If you do not receive notification in this time frame, please contact the Program Chair to make sure your abstract was received. Correspondence from the Program Chair will be with the presenting author only. Notification of acceptance will be made by August 25, 2006.

AACC Policy on Disclosure of Potential Bias or Conflict of Interest

AACC requires that all speakers in accredited Continuing Education Activities disclose any possible bias or conflict of interest regarding the topic that is being presented. A conflict of interest is defined as any financial interest of the speaker in a company's products or services discussed in the presentation. For example, if the speaker (1) holds stock in the company, (2) is paid salary or consultant fees by the company, (3) has grant support from the company and/or (4) has received support for travel expenses, honoraria, etc. from the company, a conflict of interest exists regarding this topic and must be reported. If the speaker has a financial interest in a company *but is not discussing a product or service of that company, no conflict of interest must be disclosed.*

Please place an X next to ONE of the DISCLOSURE STATEMENTS indicated below:

_____ I have read the above statements and I declare that neither I nor any member of my immediate family has a financial interest in a company as defined in the AACC policies on conflict of interest.

_____ I have read the above statements and I declare that I have (or a member of my immediate family has) a financial interest in a company as defined in the AACC policies on conflict of interest. Please indicate the nature of the conflict of interest (Grant/Research Support ___; Salary/Consultant ___; Stocks/Bonds ___; Honoraria/Expenses ___) and the Source (Company) providing financial support _____

Signature _____

Date: _____

By submission of this abstract by e-mail no signature is required for the disclosure. You must, however, type the applicable disclosure statement in your e-mail text.

Submission Address:

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ABSTRACT SUBMISSION DEADLINE - JULY 1, 2006