



AACTion

News &
Announcements

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American Academy of Clinical Toxicology, Inc.

Message from the President:

Alan Woolf, MD, MPH, FAACT

It's Time To Be BOLD!!!

Good morning, AACT members! I am excited to be taking on the considerable duties and responsibilities of the office as your new president. I assure you that it is a very humbling experience to be elected to this position of trust by your friends and peers. And I promise to give 110% of my time and effort to this undertaking. I am honored and grateful for this singular opportunity to make a difference, during this very exciting moment in the history of both clinical toxicology and the American Academy of Clinical Toxicology.

It is time to be bold! It is time to re-envision the goals of the Academy, bearing in mind the fundamental soundness of our mission. Remember our mission?

The American Academy of Clinical Toxicology (AACT) was established in 1968 as a not-for-profit multi-disciplinary organization uniting scientists and clinicians in the advancement of research, education, prevention and treatment of diseases caused by chemicals, drugs and toxins.

It is time to take the Academy in new directions, to reinvigorate our partnerships, both new and old, with



other toxicology organizations nationally and internationally. It is time to re-affirm the core beliefs we all hold dearly in the Academy, beliefs like professionalism, scientific integrity, collegiality, and respect. It is time to believe and trust in each other as we move forward together.

First off I want to acknowledge that I stand on the shoulders of all those champions of the AACT who have gone before me. And I want to offer special thanks, on behalf of the Academy's Board of Trustees, its committee and special interest group leaders, and its members and fellows, to our newest past-president, Dr. Michael Greenberg. Mike has shown outstanding leadership and accomplishments on our behalf as president these past two years. Mike's record includes a laundry list of accomplishments such as:

the offering of new benefits to Academy members, the implementation of the educational 'question of the day', the revamping and renewal of our website, and the collaboration with new vendors like Wiley Publishers (Hey, People, go to the website and buy a book!).

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PRESIDENT'S MESSAGE CONTINUED

I know that you will all agree with me that this year's North American Congress of Clinical Toxicology in Denver, Colorado, was one of the best events we have ever held, attracting more than 700 participants. Under Mike's leadership, and in collaboration with Dr. Elizabeth Scharman, the Chair of the NACCT Planning Committee, we are witnessing exciting changes in the format and offerings, changes that have improved this premier scientific and educational event. During his leadership, the NACCT has 'gone green', using the Internet for registration, for composing the syllabus of educational content offerings, and for evaluation of the symposia by participants. We have implemented new programs in NACCT including a pilot Occupational & Environmental Medicine (OEM) day, the Toxicology History Room, the Simulation in Toxicology Teaching exhibit, and instituting the use of the audience response system in fostering greater audience interactivity during lectures and symposia. All of these have added tremendous value to the NACCT for its participants.

So thanks, Mike, for all your hard work and enduring legacy to the Academy. Before I end this column, I also want to welcome the AACT's new president-elect, Bob Hoffman, and our new treasurer, S. Rutherford ('Ruddy') Rose, to their new roles in the organization. I also want to thank Karen Simone, our dedicated and tireless secretary, for her continuing work. Karen was just re-elected for another two year term, and her outstanding service, much of it behind the scenes, must be acknowledged. The Board also welcomes three new members, Kennon Heard, Richard Weisman and Ken McMartin, who will pledge their diligent efforts on behalf of AACT for the next three years. And I want to thank sincerely our Board members, Drs. David Juurlink, Chris Holstege and Rob Palmer, who are now stepping down from their Board responsibilities. We truly appreciate your fine efforts in representing the interests of the membership.

All of these individuals and many others: chairs and members of the AACT committees and special interest groups, who devote their time and energies to the work of the Academy. All of these colleagues too have earned and deserve our thanks.

And now it is time to be bold! I want to tap into your spirit and creativity. Get involved in your organization; together we can aim high—to continue to find ways to make the AACT the respected voice of clinical toxicologists in the future. I welcome your comments, criticisms (really!), ideas, and solutions as we journey together. Get involved with us, and help us to lead the Academy into its future.



FRANK ALDRICH, MD, PHD, FACP, FAACT, FACMT

January 25, 1929-May 26, 2008

Frank Aldrich, a scientist, physician, medical researcher, toxicology pioneer, plant physiologist, classical music lover, wordsmith, ham radio operator, fisherman, rifleman, father, grandfather, devout Christian and one of my best friends and mentors, a true “Renaissance Man.”

Frank was born and raised in Detroit, Michigan, he received a B.S from Michigan State, an M.A. and PhD, from Oregon State, and an MD from Case Western Reserve. He took an internship at the University of Iowa, a medical residency at Lemuel Shattuck Hospital, Boston, MA, and was a fellow in medical toxicology at the University of Colorado. He had many roles in several areas including, but not limited to, associate professor of medicine in clinical pharmacology (Colorado), high altitude fuel/engine research (Colorado), National Academy of Sciences Military Environmental research as well as active duty in the Army's Chemical Corps, in Ft. Detrick, MD. Over the years he had numerous medical articles which appeared in US as well as European medical journals.

He was a corporate medical physician/toxicologist at IBM, Director of the environmental medical service at MIT, principal investigator with the Colorado Dept of Health involved with pesticide studies, Toxicology Advisory Board for the Consumer Product Safety Commission, as well as plant physiologist at the USDA.

He was a member of numerous medical organizations, many of which were related to occupational and medical toxicology. He was a charter member of the American Academy of Clinical Toxicology since 1968 and served as the Academy's Secretary Treasurer from 1971 and later president from 1980 until 1982. He had an uncanny creative knack that helped to define much of the present AACT. For example, he created the AACT's official journal's name, AACTion, which continues to this day. He was one of seven board examiners appointed to give the first medical toxicology examination by the newly formed American Board of Medical Toxicology (ABMT which became the ACMT, once approved by the American Board of Medical Specialties.)

Frank, and his wife, Trudy, spent many years in Boulder, CO, after which they moved to the Pacific Northwest residing in Gig Harbor, WA, located just north of Tacoma. He is survived by a sister, Constance Kerwin, children, Allison, Janet and George Aldrich, and grandchildren Dylan and Margaret Cobb. He was stepfather to Wendy Scott, Erik Stieg, and Jennifer Stankus and grandfather to Taylor and Parker Scott, and Emaline Nell Stieg.



On May 31, 2008, a memorial service was held celebrating the life of Frank. This took place at the Agnus Dei Lutheran Church in Gig Harbor, WA

Frank was an intelligent, gifted physician and scientist, with a quick wit and an unmatched sense of humor. He was creative and a significant pillar in the early struggling years of the AACT. He is greatly missed by his family, friends, colleagues and especially by those of us that have been forever changed because of our association with Frank.

by Mark Thoman, MD, FAACT

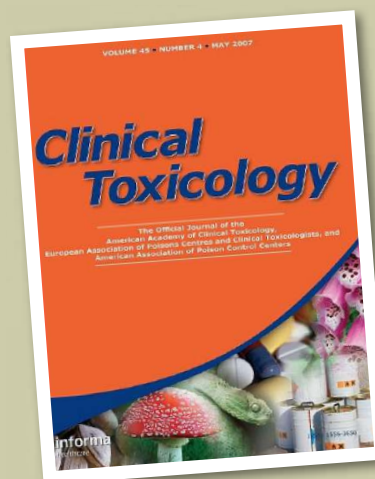
THIS JUST IN FROM CLINICAL TOXICOLOGY....

We welcome the opportunity to contribute regularly to AACTion in its new format. As readers know Clinical Toxicology is the official journal of the American Academy of Clinical Toxicology. Many probably know less about the submission and production processes, as well as the refereeing and editing processes of the Journal. Over the next few issues of AACTion we will cover some of these areas as well as highlights important developments in the Journal and articles of interest. For those who are interested in keeping abreast with research it is possible to subscribe to Table of Contents (TOC) alerts through the Informa website (<http://informapharmascience.com>) or by requesting it from the managing editor Kimber Jest (Kimber.jest@informa.com). Kimber was in Denver and many of you may have had an opportunity to meet her. She originates from California and so felt at home at the meeting. Your next opportunity to say hello will be in Dubrovnik at the forthcoming EAPCCT meeting.

All active, toxicology fellow, and student AACT members receive a print and on-line subscription to Clinical Toxicology as part of their dues. The easiest way to access the Journal online, is via the AACT website, rather than attempting to use any internal links that come in e-mails from the publisher. We know that this has caused confusion for some. Your subscription is through AACT and not as an individual subscriber. Hard copy journals, which are mailed from London, should arrive regularly and if more than 2 months go by without receiving a copy you should let Kimber know.

Submitting articles to the Journal is very easy and these should come through the journal website

<http://mc.manuscriptcentral.com/lclt>. When you first log in you will need to create a password. It is also helpful to record your interests in the manner suggested by the Journal. This is used when we select referees for articles that are submitted.



We are always on the look out for enthusiastic researchers who wish to submit articles, and are happy to discuss potential submissions informally. An e-mail to either nick.bateman@luht.scot.nhs.uk or martin.caravati@hsc.utah.edu will result in appropriate advice. If you are considering writing the article as a review, it is important to check first in case any review on a similar topic has been commissioned. This may be a useful way of getting your into print if you have recently prepared for a research project or grant application.

We look forward to hearing from you and your comments on the journal we edit on your behalf.

*by Nick Bateman, MD, Editor-in-Chief
and E. Martin Caravati, MD Associate Editor*

Save The Date!

EAPCCT 2011

May 24-27, 2011
Dubrovnik, Croatia

NACCT 2011

Sept 21-26, 2011
Washington, DC

NACCT HOSTS THE TOXICOLOGY HISTORY ROOM

The Toxicology History Room (THR) is a traveling exhibit of posters designed to provide professional meeting attendees with a perspective on the historical importance of the science of toxicology in society, and present information on important contributions of toxicologists and organizations devoted to the field. It consists of posters printed on foldable, easy-to-transport, yet sturdy fabric, and sometimes other related material such as books or other artifacts. It premiered at the March, 2009 annual meeting of the US Society of Toxicology (SOT) and was displayed in an expanded form at the Twelfth International Congress of Toxicology (ICT-XII) in Barcelona, Spain, in July, 2010.

Its third stop was the NACCT's recently concluded Denver meeting. With the NACCT's long-standing interest in subjects historical and the popularity of the annual Toxicological History Society session, it seemed like a natural fit. Indeed, it was well attended and received, and will be displayed again at the NACCT 2011 meeting in Washington, DC. Interest has also been expressed by other national and international scientific groups in displaying the THR at their meetings.

The posters on exhibit in Denver were:

Absinthe (David Nathan-Maister, Oxygene Ltd.)

Brief History of Early Drug Regulation in the United States (E Walker, Critical Path Institute)

Chronology of Events of the 1984 Bhopal Accident (R Sarangrajan, Massachusetts College of Pharmacy and Health Sciences, and BMahadevan, Schering Plough Research Institute)

The Deadly Styx River of Greek Myth: Did Poison from the Styx kill Alexander the Great? (A Mayor, Research Scholar, Stanford University and T Hayes, Pfizer Research)

Ferreira da Silva: from Chemistry to Toxicology (F Remião, H Carmo and M de Lourdes Bastos, University of Porto, Portugal)

The First Experimental Toxicologist: Mithradates VI of Pontus (A Mayor, Research Scholar, Stanford University)

Highlights in the History of Toxicology (P Wexler, M Blalock, and P Tuohy, National Library of Medicine)

History of Opium (C Drew, U.S. Drug Enforcement Agency)

International Union of Toxicology (IUTOX) History (Dori Germolec, Ernie Hodgson, Donna Breskin, Kai Savolainen)

Love Canal: Historical Perspective (F Stoss, SUNY Buffalo)

Mateu Orfila: Founding Father of Modern Toxicology (J Descotes, Lyon Poison Center, France)

Milestones of Toxicology (S Gilbert, INND and T Hayes, Pfizer Research)

National Toxicology Program (NTP) History (D Germolec, MWolfe, J Bucher and the National Toxicology Program)

Nicander (ATouwaide, Institute for the Preservation of Medical Traditions)

Poison: The Evolution of a Family of Fragrances (P Wexler, National Library of Medicine)

Toxic Curiosities from the National Museum of Health and Medicine (J Curley and the National Museum of Health and Medicine)

The Toxic Legacy of Childhood Lead Poisoning (D Rosner, Columbia University Mailman School of Public Health and G Markowitz, John Jay College)

Toxic Warfare and Poison Weapons in Antiquity (AMayor, Research Scholar, Stanford University)

U.S. Society of Toxicology (SOT) History (E Hodgson, R Scala and G Carlson of the Fiftieth Anniversary SOT Task Force (FAST))

The THR Steering Team responsible for its incarnation at NACCT included:

S Gilbert (Institute of Neurotoxicology and Neurological Disorders, Seattle, Washington) {co-chair}

B Judge (Helen DeVos Children's Hospital, Grand Rapids, Michigan)

E Scharman (West Virginia Poison Center, West Virginia)

E Vilanova (Universidad Miguel Hernandez de Elche, Elche, Spain)

P Wexler (National Library of Medicine, Bethesda, Maryland) {co-chair},

A Woolf (Children's Hospital, Boston)

The THR plans to continue to be enlarged over time, and presented at relevant scientific meetings. Future plans call for a speaker series and a museum-like display with historical instrumentation and artifacts. A virtual THR with the posters presented as pdf files is available at www.toxhistoryroom.org. Anyone can propose a new poster on a historical subject. Please send your ideas to wexlerp@mail.nih.gov and sgilbert@innd.org. The THR posters are available for display at meetings or events at no cost. The THR is funded in part by INND/Toxipedia (www.toxipedia.org) a non-profit dedicated to making scientific accessible by placing it in the context of history, society, and culture.

by Phillip Wexler, MD, FAACT

Clinical Toxicology Takes on Simulation!

The AACT Acute & Intensive Care (AIC) SIG recently sponsored an innovative clinical toxicology simulation center for 3 days at NACCT 2010 in Denver. Four detailed clinical scenarios were developed in collaboration with METI, Inc (Medical Education Technologies, Inc) which graciously supplied the wireless, portable, high-fidelity simulator, iStan. We are very appreciative of METI and one of their senior education specialists, Adam Reading, for allowing us to utilize this \$68,000 simulator and all of its advanced features.



Dr Mark Kirk and Dr. Charles McKay working hard as a team.

The effort was directed and coordinated by Anthony Scalzo, MD, FAACT, Co-Chair of the AIC SIG, Director of the Clinical Simulation Center and Division of Medical Toxicology at

Saint Louis University School of Medicine, and Medical Director of the Missouri Poison Center. Dr. Scalzo assembled a team of faculty colleagues from several institutions to assist in presenting these toxicology scenarios and to lead groups of NACCT attendees in the management and resuscitation of the cases. The detailed multicomponent

cases included organophosphate nerve agent (Sarin) poisoning, combined diltiazem and propranolol overdose, MDMA and assault case, as well as a synthetic cannabinoid toxic reaction. Other more abbreviated case scenarios were also presented which included jimsonweed toxicity, methadone-related Torsades, and antidepressant overdose.

Numerous attending toxicologists and emergency medicine specialists participated in the scenarios and encouraged their Fellows and other clinical toxicology specialists to join one of the many sessions offered at NACCT.

The teaching faculty for running the simulations was a multicenter effort. These toxicology and emergency medicine faculty included Anthony Pizon, MD, University of Pittsburgh Medical Center and his toxicology fellow, Michael Abesamis, MD, Ann-Jeannette Geib, MD, Robert Wood Johnson School of Medicine, and Jeff Lapoint, MD, toxicology fellow, the NYC Poison Control Center.

We were impressed with the number of attending level emergency medicine and toxicologists who embraced our efforts to realistically simulate difficult overdose management issues as well as ACLS

and resuscitation procedures that were required on our high-fidelity simulator. We also appreciate the encouragement they gave to their toxicology fellows as well as nurse CSPIs from many regional poison centers who participated in our simulations. Dr. Scalzo was also excited to see involvement of Pharm D toxicologists and pharmacist members of AACT who actively contributed to the team management and discussion of pharmacologic interventions with our simulated toxicology cases.

This demonstration project also resulted in mutual discussions amongst AACT and ACMT members who had interests in simulation medicine. Dr. Scalzo hopes to help coordinate through the Acute & Intensive Care SIG and its member's collaborative efforts to develop additional simulation scenarios in clinical toxicology.

by. Anthony Scalzo, MD,FAACT



Uniting scientists and clinicians in the advancement of research, education, prevention and treatment of diseases caused by chemicals, drugs and other toxins.

AACT Acute & Intensive Care SIG presents

"Simulated Cases in Clinical Toxicology"

- Teach team dynamics and resuscitation
- Perform assessment and employ antidotes
- Teach and improve communication skills
- Conduct research in outcomes
- Reduce medical errors

DETERMINING BRAIN DEATH: CAUTION WITH TOXICOLOGY PATIENTS

by Ross Sullivan MD and Mike Hodgman MD

Brain death and its criteria have been hotly debated for over a half of century. The debate has not escaped the realm of toxicology. Recently, a case of baclofen overdose brought to light the need for the medical and clinical toxicologists to have a working knowledge of brain death and its guidelines. At 2010 NACCT, the issue of brain death in a overdosed patient generated much interest and discussion at the Forensic SIG platform session.

Our Poison Control Center was recently challenged by a case of baclofen overdose mimicking brain death. A 49 year old female overdosed on baclofen. She was intubated, and while in the hospital, was in a deep coma, and had no brain stem reflexes. She remained in this state for 5 days. She had an EEG that was interpreted as poor, and on Apnea test, took one breath at 5 minutes. She was considered brain dead, and her family decided to donate her organs. At organ procurement, the patient opened eyes, and moved her limbs purposefully. One week later she was transferred to psychiatry without complications.

Although much ambiguity remains about when and how to determine brain death in critically-ill patients, guidelines for the determination of brain death have been promulgated and recently revised by the American Academy of Neurology.⁽¹⁾ Their use in patients with coma from drug overdose however, must be done cautiously. The determination of brain death is primarily clinical, with selected use of tests to augment the clinical evaluation. First and foremost is the exclusion of reversible causes such as drug intoxication, metabolic or endocrine disturbances or hypothermia. Blood pressure should also be addressed prior to evaluation if hypotension is present. Once reversible causes are excluded, a three part exam is necessary to declare brain death. First, the patient must be comatose. Second, clinical exam should demonstrate no brain stem reflexes, accomplished through a careful exam that includes lack of response to noxious stimuli and testing of cranial nerves and failure to spontaneously breathe during an apnea test. Third, the patient must undergo an Apnea test where there must be no spontaneous breaths over 8-10 minutes plus a PCO₂ of greater than 60 or a PCO₂ mmHg increase of at least 20 mmHg. The use of ancillary tests, such as electroencephalography (EEG), conventional angiography, or CT or MR angiography, is considered optional in adults in the most recent expert guidelines published. As a point of caution, ancillary tests may be misleading (i.e. false positive ancillary test for brain death should not supplant clinical findings that do not support brain death).⁽¹⁾

Firstly, with suspected drug intoxication ample time must be allowed for clearance of the drug to non-toxic levels. The most recent guidelines published in *Neurology* suggest waiting a period of 5 times the drug's half-life or, if feasible, use of specific drug levels. ⁽¹⁾ Potential problems with this approach may include delayed and erratic absorption with overdose as well as altered kinetics and increased rates of drug elimination.

An example of a drug that may not comply with the American Academy of Neurology's recommendation can be seen with baclofen. With therapeutic dosing the half life of baclofen is about 2 to 4 hours.⁽²⁾ More prolonged elimination half lives have been measured in overdose. In one case an elimination half life of 8.6 hours was measured based on levels between 12 and 36 hours post overdose.⁽³⁾ In another case an elimination half life of 34.5 hours was measured based on levels done between 36 and 60 hours post ingestion, following which even a small increase in plasma baclofen level was observed.⁽⁴⁾ As a very lipophilic drug this very prolonged half life may reflect delayed clearance from the brain compartment.⁽²⁾

Deeming one brain death must be done cautiously. Our patient had no signs of cranial nerve activity on day 5 and flaccid extremities without reflexes or response to noxious stimuli. Her apnea test indicated an intact although very depressed hypercarbic respiratory drive. Although the consulting neurologist felt the findings of the EEG performed the day prior to the clinical evaluation for brain death suggested a poor prognosis, the clinical exam did not fulfill brain death criteria. Despite this the medical team believed further care futile and after a family meeting the decision to proceed with organ harvest was made.

The determination of brain death in the comatose overdose patient must proceed with caution. An adequate period of time to allow drug clearance must be allowed. Physiologic and metabolic perturbations caused by the intoxication must all be addressed. Except in cases where irreversible injury is clear from prolonged anoxia or other organ injury incompatible with life the decision to withdraw life support should be cautiously. It is also important that a responsible advocate for the patient be identified. This may require input from social services, psychiatry and a hospital ethicist.

(continued on page 8)

FEATURE ARTICLE CONTINUED

References

1. Wijedicks E, Varelas P, Gronseth G, Greer D. Evidence based guideline update: Determining brain death in adults. *Neurology* 2010;74:1911-1918
2. Faigle J, Keberle H. The chemistry and kinetics of Lioresal. *Postgrad Med J* 1972;48 (Suppl.5), 9.
3. Gerkin R, Curry S, Vance M, Sankowski P, Meinhardt R. First-Order Elimination Kinetics Following Baclofen Overdose. *Ann Emerg Med* 1986;15:843-846
4. Ghose K, Holmes K, Matthewson K. Complications of baclofen overdosage. *Postgrad Med J* 1980;56: 865-867

OUR RESEARCH

● **Spiller HA, Scaglione JM, Aleguas A, Foster H, Durback-Morris L, Scharman EJ, Baker SD** Effect of scheduling tramadol as a controlled substance on poison center exposures to tramadol. *Ann Pharmacotherapy* 2010;44:1016-1021

● Lutterloh EC, Iqbal S, Clower JH, **Spiller HA**, Riggs MA, Sugg TJ, Humbaugh KE, Cadwell BL, Thoroughman DA. Carbon Monoxide Poisoning After an Ice Storm — Kentucky, 2009 *Pub Health Reports* (in press)

● **Spiller HA**, Singleton MD. Comparison of incidence of hospital utilization for poisoning and other injury types. *Pub Health Reports* (Accepted – in press)

● **Spiller HA, Borys DJ, Ryan RL, Sawyer TS**, Wilson BL. Unintentional therapeutic errors involving insulin in the ambulatory setting reported to Poison Centers. *Ann Pharmacotherapy* 2010 (in press)

● **Winter ML, Spiller HA**, Griffith JRK. Benzonatate ingestion reported to the National Poison Center Database System (NPDS). *J Med Toxicol* 2010 (accepted – in press)

● **Spiller HA**, Bailey JE, **Dart RC**, Spiller SS. Investigation of Temporal changes of abuse and misuse of prescription opioids. *J Add Dis* 2010;29:78-83

● **Prosser JM, Smith SW**, Rhim ES, **Olsen D, Nelson LS, Hoffman RS**. Inaccuracy of ECG Interpretations Reported to the Poison Control Center. *Ann Emerg Med* 2010 (epub ahead of print)

● **Manini AF**, Kumar A, **Olsen D**, Vlahov D, **Hoffman RS**. Utility of serum lactate to predict drug-overdose fatality. *Clin Toxicol (Phila)* 2010;48:730-6

● **Manini AF, Nelson LS, Olsen D**, Vlahov D, **Hoffman RS**. Medical examiner and medical toxicologist agreement on cause of death. *Forensic Sci Int* 2010 (epub ahead of print)

● **Manini AF, Nelson LS**, Skolnick AH, Slater W, **Hoffman RS**. Electrocardiographic predictors of adverse cardiovascular events in suspected poisonings. *J Med Toxicol* 2010;6:106-15

● **Kosnett MJ**. Chelation for heavy metals (arsenic, lead, and mercury): protective or perilous? *Clin Pharmacol Ther* 2010;88:412-5

SIG Corner: Radiation

The Radiation Special Interest Group held a successful symposium in Denver, during NACCT 2010: Captain John Cardarelli (EPA) presented the current radiation risk paradigm and discussed its limitations when applied to public dose limits. Captain David Saunders (CDC) presented the current laboratory diagnostic tests being developed at the Division of Laboratory Studies of the CDC, to diagnose internal contamination with different radionuclides. Finally, Dr. Ted Cetaruk (Denver Health System) presented the medical management of the Plutonium-239 spill incident that occurred at NIST in 2008. This symposium was jointly planned with the Occupational and Environmental Toxicology Special Interest Group.

The business meeting was also well attended and witnessed a fruitful discussion about future plans. Dr. Art Chang (CDC) presented to the membership proposed

plans to update and enhance current NPDS radiation codes in collaboration with Micromedex and AAPCC who were present at the meeting. More recently, the RSIG and WMD SIG submitted a proposal for a joint symposium during NACCT 2011 that will consist of a table top exercise discussing the role of toxicologists in the aftermath of an explosive RDD or “dirty bomb” detonation.

Additionally, a proposal was made to the SPI committee to hold a Radiation-related SPI roundtable discussion in DC. The RSIG is always seeking to involve additional AACT members. Currently, we are looking at members who would assume different roles such as updating the website and editing the monthly news digest. Please email Ziad Kazzi (zkazzi@emory.edu) or Art Chang (ctn7@cdc.gov) if you would like to join us or present any novel ideas.

by Art Chang MD and Ziad Kazzi MD

Fellow Perspective

I take an interesting perspective into fellowship. I worked in the emergency department for a year as an attending at one of the hospitals that I now cover as a toxicology fellow.

While someone may think that this situation is an optimal one, there were several factors at play that could have made for an uncomfortable start. First of all, and most obvious, I had to begin to learn a new discipline. Also, I had not carried a pager since my second year in residency and our poison center covers 5 states. How efficiently would I be able to handle this call volume? Much of this call and consultation would be for patients that I cannot see or examine myself. Lastly, how would it be to transition from complete autonomy regarding patient care decisions to deferring to the toxicology attending?

If all that is not enough, arguably my biggest anxiety was that I would be giving recommendations to attendings consulting me from my own emergency department. What if something goes wrong? What if my recommendations are not spot on? How would I be viewed?

I believe that having the experience of calling consults in the emergency department as the attending has enhanced my effectiveness as a consultant when giving recommendations. And it works the other way too. Knowing what information I like to hear when called for a consult has improved my skills of calling the consult. This process has helped me grow and improve as both a toxicology consultant and an emergency medicine attending. In many ways, this growth has alleviated much of the anxiety I originally feared.

After several months in this environment, much of the anxiety is gone. Though I have a long, long way to go, I am feeling more comfortable from a toxicology consultant perspective. In fact, I feel as though the learning curve has steepened significantly for me now that the anxiety has lessened. Some consults still scare me, but I have now been able to focus on doing the right thing instead just trying to avoid doing the wrong thing. All of my patients are better off for it.

Chris Hoyte MD is a first year Medical Toxicology fellow at Rocky Mountain Poison and Drug Center in Denver, CO

Member Spotlight:

Questions for: *David Juurlink, MD, PhD*

You are currently an Associate Professor of Medicine at the University of Toronto, Canada. Tell me about the path you took to get there.

How far back should I go? In the early years of high school I was a terrible student. At some point I came to my senses, pulled up my socks, and somehow managed to scrape into the Pharmacy program at Dalhousie University in Halifax. That's where my (ahem) interest in drugs started. I enjoyed the biologic sciences, and I studied medicine there as well, working part-time as a pharmacist during medical school. Later I moved to Toronto and did residency in Internal Medicine, followed by Clinical Pharmacology and then a fellowship in Toxicology. I got involved in research almost by accident, in the course of graduate studies in Clinical Epidemiology that I started on a whim. My present job involves attending on the General Medicine clinical teaching unit 3 months a year, overseeing our hospital's Clin Pharm/Tox consult service year-round, and a fair bit of teaching and research. It's a great job with lots of variety in my day-to-day work.

I see that you have published extensively in the field of drug interactions, and have really made some important contributions around drug safety. How did you choose to focus in this area?

I've always been interested in the basic pharmacology and clinical expression of drug interactions, and I am amazed at how little we actually know about them, given how common and dangerous they are. A lot of great basic research is done in the field, but it takes forever to influence clinical practice, in part because the basic scientists and clinicians speak different languages. On the more general issue of drug safety, I am interested in the safety of drugs in the "real world" – that is, in day-to-day clinical practice, outside the setting of the clinical trials that allow drugs to make it to market. I'm a big fan of RCTs for figuring out if a drug can work, but most trials take place in an artificial setting (call it "Disney World"). That artificiality means that RCTs can misinform us about drug safety, sometimes in important ways. Trialists don't like to hear that, but it's true.

How has your role in AACT contributed to your career?

I recently finished my second term on the Board of Trustees, which is basically a collection of great people who volunteer a lot of time and do excellent work on behalf of the organization and its members. I've been involved in NACCT as a speaker, moderator, and symposium organizer on multiple occasions. I'm also on the editorial board of Clin Tox, where I'm pretty sure I hold the ignominious distinction of being the slowest reviewer. The journal has undergone some major transformation over the past few years and really has become a great vehicle for communicating research in clinical toxicology.

Clearly you have a ton of spare time on your hands. What do you like to do when you have a few hours off?

I have three great boys – Everett (12), Trevor (9) and Ryan (5). They keep me active with their various activities, homework and conflict resolution. I am now relearning Grade 7. Aside from my parental obligations, I play squash year-round, and in the winter I enjoy snowboarding, although the hills in Ontario are not much to speak of. (Is it wrong to use your new column to angle for invitations to speak in mountainous regions during winter?) I also really enjoy cooking – anything from simple one-dish recipes to elaborate multi-course dinners. I sometimes contemplate a culinary sabbatical, but that's not happening any time soon.

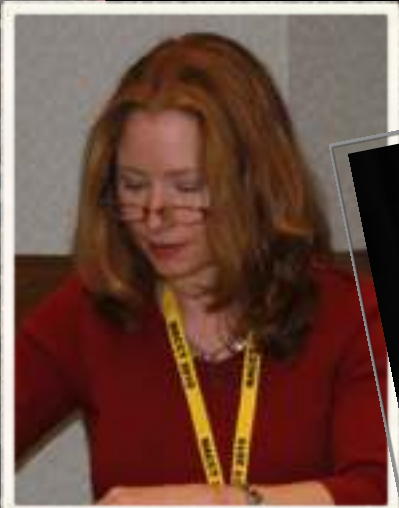
I heard that you were once on the path to becoming a professional drummer. Are you still working towards that goal?

Haha and no. I came to grips with my mediocrity long ago. There are 12-year olds on YouTube who are better than me. I still like to play, but there's not enough time in the day. I've recently been thinking about replacing my acoustic kit with an electronic one so I can play through headphones while the kids are asleep. The technology has improved tremendously over the past 20 years, and unlike acoustic drums they never need tuning.

Interview by: Barbara Kirrane, MD



NORTH AMERICAN CONGRESS OF CLINICAL TOXICOLOGY 2010



BUILDING BRIDGES

Society of Toxicology: Exposure and Participation for Clinical Toxicology & Toxicologists!

The Society of Toxicology (SOT), founded in 1961 as a not-for-profit scientific society, is a professional and scholarly organization of scientists from academic institutions, government, and industry representing the great variety of scientists who practice toxicology in the United States and abroad. SOT is committed to advancing the science of toxicology, including chemicals and toxins, to create a safer and healthier world. Importantly, among its many educational activities, SOT has consistently reached out to policy makers advising them on a wide range of matters of toxicological concern. While not established as a medical society, SOT always has included a good number of distinguished physicians who found its membership congenial to their practice and research interests. Indeed, it would be very difficult to separate the history of the science of toxicology from the history of medicine.

At its annual meeting, SOT presents a staggering range of symposia, workshops, information sessions, and posters on various subjects in toxicology. An annual meeting can include as many as 6,500 scientists and over 300 exhibits. Many presenters select SOT as a venue because of the potential for achieving a tremendous exposure for their work based on the size and expertise of its members. But, the society offers a great deal more than that; it includes 26 specialty sections focusing on specific areas of toxicology, 18 regional chapters that foster exchanges of information and collaboration at the local level, and 6 special interest groups intended to include the diversity and inclusiveness of the toxicology community. In the last five years, SOT has adapted to

the changing needs of the scientific community by introducing new forums and formats at its annual meeting. A dedicated specialty section for clinician scientists is another potential innovation because it currently does not exist. These are opportunities for the clinical toxicology community to communicate its unique contributions and needs to members at SOT. SOT also offers many venues for postdoctoral fellows to participate, be mentored, and be recognized for their accomplishments and career potential.

We want to invite many of those training in or currently practicing clinical toxicology to consider participating in and joining SOT. {Indeed, we have exhorted our colleagues at SOT to likewise consider joining AACT.} Networking, research presentation opportunities and the availability of a wide range of presentations that demonstrates current concepts and findings that can enhance the understanding of the scientific basis of clinical disorders and practice at a single venue are among the most obvious examples of benefits to AACT members who join SOT.

We would like to assure those individuals that their participation and membership are valued and sought by the SOT community. For example, the society has recently revised the membership process to better accommodate applications from clinicians. In the past, this process was targeted at the academic credentialing process for the PhD/research track. There are many opportunities to develop individually between both organizations just as there are many opportunities to develop at the organizational level of SOT and AACT. For additional information, please visit the SOT website (<http://www.toxicology.org/>) and contact us.

by Michael E. Ottlinger, PhD, DABT, John G. Benitez, MD, MPH, FAACT, and Richard Y. Wang, DO, FACMT

Announcements

Edward Krenzelok, Pharm D, FAACT, DBAT, presented the Career Achievement lecture "Friends and Foes in the Plant World" at the NACCT '10. On Nov 10 he presented "Acetaminophen Exposures Reported to the National Poison Data System" at the American Pain Foundation meeting entitled "Seeking solutions: Advancing the understanding for the safe use of acetaminophen" in Bethesda—AACT members Rick Dart and Jody Green also participated as panel members. On December 8, along with AACT member Dan Cobaugh, he will be participating in a symposium at the Am Soc of Health-System Pharmacists Midyear Clinical Meeting in Anaheim, CA—"Acetaminophen Poisoning: What's the FDA Thinking? How Would You Vote?"

Did You Know?

Poster presentations were first displayed at NACCT in 1978, in Chicago, IL. This idea was the brainchild of Lorne Garreston, the program's co-chair.

Toxicologists Get Married!

Brenna Farmer, MD, (NY Presbyterian/Weill Cornell Hospital, NY) was married to Jason Chu, MD (St. Luke's-Roosevelt Hospital Center, NY) on Saturday, December 18, 2010 at the Brooklyn Botanic Garden in New York. Both the bride and groom are graduates of the NYC Poison Control Center's Medical Toxicology Fellowship.



Congratulations!

We welcome your feedback!

Please send us your articles, announcements, ideas, research articles, and contributions. We cannot do this without you!

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AACT