



WELCOME TO THE 2015 SUMMER ABAT NEWSLETTER

- WITH ALL YOUR LATEST NEWS

President's Note:



Hello and welcome to the Summer ABAT newsletter. Mark Winter has composed a brilliant compendium of recent ABAT activities. Forget Facebook—Mark has got all the details you need to know about your colleagues and what they have been up to the last few months!

The ABAT board has been busy putting together a set of questions that will serve for this year's ABAT exam. I must say, the board members have not let you down. They have put together a testing process that will definitely challenge our takers and that will make you not only proud but confident in those individuals who pass the exam.

The ABAT board is still working hard on topics such as education and membership. ABAT has many future challenges. The primary challenge is membership number. In the near future, we will see many individuals considering retirement and asking for Emeritus status. ABAT must find ways to attract quality individuals who want to practice toxicology. For those considering retirement and Emeritus status, AACT has recently changed their requirements for an AACT member to become Emeritus: they need to be a Fellow of AACT. The ABAT board of directors has been in discussions with AACT and will need to consider whether or not it will follow AACT and require all ABAT members to become an AACT Fellow to become ABAT Emeritus or whether ABAT will continue to have its own policy on Emeritus and its requirements.

I know it seems like the fall is so far off yet, but it isn't. Before you know it NACCT will be here. I hope you will all attend. AACT has planned a special meeting. It is a half day shorter this year, but the content is superb right up to the last minute. So don't rush back, enjoy your time at NACCT and please stay through the last day. We don't want you to miss a single tantalizing tidbit of new toxicology information that will be presented at the meeting.

ABAT Publications and Announcements

Other ABATs may be listed on the publication but the person who reported the publication gets the credit. Greatly appreciate those who responded to the request for information –otherwise I'd have nothing to report! --mw

Judith Alsop, PharmD, and DABAT since 1991; Brent Ekins, PharmD and DABAT since 1989; and Carl Hornfeldt, PhD, RPh, and DABAT since 1991, were awarded with the distinction of Diplomate Emeritus by the membership of the American Board of Applied Toxicology. Once again we thank you for your promotion of toxicology and the best in your future years. Thanks for the 81 years of service that you gave!

Mary Ann Howland:



- ***The 10th Edition of Goldfrank's Toxicologic Emergencies is out:***
- http://www.amazon.com/Goldfranks-Toxicologic-Emergencies-10-Ed/dp/0071801847/ref=sr_1_1?s=books&ie=UTF8&qid=1416702089&sr=1-1&keywords=goldfranks+toxicologic+emergencies+2014

Bryan Hayes:

- Grover B, **Hayes, BD**, Watson K. Feedback in clinical pharmacy education. Am J Health Syst Pharm 2014; 71(18): 1592-6.
- **Hayes, BD**, Kobner, S, Trueger, NS. Social media in the emergency medicine residency curriculum: social media responses to the residents' perspective article. Ann Emerg Med. 2015; 65(5): 573-83
- Gosselin S, Morris M, Miller-Nesbitt A, Hoffman RS, **Hayes BD**, Turgeon AF, Gilfix BM, Grunbaum AM, Bania TC, Thomas SH, Morais JA, Graudins A, Bailey B, Mégarbane B, Calello DP, Levine M, Stellpflug SJ, Hoegberg LC, Chuang R, Stork C, Bhalla A, Rollins CJ, Laverne V; AACT Lipid Emulsion Therapy workgroup. Methodology for AACT evidence-based recommendations on the use of intravenous lipid emulsion therapy in poisoning. Clin Toxicol 2015 Jul; 53(6):557-64.
- Grover B, Hayes, BD, Watson K. Feedback in clinical pharmacy education. Am J Health Syst Pharm 2014; 71(18): 1592-6.

Dawn Sollee:



- Bush SP, Ruha AM, Seifert SA, Moorgan DL, Lewis BJ, Arnold TC, Clark RF, Meggs WJ, Toschlog EA, Borron SW, Figge GR, **Sollée DR**, Shirazi FM, Wolk R, de Chazal I, Quan D, Garcia-Ubbelodde W, Alagón A, Gerkin RD, Boyer LV. Comparison of F(ab')₂ versus Fab antivenom for pit viper envenomation: A prospective, blinded, multicenter, randomized clinical trial. *Clin Toxicol* 2014 Oct 31: 1-9 [Epub ahead of print]

Ann Slattery:



- **Slattery A**, Libelt E, Gaines LA. Common ocular effects reported to a poison control center after systemic absorption of drugs in therapeutic and toxic doses. *Curr Opin Ophthalmol* 2014 25(6):519-23.

Greene Shepherd:



- E. Brooke Lerner, Courtney H. McKee, Charles E. Cady, David C. Cone, M. Riccardo Colella, Arthur Cooper, Phillip L. Coule, Julio R. Lairet, J. Marc Liu, Ronald G. Pirrallo, Scott M. Sasser, Richard Schwartz, **Greene Shepherd**, Raymond E. Swienton. A Consensus-based Gold Standard for the Evaluation of Mass Casualty Triage Systems. *Prehospital Emergency Care*. Early online October 2014.

Kevin Rynn:

- Kevin reports that he has been promoted to Vice Dean for the College of Pharmacy at Rosalind Franklin University of Medicine and Science.

Congratulations Kevin!

Henry Spiller:



Keeping busy and still playing soccer:

- **Spiller HA**, Wiles D, Russell JL, Casavant MJ. Review of toxicity and trends in use of Tiagabine as reported to US Poison centers 2000 to 2012. *Human Exper Toxicol* 2015 (in press)
- **Spiller HA**, Good TF, Spiller NE, Aleguas A. Vitamin D exposures reported to US poison Centers 2000-2014: Evaluation of temporal trends and outcomes. *Human Exper Toxicol* 2015 (accepted – in press)
- Onders B, Casavant MJ, **Spiller HA**, Chounthirath T, Smith GA. Marijuana exposure among United States children younger than six years old. *Clin Pediatr* 2015 (Accepted – In press)
- **Spiller HA**, Mowry JB, Aleguas A, Griffith JRK, Goetz R, Ryan ML, Bangh S, Klein-Schwartz W, Schaeffer S, Casavant MJ. An observational study of the factor Xa inhibitors rivaroxaban and apixaban as reported to 8 Poison Centers. *Ann Emerg Med* (accepted – in press) DOI: 10.1016/j.annemergmed.2015.07.014
- **Spiller HA**, Strauch J, Essing-Spiller SJ, Burns G. Thirteen years of Oxcarbazepine exposures reported to US Poison centers: 2000 to 2012. *Human Exper Toxicol* 2016 (accepted – in press)
- **Spiller HA**, Good TF, Aleguas A. 15 years of Vitamin D exposures reported to US poison Centers.
 - *Presented at European Association of Poison Centres and Clinical Toxicologists XXXV International Congress, St. Julian's, Malta, May 26-29 2015*
- Onders B, Casavant MJ, **Spiller HA**, Chounthirath T, Smith GA Marijuana Exposure Among United States Children Younger than Six Years Old.
 - *Presented at Society for Advancement of Violence and Injury Research 2015, in New Orleans March 11-13, 2015*
- **Spiller HA**, Russell JL, Casavant MJ, Ho RY, Gerona RR. Identification of N-Hydroxy-para-aminobenzoic acid in a cyanotic patient after benzocaine exposure. *Clin Toxicol* 2014 52:976-979
- Hayes HL, **Spiller HA**. Fluoropolymer-associated illness. *Clin Toxicol* 2014;52:848-855
- Smith MD, **Spiller HA**, Casavant MC, Chounthirath T, Brophy T, Xiang H. Out-of-Hospital Medication Errors Among Children Younger than Six Years of Age in the United States, 2002-2012 *Pediatr* 2014;134:867-876
- Law RK, Sheikh S, Bronstein A, Thomas R, **Spiller HA**, Schier JG. Incidents of potential health significance identified by national surveillance of US poison center data (2008–2012) *Clin Toxicol* 2014;52:958-963
- Russell JL, Wiles DA, Kenny B, **Spiller HA**. Significant chemical burns associated with dermal exposure to laundry pod detergent. *J Med Toxicol* 2014;10:292-294
- Valdez AL, Casavant MJ, **Spiller HA**, Chounthirath T, Xiang H, Smith GA. Pediatric Exposures to Laundry Detergent Pods. *Pediatr* 2014 published online Nov 2014(doi: 10.1542/peds.2014-0057)
- Wiles DA, **Spiller HA**, Casavant MJ, Russell JL. A retrospective assessment of loperimide toxicity 2000-2011. *Int J Pharmacol Toxicol Sci* 2014;4:1-4



Above: A family of wild turkeys is running around Rick Spiller's backyard!



Above: My best impression of Howard Hughes in the cockpit of the Spruce Goose.

Allison Muller:

- Interview:
- Allison Muller, PharmD and toxicologist, discusses her transition into a solo practice after having worked at the Children's Hospital of Philadelphia and a poison control center for 20 years. Dr. Muller talks about being an expert witness as well as a medical writer. She also talks about the benefits of networking and hiring a marketing assistant. Podcast with Emma Hitt:
<http://podbay.fm/show/985866761/e/1429328376?autostart=1>
- Upcoming meetings:
- American Society of Pharmacy Law, November 2015. This is my first time attending this meeting. I've spoken to some active members already and it sounds like a great combination of pharmacy and legal topics. Just what this budding toxicology expert witness is looking for!
- I will be at NACCT and speaking at the ABAT symposium on liability issues for toxicology consultants. My co-presenter, Dr. Jack Snyder, is a toxicologist and an attorney with a wealth of knowledge to share.
- In January 2014, I started my own consulting company, Acri Muller Consulting, LLC. My services include medical writing, medical/pharmacy education, and toxicology litigation work.
www.acrimullerconsulting.com
- If any ABATs are thinking about consulting as their next step, I'd love to meet up with them at NACCT for coffee!
- Presentations:
- Presenting "Toxicology 101 for Attorneys" to the Criminal Law Section of the Chester County Bar Association on September 10th.
- Leading a roundtable on toxicology for medical writers at the American Medical Writers Association Mid-Atlantic conference on November 7th.
- Here is an example of one of my recent writing projects:
file:///C:/Users/Acri1128/Downloads/AJHO_May15_90_Breast-CME.pdf

Peter Chyka:

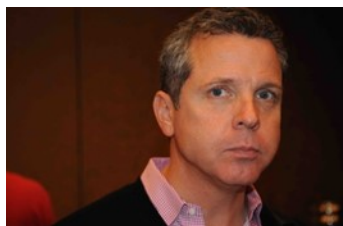
- **Chyka PA.** Acetylcysteine and acetaminophen overdose: the many shades of gray (editorial). J Pediatr Pharmacol Ther 2015;20(3):160-162.
- **Chyka PA.** Clinical toxicology. In: DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM. Pharmacotherapy: A Pathophysiologic Approach, 9th ed. New York City: McGraw-Hill. 2014: e133-158.
- **Chyka PA.** Toxicology and chem-bioterrorism. In: Chyka PA, Boucher B, Franks, A, Waddell JA (eds). The APhA Complete Review for Pharmacy, 11th ed. Washington, DC. American Pharmacists Association. 2015: 859-882.

Kristin Engebretsen:

She feels like a slacker with **only** 3 publications this quarter. With the duties of ABAT President AND 11 students/residents/fellows attached to her hip this month—she feels “I don’t get quite as much publishing done. She said she would see if she has some good pictures from EAPCCT /Sicily/Malta. It was beautiful there. Still waiting.....

- Froberg BA, Levine M, Beuhler MC, Judge BS, Moore PW, **Engebretsen KM**, Mckeown NJ, Rosenbaum CD, Young AC, Rusyniak DE; ACMT Toxicology Investigators Consortium (ToxIC). Acute Methylenedioxypyrovalerone Toxicity. J Med Toxicol 2015;11(2):185-94.
- Nelson ZJ, Stellpflug SJ, **Engebretsen KM**. What Can a Urine Drug Screening Immunoassay Really Tell Us? J Pharm Pract. 2015 Apr 27.
- Cole JB, Nystrom PC, Orozco BS, Moore JC, Kornas RL, Fryza BJ, Steinberg LW, O'Brien-Lambert A, Stellpflug SJ, **Engebretsen KM**, Ho JD. A Prospective Study of Ketamine versus Haloperidol for Severe Prehospital Agitation. Accepted for oral presentation at the upcoming NACCT meeting.

Daniel Cobaugh:



- **Cobaugh DJ**. A professional imperative: developing pharmacy residents as the next generation of practice-based researchers. Am J Health Syst Pharm. 2015 Apr 15; 72(8):615.
- **Cobaugh DJ**. Where does AJHP go next? Am J Health Syst Pharm. 2015 Mar 15; 72(6):437.
- **Cobaugh DJ**, Miller MJ, Pham TT, Krenzelok EP. Risk of major morbidity and death in older adults with suicidal intent: a cross-sectional analysis from the National Poison Data System, 2000-2009. J Am Geriatr Soc. 2015 Mar; 63(3):501-7.
- van den Bogert CA, Miller MJ, **Cobaugh DJ**, Chen L, Allison JJ, Saag KG. Screening Questions for Nonsteroidal Anti-inflammatory Drug Risk Knowledge. J Patient Saf 2014 Oct 1 [Epub ahead of print].

Alexander Garrard:



Announcement: Congratulations, Dr. Garrard!

Washington Poison Center's Dr. Garrard Named to Puget Sound Business Journal's 40 Under 40



Today is the day we can finally share that Dr. Garrard has been named to the Puget Sound Business Journal's 2015 40 Under 40 list!

Just over one year ago, Alex joined the WAPC staff. In that time, the new Mr. Yuk's impact at WAPC has been witnessed all around Washington, including catching the attention of the Puget Sound Business Journal (PSBJ).

Each year the journal publishes an esteemed 40 Under 40 list that honors and celebrates the top forty young professionals in the Northwest less than 40 years of age.

Nominated by peers and colleagues, these individuals are set apart by their dynamic leadership, entrepreneurial spirit, and present and future standing in the for-profit and nonprofit worlds. Many of you submitted nominations on his behalf!

Alex says, "It is a huge honor to be recognized as one of Puget Sound Business Journal's Top 40 under 40, especially having only been in the Puget Sound area for a year. This has been a year of dynamic changes and high energy at the Washington Poison Center, and I am excited that this award highlights the amazing work that the poison center does every day for the people of Washington State."

He joins the list with 39 other professionals this year and 600 other professionals from the past 18 years. Garrard said "I am looking forward to connecting with current 40 under 40 and alumni as a means to network and grow professionally." At only 31, he is excited about what this award means for the trajectory of his career moving forward.

You can see the 2015 40 Under 40 list on [PSBJ's Honoree Announcement](#) and look forward to reading about all of the honorees when the full profiles are released on

September 11. Mark your calendars for the 2015 40 Under 40 Awards Bash on September 17.



- He also wanted to make us aware of yet another happening here in Seattle. In August, he flew out to Uzbekistan in central Asia as part of a delegation on behalf of the DEA. He met with their Ministry of Health to discuss synthetic drugs such as bath salts and Spice. He was be there for a week meeting with experts and physicians in the country teaching about synthetic drugs, discussing drug policy, and will also have some time to explore the ancient cities of Tashkent and Samarkand. He was the only PharmD going on the trip and a DABAT at that!

web**POISONCONTROL**:

Clinical Toxicologists Changing the Poison Control Paradigm

Blaine (Jess) Benson, PharmD, DABAT

Nicole Reid, RN, BSN, MEd, CSPI, DABAT

Susan Smolinske, PharmD, DABAT

Most of us pass our days by teaching, helping patients, and creating new knowledge. They are important endeavors that positively impact those around us and perhaps even individuals we will never know. Part of the joy is practicing in a medical discipline that we love - clinical toxicology - and another part of the reward is knowing that the work makes a difference in someone's life. This article is a quick overview of three clinical toxicologists' work in a newly developing area - the provision of automated poison control guidance through web**POISONCONTROL**®. We write to share our observations and to invite others to join us in this rewarding work.

We know from Census Bureau statistics and from research performed by the Pew Center that there is a growing sector of the population now prefers solving problems using their computer or mobile device rather than talking to someone over the telephone. The U.S. Census Bureau reports that 83.8% of U.S. households owned computers and 73.4% had high-speed connections in 2013.¹ Seventy-two percent of internet users look for health information online.² Studies conducted by the Pew Research Center show that 64% of Americans own smartphones, between 80%-97% use their phone to connect to the Internet and 62% of owners use their phone to obtain health information. Eight percent of Americans use their smartphone to get help during medical emergencies.³

web**POISONCONTROL**® was developed to assist the sector of the population that is not inclined to use the telephone, by providing accurate patient-specific poison triage and first aid advice through a totally automated application. The application portal can be found at www.webpoisoncontrol.org. There is also a mobile application (web**POISONCONTROL**®) that can be downloaded to smart phones on the [App Store](#) or on [Google play](#). Users are first warned that the application is for single acute ingestions in humans (not pets) who are 6 months to 79 years of age and don't have symptoms, yet. The app is also for individuals who are not suicidal, pregnant or who have serious, prior medical conditions. Users have to agree to that none of these exclusions apply, then the application prompts them for age, substance name and amount, time since exposure, and sometimes the patient's weight. With this information, the application offers an individualized assessment and triage plan. (Figure 1) The application follows up by email and modifies its assessment based on user responses. Patients are either managed at home, referred to their poison center or, in rare cases, referred directly to the emergency room. If you haven't played with the application, this would be a good time to try it out. But please check the "I'm just trying the tool. This is not a real case." option at the bottom of the first page.

Pew Research Center, April, 2015, "The Smartphone Difference" Available at: <http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/> is composed of over 30,000 substance entries and 120,000 product barcodes interacting with over 1000 ingredient-based triage algorithms. In addition to providing recommendations to application users, the algorithms are being used as internal treatment guidelines by

seven poison centers. The algorithms are evidence-based. When evidence does not exist, they are based on the experience of participating poison centers. Participating poison centers provide invaluable assistance in improving the algorithms through their daily observations and feedback. The work associated with developing, maintaining, and expanding web**POISONCONTROL**® is enormously challenging. web**POISONCONTROL**® algorithm generation requires the author to view assessment and triage as a computer would. There are no shades of gray. No "well that depends". Everything is black and white. The scope of the project is huge. The application can be used for pharmaceuticals and non-pharmaceuticals so algorithms must be written for many substances that we personally chose to ignore in our careers because they were uncommon or of no interest to us. There are many questions that arise in a typical week about excipients, strength of the literature, product variants, optimal threshold profiles and so on.

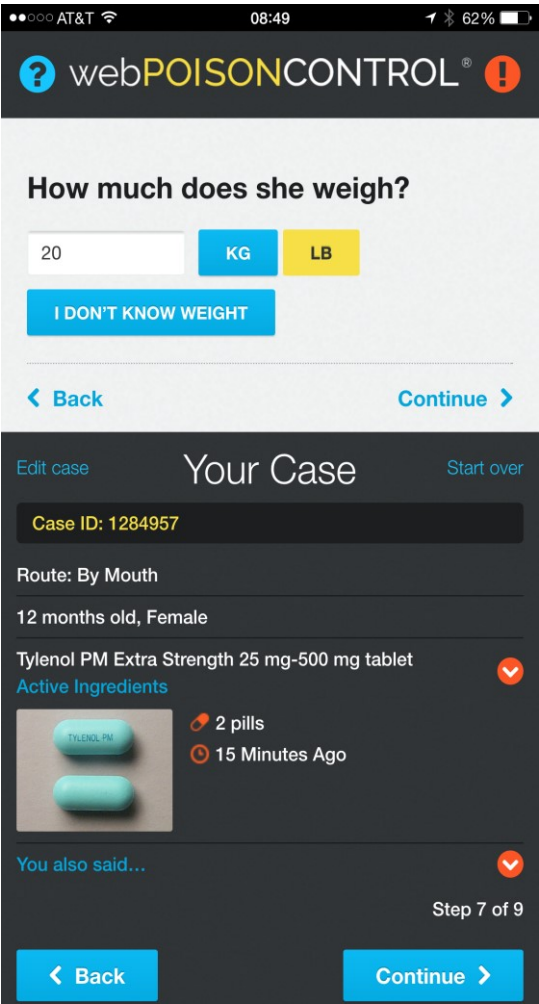
At the same time the work is extremely rewarding. We get to relearn clinical toxicology in a new way. We reexamine the literature, explore alternative triage strategies together, and collaborate in real-time across the continent. In addition, the work is incredibly meaningful. Algorithms in their ever-evolving form, have the potential to live forever. The application works day and night helping people all around the world. If web**POISONCONTROL**® is successful, there is an opportunity to help people we have never met, long after we have left this planet.

We would like to extend an open invitation to ABAT diplomats to participate in the continued development of web**POISONCONTROL**®. If this opportunity potentially appeals to you, you just want to learn more about web**POISONCONTROL**®, or you'd like to use the algorithms in your center, please contact Jess Benson (benson@poison.org) for details.

References

1. Ryan T, Ryan C. "Computer and Internet Use in the United States: 2013," American Community Survey Reports, ACS-28, U.S. Census Bureau, Washington, DC, 2014. Available from: <http://www.census.gov/content/dam/Census/library/publications/2014/acs/acs-28.pdf>
2. Pew Research Center, January, 2013, "Health Online 2013". Available at: http://www.pewinternet.org/files/old-media//Files/Reports/PIP_HealthOnline.pdf
3. Pew Research Center, April, 2015, "The Smartphone Difference" Available at: <http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/>

Figure 1 Screenshot of web**POISONCONTROL**® application



ABAT News:

Announcements/Requests:

- ✓ Rick Spiller and his colleagues are continuing to work on the pathophysiology pathway of benzocaine induced MetHb. They have established the reactive metabolite *in vivo*, but are in need of more cases with blood samples in the minutes right after the MetHb appears. If anyone is interested in helping out or has cases please contact Henry (Rick) Spiller at haspiller5@gmail.com.
- ✓ ABAT is looking for members who are interested in being part of the ABAT Education Committee. We are looking to form a special subcommittee of those who are interested in tackling the project of bringing awareness and education to EM Clinical Pharmacists, CSPIs and other possible organizations and their possible opportunity to become involved in ABAT. If you are interested, please contact Bryan Hayes at bryanhayes13@gmail.com
- ✓ We have received a plea from Cynthia. She is looking for possible researchers for a hair study. She wants hair samples collected 8 weeks after same day surgeries. A listing of the drugs that were utilized during the surgery would be required. The goal is to analyze the hair samples for single dose exposures. Anyone interested needs to contact her: Cynthia.Morris-Kukoski@ic.fbi.gov.



Booth Volunteers in Action in 2014!!

We are looking forward to San Francisco NACCT 2015. The grid is posted on the AACT website (www.clintox.org) or:

http://contemporaryforums.com/uploads/pdf/235_NACCT_Final_Master_Grid.pdf