

# The Syracuse Chemist

Volume 105/Issue 6



November 2013

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## Local Section Elections! Our Election Process

This year is the 3<sup>rd</sup> year that the Syracuse Section will be holding electronic elections. For the last two years we had a fantastic response rate, and we hope to keep that level of excitement and member involvement for this year's election. You will be receiving an e-mail ballot announcing the opening of the election window (December 2 to December 18). In three cases, for **Chair-Elect** and for two **Delegates outside Onondaga County**, there are currently no candidates running. There will be spaces for write-in recommendations for candidate appointments by the Executive Committee - perhaps you might consider recommending yourself!

This issue of the Chemist highlights some of the fantastic work your section has accomplished this year. We hope you can join us in our celebrations of chemistry next year, as a participant or as a member of the executive committee!

### *In Memorium*

Dr. Donald C. Dittmer, professor emeritus of chemistry, Syracuse University, died unexpectedly November 26, 2013 in his home. Donald Dittmer received his Bachelor of Science in chemistry at the University of Illinois, his PhD at MIT, and did his post-doctoral work at Harvard University. He was Emeritus Professor of chemistry at Syracuse University, where he continued working with post-doctoral students and his research, specifically in the making of compounds without the use of solvents which are potentially environmentally harmful.

In the local Syracuse Section, he has served as treasurer, councilor, and chair of the section. Donald was an active member of the section and served as delegate this past year. He shall be remembered for his devotion to his students and to his teaching.

A memorial service will be held in Syracuse to be announced at a later date. Donations may be sent in honor of Donald C. Dittmer to SU Chemistry Dept., 111 College Place, Syracuse, NY 13244. -

# Meet your candidates

## Chair - Jeffrey Schneider, Ph.D.

Dr. Jeffery A. Schneider received his doctorate degree in Physical Chemistry from Dartmouth College in 1992. His postdoctoral work at the University of Cincinnati was in the area of analytical separations. Upon completion of his postdoctoral studies, in 1994, he joined the faculty in the Department of Chemistry at the State University of New York at Oswego in Oswego, NY, where he has been ever since. Though his main teaching responsibilities are in General and Physical Chemistry, he does co-teach a course on Fermentation Science that travels with students to Europe to learn first-hand about the culture and history surrounding fermented products. His research interests are in the areas of fermentation science and arsenic in the environment.

As a past president of the Student Affiliate group at the University of Wisconsin-Milwaukee, Jeff understands the importance of getting students involved in the many facets of the Section's activities. Not only does it give students a sense of purpose, it also helps foster their participation throughout their careers as chemists. He looks forward to meeting and working with students in the section to encourage their participation.

When Jeff isn't busy being a chemist, he enjoys operating his ham radio (licensed since 1979), brewing beer (since 2005), and feeding his wanderlust by traveling across Europe with friends and family.

## Chair-Elect - Vacant

## Treasurer - Bob Fleischman

Bob holds a BS in Chemistry with a minor in Biology from LeMoyne College. For the past 15 years Bob has worked for Millipore Corporation as a Field Engineer (Customer Care Engineer) in the Northeast region. Prior to that he worked for Dialysis Clinic Inc. for over 9 years where he was a machine technician that was responsible for water purification equipment as well as ordering treatment supplies. Bob has been active in the Syracuse Section for over 5 years participating as Judge for the Greater Syracuse Scholastic Science Fair. For the past two years, Bob has served as Treasurer for the Syracuse Section.

### *Mission Statement*

As treasurer of the Syracuse Section of the ACS in 2012 and 2013, I have participated in the Executive Committee and fulfilled the responsibilities of my position overseeing the financial accounting for the Section. My 20+ years of supporting academic, industrial, and health care clients using my chemistry degree in an indirect manner has allowed me to bring a fresh perspective and new ideas to the Syracuse Section. I would be honored to be reelected and serve as treasurer of the Syracuse Section in 2014.

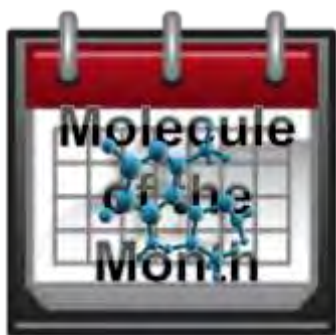
## Secretary - Anna O'Brien, Ph.D.

Anna is an assistant professor at LeMoyne College (LMC), teaching courses in analytical, instrumental, and environmental chemistry. She enjoys mentoring undergraduate students in research projects focused on green synthetic chemistry. Originally from Ohio, where she did her undergraduate (Chemistry) and MS (Chemical Engineering) at the University of Toledo, she has lived in the Syracuse area since 2000. She earned her Ph.D. in Chemistry from Syracuse University and had a teaching-research post-doctoral fellowship at Colgate University. She has helped with grading and proctoring for Science Olympiads held at LMC and will serve as advisor of the LMC Chemistry Club. In 2013, Anna served as Secretary for the Syracuse Section.

## Delegate at large- Joseph Mullins, Ph.D.

Dr. Mullins received an AAS degree from Niagara County Community College (Sanborn, NY) then worked as a chemical technician at Eastman Kodak in Rochester, NY. He graduated from the Rochester Institute of Technology with a B.S. degree in chemistry in chemistry (1990), and received a doctorate from the University of Rochester in 1996, specializing in organic synthesis/methodology. He has held visiting assistant professorships at Salisbury State University (MD) and the Rochester Institute of Technology. Since 1999 he has been at Le Moyne College, Syracuse, NY where he currently holds the position of associate professor of chemistry. He has served as secretary of the Syracuse section of the American Chemical Society from 2002-2003 and 2007. Joe lives outside Onondaga County.

## Delegates Outside Onondaga County (2) - Vacant



## Molecule of the Month

*Identify the compound and submit your answers to our Quizmaster, Dr. Daniel Barr ([dabarr@utica.edu](mailto:dabarr@utica.edu)) - the first person to answer correctly will get a special mention in the next issue of the Chemist!*

This month's puzzle is in the form of a cryptogram: Each letter in this quote from a has been replaced using a random other letter (e.g. X for A, O for B, etc).

“FMRGIMG IGSGD FZPSGF T ADZYPGN XRVLZHV MDGTVRIU VGI NZDG” - UGZDUG YGDITDB FLTX

# National Chemistry Week 2013

By: Joy Logan



The Syracuse Section of the American Chemical Society kicked off National Chemistry Week on October 12<sup>th</sup> at Abbott Farms in Baldwinsville, NY. Volunteers from the section and the Baldwinsville community provided hands-on activities to more than 75 children who visited the farm during the day. This event connected the Section to the community by engaging and educating the public on agricultural chemistry. In collaboration with the farm, the Section provided \$1 off coupons for pumpkins to participants along with information regarding additional National Chemistry Week events that were to be held across the region. The farm was delighted with our participation and has requested that we return for future events!

On October 13<sup>th</sup>, the Syracuse Section teamed up once again with the Carol Baldwin Foundation for the 3<sup>rd</sup> annual "A Run For THEIR Life" to support breast cancer research. ACS members Sally Mitchell and Amanda Lashua participated in the 5K walk/run. Volunteers from area high schools, colleges and universities provided hands-on activities and balloons to children attending the event. The walk/run event met with great participation from the local community with over 700 runners and more than \$74,000 going directly to Upstate Medical University, a Syracuse research hospital.

The Syracuse Section hosted our main National Chemistry Week event for the second year at Destiny USA in Syracuse, NY on October 19th. This year's event, "The Evolution of Energy", had seventy-four volunteers from three high schools, five colleges/universities, the greater Syracuse community and ACS members join together to present hands-on activities and demonstrations connected to energy. More than 100 children and their families navigated a series of activity tables ranging from solar powered cars to UV bead bracelet making, connecting chemistry and energy. In collaboration with Destiny USA and WonderWorks of Syracuse, discount admission coupons were provided to all participants for WonderWorks, a hands-on science attraction.



A National Chemistry Week satellite event was held at Cazenovia College on October 24th, where faculty and students organized "Science Is Fun" night for children (ages 5-12). More than 120 people attended the event and children had fun viewing chemical demonstrations and participating in numerous hands-on activities. A two-hour long celebration of science included flash-mob style singing of a humorous song about science. The event was sponsored by the Syracuse Section of the ACS, the Division of Humanities and Natural Sciences and two Cazenovia College students clubs: the

Environmental Club and the Education Club. The organizers were able to show the children who attended the event that science is indeed fun!

To conclude our month of events, East Syracuse-Minoa High School hosted "Spooktacular" on October 26<sup>th</sup>. Volunteers from area high schools and universities along with ACS members provided hands-on demonstrations and activities for over 500 children during a Halloween themed science event. This event, in its tenth year, was met with tremendous participation from the community.

# ACS NERM 2013

The 2013 NERM conference was a fun and relaxed atmosphere to share fascinating and cutting-edge research with colleagues from other institutions. Congratulations to all of our local section participants on their excellent and informative presentations:



Towards heterobimetallic alkaline earth metal bismuthates as MOCVD precursors

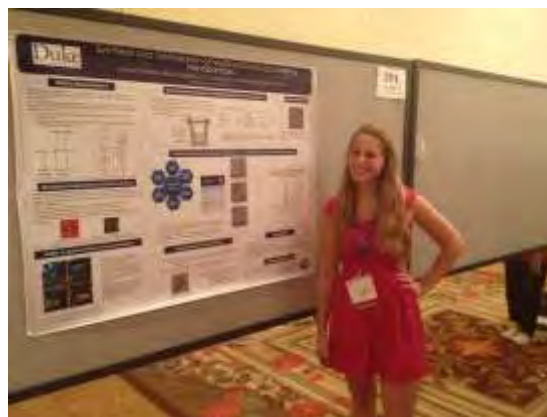
*Authors:* Cody C. Webb Jr, Alan Goos, Anna O'Brien, Karin Ruhlandt

Computational modeling of AMPK mutants reveals a critical salt bridge between K485 and D248 that mediates ligand-dependent regulation of the kinase

*Authors:* Heather N McManus, Hector Barajas-Martinez, Charles Antzelevitch, Dan Hu, Daniel A Barr

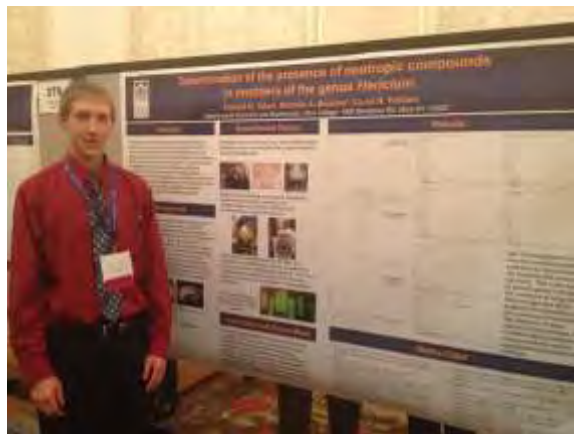
Synthesis and Characterization of alpha-Helical Mimetics for Protein Binding Studies

*Authors:* Shaquille D. Barnes, Michelle A. Boucher, Daniel A. Barr



Determination of the presence of nootropic compounds in members of the *genus Hericium*

*Authors:* Richard M Tehan, Michelle A Boucher, Curtis R Pulliam



Role-playing as chemists: Reflections on running a laboratory driven core course

*Authors:* Michelle A. Boucher, Alyssa C. Thomas

Truncated variants of the GCN4 transcription activator protein bind DNA with dramatically different dynamical motifs

*Authors:* Danielle M McHarris, Daniel A Barr

Preliminary biomarker study in a population occupationally exposed to heavy metals

*Authors:* Carolyn Joyce, Jessica Blodgett, Kestutis Bendinskas

EDTA decreases trypsins' activity and affects the quality of peptide MALDI-TOF MS data

*Authors:* Hoangvy Nguyen, Lulu Zhang, Kestutis Bendinskas



# Chemistry And... The Media

*By: Daniel Barr*

At this year's Northeast Regional Meeting (NERM) of the ACS, we had the privilege to hear from Prof. Donna Nelson, science advisor for the hit TV show *Breaking Bad*. Donna's story highlights some interesting aspects of the relationship between science and the media, which has important implications for the public perception of science and the recruitment of new students into science and technology disciplines.

Donna's story starts with the premise that nothing will get better if we just sit on the sidelines and complain about how science is portrayed on TV. Donna first got exposed to *Breaking Bad* through an article in *C&EN* interviewing Vince Gilligan, the producer of the show, about his approach to the science of synthesizing methamphetamines. In the interview, Gilligan said that the show did not have a budget for a formal science advisor and so they had to just look stuff up on the internet and do the best they could. Gilligan and the writers were interested in doing the best they could to accurately represent the science, and he said in the interview that they would welcome input from a chemically-knowledgeable audience. After spending several years as an advisor to the show, Donna asked Gilligan how many people had responded to his interview in *C&EN*; of the more than 100,000 readers of the magazine, she was the only one who actually followed up and offered to provide scientific input for the show. If we want to have an impact on what the next generation of young people see about science in the media, we need to be willing to get involved.

It is often easy for us to scoff not only at the way science is portrayed in popular media, but at the types of science that are shown, and *Breaking Bad* is an excellent example of this. Donna talks about a long process of indecision about whether or not she felt it would be right to get involved with a show whose premise was so deeply entrenched in dark themes of drugs, gangs, and violence. She asked herself whether that was the kind of science (and the context for that science) that young people should be seeing. She explains that two factors helped her to decide to get involved with the show. First, she appreciated that the show portrayed drugs and gang violence as a bad and dangerous thing and thus not something that kids would (should?) aspire to. She also realized that the show was becoming incredibly popular and would be a hit series whether the science was correct or not, so she figured it was worth doing whatever could be done to make sure the science was as accurate as possible. As a result, people who watch *Breaking Bad* are exposed to accurate scientific concepts and reasoning, which represents a huge step forward in the collaboration between science and popular media.

So what do we learn from all of this? Donna's advice to young people (or anyone) interested in getting involved in popular science is threefold: dream big, be persistent, and be ready! Be able to recognize and seize opportunities when they arise and make the most of every chance you get.

Want up-to-the-minute information about the section?  
Bookmark <http://syracusesection.sites.acs.org> to get all the  
latest news and events!



## Syracuse Chemist

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### Deadline for material:

Chemists will be published every other month beginning in January. The deadline for submitted materials will be the 15<sup>th</sup> of every even numbered month (Ex. 2/15 for the March issue). Please submit print ready materials to Michelle Boucher mboucher@utica.edu

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### Advertising Rates

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