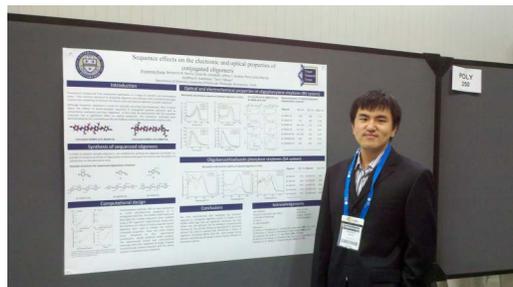


Student Travel Grant Recipient Reports on Fall ACS National Meeting

Thanks for the travel grant provided by the ACS Pittsburgh section. I was very excited for their support giving me a chance to participate in the ACS meeting in Indianapolis this fall. It's a great conference, and I enjoyed every minute there.

As a chemistry graduate student, I learn a lot from other researcher's work through ACS publications and keep myself up to date. The ACS conference

provides a great opportunity to learn about the newest and coolest work in chemistry. Every day, I spent all day in talks across different symposiums. Some of them were closely related to my research and very helpful to solve problems I have or suggestive in some aspects to make my research more solid. There were also some other talks that were not related but really innovative. They inspired me a lot about science. Since the ACS conference is very large it includes talks in many different research areas across the whole chemistry world. Everyone can find things that are very interesting and helpful to them. It's also a great time to go outside the area I work in, the lab, and learn about other attracting fields in chemistry.



Student Travel Grant Recipient Shaopeng Zhang at the fall ACS National Meeting.

Even though you can read other people's papers at university and know their research quite well, attending their talks is still quite different. Usually during the talk, presenters talk about several of their papers in a more systematic way, so that you can understand their general thoughts toward the trend of the research field which provides a good guide for new researchers. I met some well-known scientists during the meeting, like the Nobel Prize laureate Prof. Grubbs, as well as other famous scientists in my research area like Prof. Cheng and Prof. Bao. I had known their names for a long time from their publications. But from their talk, I learned some of their unpublished work, asked some questions and discussed with them my confusion.

At night, there was a poster section. It was held in a very big room in the convention center with hundreds of posters exhibited each night. I liked to walk around the posters and talk

Dr. Dennis Curran Awarded Ernest Guenther Award

Dr. Dennis P. Curran of the University of Pittsburgh won the Ernest Guenther Award in the Chemistry of Natural Products. The purpose of the award is to recognize and encourage outstanding achievements in the analysis, structure elucidation, and chemical synthesis of natural products. Congratulations, Dr. Curran!

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American Chemical Society Pittsburgh Section
2013 PITTSBURGH AWARD BANQUET
TUESDAY ♦ DECEMBER 10, 2013

Honoring
2013 Pittsburgh Award Recipient
Dr. David Waldeck
&
2013 Distinguished Service Award Winner
Dr. Gerald Carlson

Pittsburgh Athletic Association ♦ Main Dining Room
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Social Hour 6:00 PM ♦ Dinner 6:45 PM
Award Presentations 7:45 PM

Cost: \$45.00 (\$22.50 Student or Post-doc)
Cash Bar ♦ \$5 Valet Parking



The Award Presentations are free and open to the public.



Registration & payment must be received by Dec. 4th.

Mail this registration form and check (made payable to "Pittsburgh Section ACS") to:

Amy Rupert ♦ 1010 Goehring Street ♦ Pittsburgh, PA 15212

Name: _____

Address: _____

Email: _____ Phone: _____

Please indicate meal choice: _____ Spinach and Ricotta Stuffed Chicken Breast (w/ Saffron Veloute)

_____ Steak Au Poivre (Peppercorn crusted Strip Steak w/ Brandy Cream Sauce)

_____ Roasted Vegetable Ravioli (w/ Vodka Tomato Cream Sauce)



Society for Analytical Chemists of Pittsburgh



January Meeting
Monday, January 13, 2014
8:00 PM
Duquesne University

“Going Viral: Tracking Epidemics by NextGen Sequencing”

Elodie Ghedin, Ph.D.

Department of Computational and Systems Biology
Center for Vaccine Research
University of Pittsburgh School of Medicine

Abstract: Second and third generation deep sequencing promise to transform our understanding of microbial evolutionary dynamics, allowing the description and dissection of the mutational spectrum of microbial and viral populations at an unprecedented level of precision. Despite the availability of reference genomes for 3000 viral species and more than 6000 bacteria and eukaryotes that are either completed or in progress—many of which pathogens—novel infectious agents remain to be discovered and characterized. With the advent of human microbiome studies where metagenome deep sequence data are used to characterize mixed microbial communities, determining what qualifies as a pathogen will require a systems biology approach to data analysis. Despite its undoubted potential, ultra-deep sequencing also comes with a number of inherent analytical difficulties. Presenting data on emergence and transmission of pathogens in host populations, I will illustrate the clinical and epidemiological value of high-resolution mapping of genomic variants by deep sequencing, and the limitations the field would need to overcome for this novel approach to reach its full potential.

Bio: Dr. Elodie Ghedin is an Associate Professor in the Department of Computational and Systems Biology and a member of the Center for Vaccine Research at the University of Pittsburgh School of Medicine.

She received her BS and PhD from McGill University (Montreal, Canada) and was trained as a postdoctorate fellow at the Laboratory of Parasitic Diseases of the National Institute of Allergy and Infectious Diseases/NIH and at The Institute for Genomic Research (TIGR, now the J. Craig Venter Institute).

Her research is aimed at generating critical insight about host-pathogen interactions and pathogen population structures. She uses functional and comparative genomics, computational and evolutionary biology, and molecular biology techniques to focus on the agents that cause diseases endemic to tropical climates, such as lymphatic filariasis (elephantiasis), onchocerciasis (River Blindness), and leishmaniasis, as well as global diseases such as seasonal and pandemic influenza. Dr. Ghedin joined the University of Pittsburgh in 2006 after spending six years at TIGR where she led the influenza virus and the lymphatic filariasis (*Brugia malayi*) genome projects. In 2011, citing the creativity and collaborative nature of her work and her contributions to parasitology and virology, the MacArthur Foundation recognized Dr. Ghedin with their fellowship award.

Dinner Reservations: Please email the SACP Administrative Assistant, Valarie Daugherty at daugherty@pittcon.org by Tuesday, January 7, 2013 to make dinner reservations. Should you not have email, please call 412-825-3220, ext 204. Dinner will cost \$10 (\$5 for students) and checks are to be made out to the SACP. If you have any dietary restrictions, please let Valarie know when you leave message.

Parking: Duquesne University Parking Garage entrance is on Forbes Avenue. Upon entering the garage, you will need to get a parking ticket and drive to upper floors. Bring your parking ticket to the dinner or meeting for a validation sticker. Please contact Duquesne University, if any difficulties should arise.

Using A Form Of 'Ice That Burns' To Make Potable Water From Oil And Gas Production

ACS Sustainable Chemistry & Engineering

In the midst of an intensifying global water crisis, scientists are reporting development of a more economical way to use one form of the "ice that burns" to turn very salty wastewater from fracking and other oil and gas production methods into water for drinking and irrigation. The study on the method, which removes more than 90 percent of the salt, appears in the journal *ACS Sustainable Chemistry & Engineering*.

Yongkoo Seol and Jong-Ho Cha explain that salty wastewater is a byproduct of oil and gas production, including hydraulic fracturing, or fracking. These methods use water and produce as a byproduct almost 10 barrels of salty water for every barrel of oil. That water could help people in water-stressed regions. But it can't be desalinated economically with traditional methods. Seol and Cha knew that an alternative called "gas hydrate desalination" showed promise. A gas hydrate consists of only water and a gas such as methane, the stuff of natural gas. Thus, when hydrates form, salts and other impurities are left behind. When the hydrate breaks down, the gas and pure water are released. However, forming the gas hydrate used in desalination required costly chilling of the water to 28 degrees Fahrenheit. Seol and Cha sought to develop a less costly version of the method, which involves a variation on methane hydrates, chunks of ice that burst into flame when brought to the surface.

They describe development and laboratory testing of a new type of gas hydrate desalination technique. They formed the hydrates from water and carbon dioxide with the gases cyclopentane and cyclohexane, which made the method work more efficiently. It removed more than 90 percent of the salt compared to 70 percent with the previous gas hydrate technique. And the process works at near-room temperature, reducing the need for chilling.

The authors acknowledge funding from the U.S. Department of Energy's National Energy Technology Laboratory.



Using a form of the "ice that burns," scientists are reporting development of a more economical way to turn salty wastewater from oil and gas production methods into water for drinking and irrigation.

Credit: U.S. Geological Survey

Applications for Student Travel Awards Now Being Accepted

The Pittsburgh Section of the American Chemical Society has budgeted funds to help encourage undergraduate/graduate student participation in national and regional ACS meetings. The awards are intended to help defray meeting registration and travel-related expenses (lodging, transportation, per diem) for eligible students. To apply for the funds, one should simply complete the application (available on our web site at www.pittsburghACS.org) and return it by the relevant deadline to:

Pittsburgh Section ACS
Travel Grants
Attn: Dr. Michelle Ward
Room 107 / Chevron Science Center
219 Parkman Avenue
Pittsburgh, PA 15260

Each year, the Pittsburgh Section of the ACS will award up to four \$500 grants to aid our undergraduate/graduate student members in presenting papers or posters at ACS Meetings. Awards will be made based on the scientific merit of the paper/poster to be presented and financial need. The deadlines for receipt of applications are 12/01/2013 (for travel to be completed by 06/30/2014) and 06/01/2014 (for travel to be completed by 12/31/2014).

Our Section is looking forward to helping increase the participation of local students in ACS conferences. If you have any questions, please do not hesitate to contact Dr. Michelle Ward, muscat@pitt.edu or 412-624-8064.

Student Travel Grant Recipient Report Continued from Page 1

to people. It was a very efficient way to discover research that was interesting to me from a large amount of posters. I also presented a poster. One thing I liked a lot about the poster section, whether I presented or read other people's posters, was that I had plenty of time to discuss and talk with other graduate students. There was no time limit and you can ask a lot of questions and talk about many things. It's a great opportunity to expand my network and get very helpful advice from people. I talked with graduate students from many different universities, professors and some editors of well-known research journals. I was very happy that they were interested in my work and thought it would be very important in our area. We all enjoyed the talk and I am still in touch with some of them even after the meeting.

This was the first ACS meeting I had been to. It was a wonderful meeting with so many talented people getting together and sharing their new discoveries. I was very happy to be part of it and I am looking forward to the meeting next year.



Adopt-A-Vet Holiday Stocking Drive

Join with the Women Chemists Committee and the University of Pittsburgh ACS Student Affiliates, as we look to bring a little holiday cheer to the patients at the VA Hospital in Oakland.

December 1st – 17th we will be collecting stockings and filling them with items from a wish list we received from the hospital. These stockings will then be hand-delivered to the inpatient and outpatient veterans. The wish list can be found on the Upcoming Events page of the WCC website (www.pghWCC.org) or by contacting Dr. Michelle Ward (muscat@pitt.edu).



CERM 2014 Save the Date!

The Central Regional Meeting of the ACS will be held October 1-4, 2014 at the Doubletree by Hilton Green Tree Hotel, Pittsburgh.

For more information, visit the CERM website at www.acscerm2014.org.

ACS Pittsburgh Section Polymer Group Reactivated

ACS Pittsburgh Section's Polymer Group will be reactivated and functioning in the year 2014 to promote technological and environmental innovation in the polymer sciences. If you are interested in joining the polymer group or want more information, please contact Kailas Sawant at kbs@wspchemtech.com.



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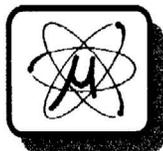
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Services

Volunteers Needed!

There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Heather Juzwa at hljuzwa@shimadzu.com!

Crucible Deadline

The deadline for items submitted to The Crucible is the 1st of the month prior to publication.

For example, all items for the January 2014 issue must be to the editor by December 1, 2013.

The Crucible

The Crucible is published monthly, August through May. Circulation, 2,500 copies per month. Subscription price, six dollars per year. All statements and opinions expressed herein are those of the editors or contributors and do not necessarily reflect the position of the Pittsburgh Section.

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A newsletter of the Pittsburgh Section of the American Chemical Society

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Pittsburgh Area Calendar

Tuesday, December 10

2013 Pittsburgh Award Banquet

Pittsburgh Athletic Association, 4215 Fifth Ave., Pittsburgh, PA

Monday, January 13

Society for Analytical Chemists of Pittsburgh

“Going Viral: Tracking Epidemics by NextGen Sequencing”

Elodie Ghendin, Ph.D., Department of Computational and Systems Biology, Center for Vaccine Research, University of Pittsburgh School of Medicine

Duquesne University, Pittsburgh, PA