



ISOTOPICS

The Cleveland Section of the American Chemical Society

Volume 92 Issue 8

November 2016

November Meeting Notice

Wednesday, November 16, 2016

Speakeasy

1948 W. 25th St., Cleveland, OH

www.Speakeasy216.com

4:30 pm Executive Committee Meeting
5:30 – 7:00 pm Networking, social and dinner
7:00 – 8:00 pm Presentation by Dr. Leah Shriver, U. Akron

On Deck:

Friday 12/16/16

Social

Lake Erie Monsters Game

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“Profiling the biochemical pathology of CNS disease with mass spectrometry-based metabolomics”

Dr. Leah Shriver, University of Akron

Global metabolomics identifies systemic changes in cellular biochemistry by determining alterations in small molecule metabolites with liquid chromatography-mass spectrometry. Metabolite profiling, a complement to genomics and proteomics, has the potential uncover new therapeutic targets and biomarkers to facilitate the diagnosis and treatment of disease. This talk will focus on our work elucidating functional roles for changes in lipid metabolism, energy generation, and the one-carbon cycle that occur in neurodegenerative diseases.

DINNER RESERVATIONS REQUESTED:

Please RSVP to Dr. Lisa Ponton (lponton@bw.edu) with the names and number of people in your party by 5:00 pm on Friday, November 11th. An RSVP is not required, but requested to better estimate the number of attendees. Attendees will receive a \$5 coupon to be used toward food and drink for this event. There is no cost to attend this event.

Attendees will be able to purchase food and drink from the Speakeasy’s special events menu, which includes sharable plates, such as a cheese board, charcuterie board, and Pomme Frites, in addition to many pizza options.

Note for the Chair-Elect

We had a very successful November meeting. Approximately 70 people turned out for the tour of the Sherwin Williams Warrensville site. The evening began with a presentation by Dr. Nemi Jain on important advances in the paint industry through Sherwin Williams' 150-year history and the importance of innovation to those advances. We had the opportunity to tour the analytical labs, spray facility, and the color labs. I particularly enjoyed hearing how they use analytical tools to solve customer's problems. The evening concluded with a wonderful buffet with posters highlighting recent Sherwin Williams projects. On behalf of the Cleveland-ACS, I would like to extend a thank you to Dr. Nemi Jain and his team for hosting us. They truly went above and beyond to plan an eventful evening. I would also like to thank everyone who attended the meeting. Without you, the event would not have been successful. I look forward to seeing you at our next meeting.

Lisa Ponton, Chair-Elect

Announcement: Upcoming ACS Cleveland Event is a Social

Friday, December 16, 2016
Lake Erie Monsters v. Iowa Wild
Quicken Loans Arena, 7 pm
Doors open at 6 pm

Group ticket price is \$24. Please turn in the ticket form with payment to Lisa Ponton at the November meeting. To ensure group seating the forms need to be turned in together. Lisa will be turning in the forms to the Lake Erie Monsters no later than Monday Nov. 24th. Tickets will be distributed via Flash Seats.

Calder Cup Champions Fleece Blanket Giveaway - First 10,000 fans receive a Calder Cup Champions Fleece Blanket presented by Constellation

Chuck-a-Bear Toy Drive presented by Step 2:

Join the Cavaliers, Monsters and Quicken Loans Arena in donating new, unwrapped toys at the available Toy Drive bins located on the main concourse at Quicken Loans Arena. All toys will be distributed to underserved children in Northeast Ohio.

1-2-3 Fridays - \$1 soda, \$2 hot dogs, and \$3 draft beers

Call for Nomination: The Morley Medal

The Cleveland Section annually sponsors a regional award, which consists of the Morley Medal and an honorarium of \$2,000. The next presentation of the Morley Medal will take place at a meeting of the Cleveland Section ACS in May 2017. The award is presented at a banquet, at which time the recipient will deliver the Edward W. Morley Lecture. Travel expenses for the medalist and spouse will be provided.

The purpose of the award is to recognize significant contributions to chemistry through achievements in research, teaching, engineering, research administration and public service, outstanding service to humanity, or to industrial progress.

The area of eligibility includes those parts of the United States and Canada within about 250 miles of Cleveland. The contributions for which the award is given should have been made by the awardee when a resident of this area, or if a major contribution was made elsewhere, the nominee should have continued to make contributions while a resident of this area. Nominations may be made by any member of the American Chemical Society, The Chemical Society or the Chemical Institute of Canada.

Nominations for the Morley Medal should include a letter of nomination and curriculum vitae including the candidate's education, professional experience & activities, awards & honors, offices held and specifics on significant contributions. The letter of nomination should

highlight these significant contributions. A representative list of references to the candidate's more important contributions, an evaluation of the significance of these achievements, and a listing of the nominee's most significant publications and patents are also appropriate. Added consideration will be given to individuals under the age of 48 with demonstrated accomplishments and for promise of continuing significant future accomplishments. Strong seconding letters are also suggested. The specific reference for every publication or patent is neither required nor encouraged. Electronic submissions are preferred.

Deadline for receipt of nominations is **December 16, 2016**. Send nomination and supporting material to:

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From ACS Discoveries: How protein fragments associated with Alzheimer's could trigger Parkinson's

ACS Chemical Neuroscience

Alzheimer's and Parkinson's diseases are different neurodegenerative conditions that can sometimes affect the same person, which has led scientists to investigate possible links between the two. Now one team, reporting in the journal *ACS Chemical Neuroscience*, has identified how amyloid beta, the protein fragment strongly associated with Alzheimer's disease, can induce cellular changes that might lead to Parkinson's.

Scientists still don't fully understand what causes these neurodegenerative conditions, but their investigations have revealed some insights. For example, certain molecular changes have emerged as factors in the development of these disorders. One such change is the mutation of an

enzyme called protein disulfide isomerase (PDI) that protects neurons. And some research has hinted that biomarkers related to one disease can spur molecular processes leading to others. Mahesh Narayan and colleagues wanted to see how a particular form of amyloid beta might trigger cellular changes that can induce Parkinson's disease.

In their lab, the researchers incubated certain amyloid beta fragments — referred to as A β (25-35) — with cells (known as SH-SY5Y) often used in Parkinson's research. This set off in the cells a cascade of molecular changes associated with Parkinson's, including chemical mutations to PDI and the formation of protein clumps known as Lewy bodies. The results could provide an explanation for how someone with Alzheimer's might also develop Parkinson's. The findings also could help researchers discover ways to prevent this from happening.

The authors acknowledge funding from the Alzheimer's Disease Research Foundation.