



ISOTOPICS

The Cleveland Section of the American Chemical Society

Volume 90 Issue 2

February 2014

On Deck:

March 12, 2014

Meeting-in-Miniature

Baldwin Wallace University

February Meeting Notice

Wednesday, February 19, 2014

Cosponsored with Iota Sigma Pi
Crop Bistro and Bar, Cleveland

4:30 pm	Executive Committee Meeting
5:30 pm	Social/Networking
6:00 pm	Dinner
7:00 pm	Presentation

Cleveland ACS Officers

Chair:

Michael J. Kenney
Case Western Reserve Univ.
216-368-3736
mjk56@case.edu

Chair-Elect:

Theresa Nawalaniec
Michael Schwartz Library
Cleveland State University
Phone: 216-687-3504
t.nawalaniec@csuohio.edu

Treasurer:

John Moran
Department of Science and
Mathematics
Phone: 216-373-6380
jmoran@ndc.edu

Secretary:

Anna Cronin
cronina@glsc.org

Cleveland Section Web Site:

http://www.csuohio.edu/sciences/dept/cleveland_acs/

Water Treatment for the Commercial Kitchen

Ed Robakowski, Kineticco

This presentation will follow the path water takes from its source, through the Municipal Treatment Plant to the Point of Use at its' intended destination and within. What will be covered are the changes that occur both physical and chemical as it proceeds through each unit process. The mechanisms of each component, Filtration, Adsorption, Ion Exchange and Membrane Separation will be explored. Most importantly why this process is beneficial and desirable in the Commercial Kitchen environment.

DINNER RESERVATIONS REQUIRED:

Please RSVP by Sunday, February 16 via email to <http://tinyurl.com/acscleveland> or eigensolutions@gmail.com. An email acknowledgement including dinner menu and a phone number for additional questions will be sent at that time. Checks made out to "Cleveland ACS" are greatly appreciated; cash otherwise. \$20 for members and guests, \$10 for retirees or unemployed, \$5 for students.

Directions to Crop Bistro and Bar

2537 Lorain Ave.
Cleveland, OH 44103

One of America's top restaurants (according to *Zagat*)...Cleveland's **best** restaurant (according to Cleveland's *Scene*)...and winner of the 2012 *Wine Spectator Award of Excellence*, Crop Bistro & Bar is located in the heart of Cleveland's historic Ohio City neighborhood, and features a menu of modern American cuisine, built upon foundations of flavor, freshness, and invention.

A project of well-seasoned Chef and food professional Steve Schimoler, Crop was originally imagined as a laboratory for Chef Steve's cutting-edge culinary research – a Customized Restaurant Operations Platform, if you will. Today, that concept has expanded into a casually elegant showplace for Steve's relentlessly inventive fare.

Relying heavily on local foodstuffs culled from the region's small farmers and artisanal producers, the menu is a celebration of contemporary craftsmanship, focused on intense flavors, top-quality ingredients, and a heaping helping of culinary whimsy. Like the harvest, the dishes change frequently, to best utilize all that is fiercest, freshest, and most fabulously delicious.

Speaker Bio

Ed Robakowski is the Sr. Research Scientist at Kinetico Incorporated. He has over 30 yrs. of experience in the Industrial, Municipal, Commercial and Residential Water Treatment Industry. His areas of expertise are in Ion Exchange, Membrane Separations, Waste Minimization, and Analytical Chemistry. He is a long time member of the AWWA, AOAC, WEF, & ACS. He is also a former member of the NSF Joint Committee on Drinking Water Treatment Units. He holds a State of Ohio Class 1 Public Water Supply Operators Certification and a BS degree from Cleveland State University.

Champions for Heller Award Nominees Sought

By Don Jaworske

The Heller Award, described below, is in need of Champions to sponsor highly deserving High School teachers for the Award. In the past these Champions have been critical in successful award nominations. Nominees and/or their major nominator request Champions to assist with the nomination process. The job of Champion consists of reviewing the nominee's credentials and perhaps other supporting letters for effectiveness and to ensure they address the criteria for the award. It also typically requires a supporting letter for the nominee, often based on the nominee's package and/or a telephone interview with the nominee. If interested in working with and sponsoring a nominee, please respond to Don Jaworske at Donald.A.Jaworske@nasa.gov by February 28, 2014.

Call for Nominations: Irene C. Heller Award

Presented to an Outstanding High School Chemistry Teacher by the Cleveland Section of the American Chemical Society

The Cleveland Section of the American Chemical Society annually sponsors an award to recognize an outstanding high school chemistry teacher in the Cleveland Section. The award consists of an honorarium of \$1,000 and a framed certificate. The award is named for Irene Heller of North Olmsted High School in recognition of her contributions as an outstanding high school chemistry teacher and her service to the Cleveland Section. Nominations for the award should be presented to Jeff Mathys 11535 Cherokee Street, Brecksville Ohio 44141 by close of business Friday, March 7, 2014. The nominations should consist of information on the candidate's education, professional experience and activities, awards and honors, offices held and specifics on significant contributions. The letter of nomination should highlight these significant contributions.

Seconding letters are suggested. A detailed curriculum vita of the candidate may also be included. Nominations should be sponsored by at least one member of the Cleveland Section. If you do not know a local section ACS member willing to serve as Champion for your candidate, contact Jeff Mathys and he will provide one for you. The Cleveland Section is geographically confined to the counties of Cuyahoga, Geauga, Lorain, Medina, Huron, and Erie. Electronic nominations using Word or PDF Files mailed to jmathys.family@gmail.com will be greatly appreciated. Jeff Mathys may be contacted at 440-812-9666 during business hours for assistance with submissions.

The award will be presented at the April, 2014 meeting of the Cleveland Section.

MIM Call for Abstracts

By Lisa Ponton

This year's Meeting-in-Miniature of the Cleveland Section will be held Wed. March 12 at Baldwin Wallace University, with talks beginning at 3pm.

A highlight of the MIM is the 10-15 minute talks across all areas of chemistry. Again this year there will be cash awards given for the best undergraduate and graduate student talks. Although awards are given to encourage participation by students, we welcome talks by all practicing chemists at the MIM.

Please limit the abstract to 250 words and include names and affiliations of all authors with the presenting author's name underlined. Abstracts should be submitted, as Word or RTF files, to Dr. Lisa Ponton (lponton@bw.edu), by Monday, March 3. Please send abstracts with a subject line of "MIM-undergrad", "MIM-grad" or "MIM-regular" to insure that they are tracked properly.

Selected from ACS Discoveries!

New way to fight antibiotic-resistant bacteria: Target human cells instead

ACS Chemical Biology

As more reports appear of a grim "post-antibiotic era" ushered in by the rise of drug-resistant bacteria, a new strategy for fighting infection is emerging that targets a patient's cells rather than those of the invading pathogens. The technique interferes with the way that the pathogens take over a patient's cells to cause infection. This approach, published in the journal *ACS Chemical Biology*, could help address the world's growing problem of antibiotic-resistant "super bugs."

Huib Ovaa, Jacques Neefjes and colleagues explain that the problem of antibiotic-resistant bacteria poses a major public health threat. Health organizations have warned that unless alternatives to classic antibiotics are developed, even infections from minor scrapes could become deadly. Pharmaceutical companies are working on only a few new antibiotics, and they all take the same approach – attack the bacteria. But resistance is always a possibility. To get around this, researchers are now looking more closely at how bacteria co-opt the cells they invade for survival. These researchers previously reported that at least one set of host cell proteins, called kinases, can control bacterial growth. Ovaa and Neefjes' team decided to look at another class of proteins, called phosphatases, that act in the opposite way from kinases to see if inhibiting them would have a similar effect.

In lab tests, they identified phosphatases in human cells that are involved in bacterial survival. They also identified small molecules, or potential drugs, that could stop those phosphatases from working. Those molecules, which could form a new class of antibiotics, successfully stopped *Salmonella*, their test bacteria, from growing. Because this approach jams the host cell machinery rather than directly attacking the bacteria, the chances of bacteria developing resistance could be very low, say the researchers. They also say that the research shows that phosphatases, like kinases, could be general targets for drug development.

The authors acknowledge funding from The Netherlands Organization for Scientific Research (NOW), the Dutch Cancer Society (KWF), a European Research Council Advanced Grant, and The Netherlands Proteomics Centre supported by The Netherlands Genomics Initiative.

ISOTOPICS STAFF

Editor:

Daniel Tyson
Day-Glo Color Corporation
Phone: 216-391-7384
daniel_s_tyson@yahoo.com

Business and Advertising:

Anna Cronin
cronina@glsc.org

Associate Editor

Dwight Chasar
dwight.chasar@yahoo.com

Associate Editor

Richard L. Middaugh
Phone: 440-785-0293
rlmiddaugh@ameritech.net

Associate Editor

Meenakshi Hardi
Phone: 440-941-6467
minaxie@gmail.com

Associate Editor

Daniel Scheiman
QSC/NASA GRC
Phone: 216-433-3223
daniel.a.scheiman@nasa.gov

Isotopics is looking to highlight local chemistry professionals, companies, teachers, research groups, students, events, and more. If you have an idea for an *Isotopics* article, please contact the editor. *Isotopics* is also looking for local members to join our staff. Time commitments for staff members are minimal (a few hours a year!) and your contributions will be invaluable to our local section. If you are interested in joining *Isotopics*, please contact the editor.