

CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

February, 2015
Vol. 52 No. 5

Section Calendar

Upcoming Events

February 12	"Nanomedicine", Mt St Joseph U
March 18	Chemist of the Year Venue, Miami U
Mar 22-26	Spring National ACS Meeting, Denver, CO
April 22	Teacher and Student Awards, Northern Kentucky University
May 15	Party Night, Great American Ballpark

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February Monthly Meeting

Sponsored by Praxair

"Nanomedicine"

College Theatre Lobby, Mount St. Joseph University

Meeting Program

5:30 -
6:00pm

Board meeting

6:00 -
7:00pm

Registration and Social Hour

7:00 -
7:45pm

Dinner, Theatre Lobby

\$25.00 Members/Guests
\$15.00 for Emeritus, K-12 Teachers, Stu-
dents, Unemployed, New Members

Menu: Buffet dinner

7:45 -
8:45pm

Speaker: Dr. Dan Feldheim, University of
Colorado

"Nanometer-Scale Therapeutics for the
Treatment of Multi-Drug Resistant Infec-
tious Diseases"

Thursday, February 12

Register at <http://www.acscincinnati.org/meetings/>

THE CINTACS NEWSLETTER**Vol. 52, No. 5 February 2015**

Editor.....Adam Bange

CINTACS is published eight times a year (September through May) by the Cincinnati Section of the American Chemical Society. The submission deadline will be approximately February 25 for the March 2015 issue. Electronic submission is strongly preferred. All materials should be sent to:

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From the Chair

Happy Groundhog Day 2015 to all of the members of the ACS Cincinnati Section. Will Punxsutawney Phil predict an early spring? [I certainly hope so!]

Our webmaster, Michele Mangels, had a medical emergency over the holidays but is bouncing back quickly after surgery. Please join me in wishing Michele a rapid and comfortable recovery. We hope that she'll be able to rejoin us soon! I'd like to thank Gloria Story for keeping us apprised of Michele's situation and progress.

This month's section meeting will take place on Thursday, Feb. 12th at Mount Saint Joseph University on Cincinnati's west side. Many thanks to Prof. Jamie Titus for helping to arrange this event at her school. The MSJU meeting will feature a presentation on nanomedicine by Prof. Daniel Feldheim, a chemistry professor at the University of Colorado at Boulder. Dr. Feldheim will discuss his laboratory's work on the use of nanostructures to facilitate drug delivery for treatment of chronic diseases. In addition to being a top-notch researcher, Dan is an absolutely outstanding public speaker. Y'all come!

Last month's presentation at Cincinnati Museum Center by Dr. Gregory Smith of the Indianapolis Museum of Art was a resounding success. Dr. Smith's discussion of his laboratory's restorative efforts on a priceless van Gogh (whose home is at the Cincinnati Art Museum) was tremendously informative and inspiring. The event was very well attended and the audience was quite engaged. I know I learned a lot, and I'm sure others did too. I want to particularly thank Keith Walters for his invaluable help in preparing for the January event.

Lynn Hogue requested nominations for teacher awards, and I want to second her plea for nominations. [A friendly reminder to see the announcements for awards in CINTACS and on the website at www.acscincinnati.org.] We want to be able to recognize our best elementary, middle school and high school science and chemistry teachers! The saga about the section bylaws continues, with further banter between us (mainly Bruce Ault and Beth Reno) and ACS National. I'll spare you the details; suffice it to say that the revised bylaws will eventually be finalized in accordance with the version that was approved by the section in December. We earnestly hope that the new bylaws will be posted on the section's web page within a few months.

Please note upcoming meetings and dates on the front page of the newsletter and on the section's web page [i.e., April 15th at NKU, May 18th at Miami U, & May 15th Reds game]. Thanks to Rick Mullins for arranging our Party Night at Great American Ball Park!

Again, please consider submitting potential items of interest to Adam Bange and Michele Mangels for web posting, newsletter blurbs, publicity & etc.

All the best,

Kevin Ashley

Speaker Bio and Abstract



The featured speaker for the evening is Dr. Dan Feldheim, a Professor in the Department of Chemistry and Biochemistry at the University of Colorado, Boulder. He received a bachelor's degree in chemistry at San Jose State University while working in the lab of Professor Kevin Ashley. He subsequently earned a Ph.D. in chemistry from Colorado State University under the direction of Professor Michael Elliott, and was a post-doctoral fellow in Professor Thomas Mallouk's lab at Pennsylvania State University. His research interests lie at the interface of materials chemistry and molecular biology with a particular focus on the use of nanoscale materials to address challenging problems in the diagnosis and treatment of infectious diseases such as HIV and TB. The title of Prof Feldheim's talk will be "Nanometer-Scale Therapeutics for the Treatment of Multi-Drug Resistant Infectious Diseases".

Abstract:

The emergence of resistance to multiple antimicrobial agents in pathogenic bacteria has become a significant global public health threat. Drug-resistant bacterial infections cause considerable patient mortality and morbidity, and rising antibiotic resistance is seriously threatening the vast medical advancements made possible by antibiotics over the past 70 years. Without developing innovative approaches to combat these multi-drug resistant pathogens, many fields of medicine will be severely affected, including surgery, premature infant care, cancer chemotherapy, care of the critically ill, and transplantation medicine, all of which are feasible only with the existence of effective antibiotic therapy. This situation is so dire that the world health organization has identified multi-drug resistant (MDR) bacteria as one of the top three threats to human health.

In response to this unmet medical need, our labs have been exploring synthetic nanoscale crystals (1 nm-5 nm diameter) as therapeutic platforms for the treatment of viral and bacterial diseases. Nanocrystal therapeutics have a number of unique properties that are distinct from small-molecule therapeutics including tunable valency and in vivo circulation half life, diameters that are slightly larger than drug efflux pumps, and the ability to disrupt protein-protein interactions. Our work has shown that nanoscale therapeutics may have the potential to access new pathogen targets and delay the onset of drug resistance.

Congratulations to the ACS Cincinnati Section Chemist & Research Associate of the Year!

Chemist of the Year: Prof. STACEY LOWERY BRETZ, Miami University, Department of Chemistry & Biochemistry

Research Associate of the Year: JENNIFER L. ROBERTS, National Institute for Occupational Safety and Health, Division of Applied Research & Technology

Dr. Lowery Bretz and Ms. Roberts will be honored at the section meeting to be held on the evening of March 18 at Miami University in Oxford.

Local Section Member wins Distinguished Alumna award

One of our members, Dr. Diane Parry of Procter & Gamble, has been honored with a Distinguished Alumna Award from the University of Utah Department of Chemistry. The award will be presented to her in Salt Lake City in April.



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Nominations Open for Science Teacher of the Year Awards

Think of a teacher that changed your life. Maybe it was a science teacher that opened your eyes to the wonders of the world around you and the joy of discovering how things worked; a teacher who encouraged your curiosity and motivated you to learn more. Here is an opportunity to reward teachers for all they do. Each year the Cincinnati Section gives awards for outstanding science teaching in three categories: elementary science, middle school science, and high school chemistry.

Nominating an outstanding teacher is simple. All that is required is a nominating letter, a second letter of support, and a cv. Easy! All materials should be sent via email to Lynn Hogue (HogueLM@miamioh.edu). Deadline for submitting is March 28, 2015.

Everyone knows there is a need for more scientists and a better informed public. Excellent teachers are a way of achieving both goals. Take a moment and think of a great teacher you would like to see recognized for all that they do for students and science and get the nominating process going.



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