



# ISOTOPICS

The Cleveland Section of the American Chemical Society

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## On Deck:

September 16, 2015

TBD

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## Isotopics

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[http://www.csuohio.edu/sciences/dept/cleveland\\_acs/](http://www.csuohio.edu/sciences/dept/cleveland_acs/)

## May Meeting Notice

59th Annual SAS/ACS/MSNO/AVS May Conference and  
Morley Award

Wednesday, May 20, 2015

John Carroll University, Dolan Science Center

- 7:00 am Registration
- 8:00 am Welcome
- 8:15 am Keynote Address: William Landis, University of Akron
- 9:45 am Parallel oral sessions
- 11:00 am Yeager Presentation
- 11:40 am Lunch
- 12:45 pm Poster session (30 posters)
- 1:50 pm Parallel oral sessions
- 5:25 pm Morley Lecture: James Cowan, The Ohio State University
- 6:30 pm Reception
- 7:20 pm Dinner

## Catalytic Metallodrugs – Toward a New Therapeutic Paradigm

*James A. Cowan, Melvin S. Newman Professor, Department of Chemistry and Biochemistry at The Ohio State University*

The introduction of metal ions affords many opportunities to design new families of drugs with novel mechanisms of action against specific therapeutic targets. This lecture will review recent progress in our laboratory on the design and study of catalytic metallodrugs against nucleic acid, protein and carbohydrate targets of biomedical interest. Structural, mechanistic, and cellular studies provide a glimpse of the therapeutic potential of such molecules, and suggest pathways for improved in vitro and in vivo performance. These advances will be illustrated through selected studies of metallodrugs designed against viral, bacterial, cancer, and cardiovascular disease targets.

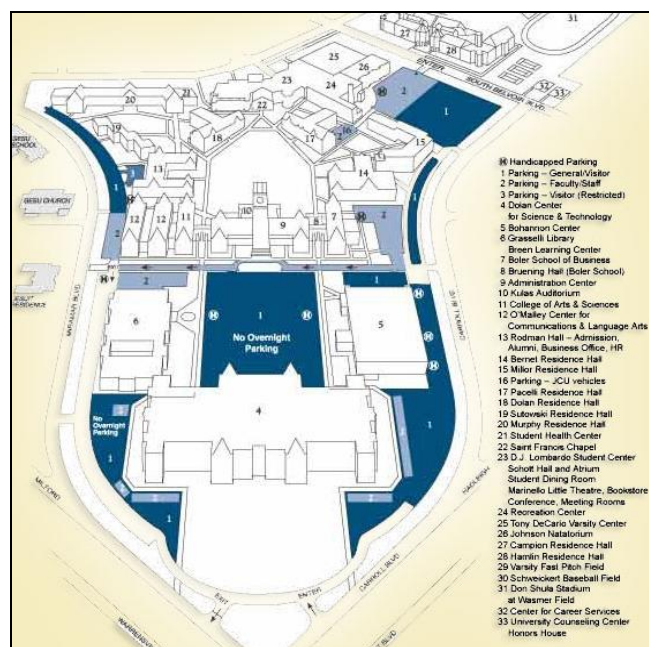
### DINNER RESERVATIONS REQUIRED:

Those attending the social reception and banquet dinner must be pre-registered by May 10. The banquet will include your choice of chicken or vegetarian entrée. The cost is \$25. To register, please visit <http://www.msneo.org/may-meeting-registration.html>.

If you have any questions, please contact Min Gao ([mgao@kent.edu](mailto:mgao@kent.edu)), Amir Avishai ([axa189@case.edu](mailto:axa189@case.edu)), and Brian Perry ([brian\\_perry@lord.com](mailto:brian_perry@lord.com)).

Please check <http://www.msneo.org/2015-may-meeting.html> for meeting updates.

## Directions to John Carroll University



**1 John Carroll Boulevard, University Heights, Ohio 44118**, The Dolan Science Center is highlighted on the map above, for more details please see: <http://sites.jcu.edu/campus-maps/>

## Speaker Bio



Jimmy Cowan is a bioinorganic chemist whose work spans the interface between chemistry and biology. He grew up in Mossend, Scotland, and was greatly influenced by high school chemistry teachers. Following undergraduate studies at the University of Glasgow, he pursued

graduate studies in organic chemistry with Jeremy Sanders, and theoretical chemistry with A. D. Buckingham at the University of Cambridge. He subsequently spent two years as a NATO Postdoctoral Fellow in the laboratory of Harry Gray at Caltech studying bioinorganic chemistry. In 1988 he joined the faculty of The Ohio State

University and was quickly promoted through the ranks. His laboratory has made fundamental advances in understanding the biological chemistry of magnesium and developed the concept and application of catalytic metallodrugs as a novel therapeutic approach. He has also discovered new molecular species in cellular iron chemistry that contribute to the understanding of iron cofactor biosynthesis, trafficking and regulation. Dr. Cowan is the recipient of awards and recognitions from the American Chemical Society and the Royal Society of Chemistry, and most recently was elected a Fellow of the Royal Society of Edinburgh. Aside from his scholarly accomplishments, Professor Cowan has contributed much to the broader scientific community, including the authoring of textbooks that introduce the subject of bioinorganic chemistry to the next generation of chemists and biochemists.

## 50 and 60 Year Members in 2015

*Submitted by Theresa M. Nawalaniec*

It is my pleasure to announce that the Cleveland section has eight members that have reached 50 years of service in the ACS and five members that have achieved 60 years of service, joining the ACS in 1966 and 1956 respectively.

Congratulations to the following members!

### 50 year

Dr. Roger Wendell Binkley  
 Dr. Norbert Thomas Kurnath  
 Dr. John J. Mieyal  
 Dr. Theodore Provder  
 Dr. Gopal B. Saha  
 Dr. Chong Kuang Shaw  
 Ms. Lynn E. Wolfram  
 Dr. Robert Calvin Williams

### 60 year

Dr. Jeanette Grasselli Brown  
 Dr. Everett Timothy McDonel  
 Dr. Ronald Ralph Olsen  
 Mrs. Mary E. Suster  
 Dr. William M. Weaver

These distinguished members have already received their pins and permanent member cards from National and are invited to attend any of our upcoming local meetings this year to receive a certificate and complimentary dinner. Congratulations again -- we hope to see you soon!

If you are unable to attend one of the meetings, we will mail your certificate to you.

### NCW Medina Presenters Needed

If you live near Medina County, have an interest in promoting chemistry and science among our youth and might have an extra hour during the day, please consider becoming a presenter for our National Chemistry Week Children's Program at one of the branches of the Medina County District Library (<http://www.mcdl.info/>). We have been trying to interest the Medina Library in our program for some time, and now they've invited us to present it in all 6 of their branches. We are scheduled to present our program during working hours on three dates in June, and we're looking for presenters at those times. We supply the materials and a complete on-line mock presentation

(<https://www.youtube.com/watch?v=qGLnCRvgXFA>); the rest would be in your hands. It's a lot of fun, and if you'd be willing to give it a try, please contact Bob Fowler at [jrfowler@cox.net](mailto:jrfowler@cox.net).

### National Chemistry Week Contests' Results

Each year our Section sponsors a local National Chemistry Week Chemistry Contest and participates in National's Illustrated Poem contest, both open to area students in grades K-12. In our Chemistry contest we devise a sequence of age-appropriate chemistry questions based on National's annual NCW theme and post these online. National's contest, for which we provide a link, invites students from around the country to literally create an illustrated poem again based on the NCW theme. Entries for each contest are submitted to us; we select winners in up to 3 age groups for each contest, and then we pass our Poem contest winners on to National.

This year the NCW theme was The Sweet Side of Chemistry--Candy, and we had the following winners of a certificate, \$25 in cash and an invitation to join us at the Section's Education Night where these awards were presented:

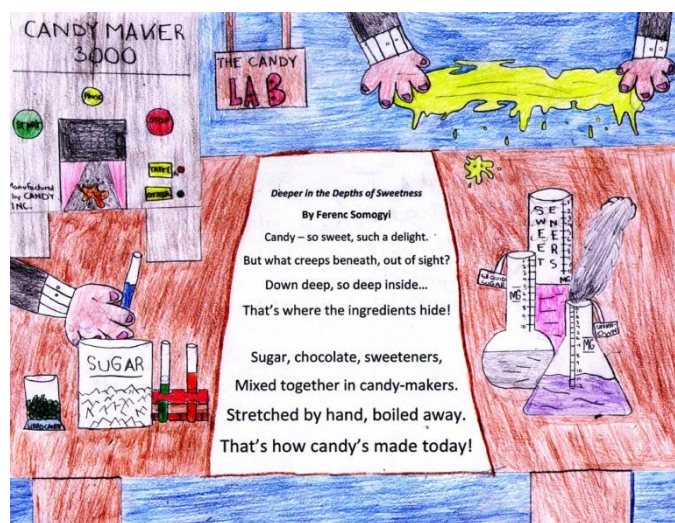
#### Chemistry Contest

**John Victor Pan** - Primary School Level

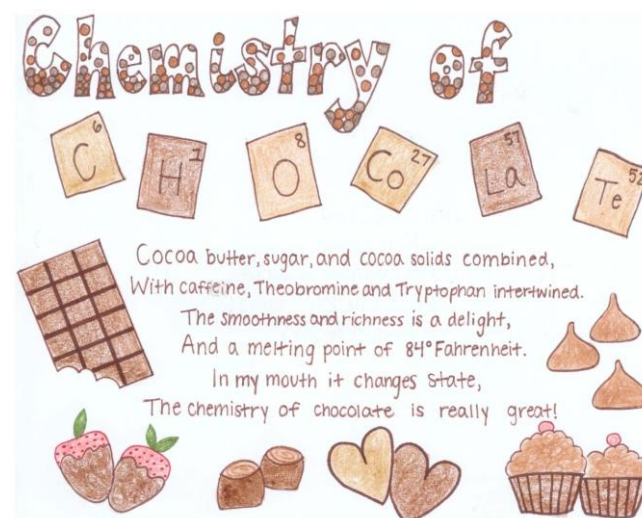
**Brianna Delewski** - Secondary School Level

#### Illustrated Poem

**Ferenc Somogyi** - Primary School Level



**Rachel Barrett** - Secondary School Level



But we had two surprises this year! The first was that Ms. Barrett's Illustrated Poem (immediately above) won first place in her age group at the National Level which won her national recognition and a \$250 prize.

(<http://www.acs.org/content/acs/en/education/outr>)

[each/ncw/ncw-illustrated-poem-contest/2014-winners.html](http://each/ncw/ncw-illustrated-poem-contest/2014-winners.html))

The second was another first. That was an Acceptance Speech authored and delivered by 6th Grader Ferenc Somogyi at the Education Night Ceremony. This was the first time any student has ever delivered such a speech, so we wanted to share with you what he wrote:

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*Speech for 2015 Chemistry Illustrated Poem Contest, by Ferenc Somogyi*

*When my father was in college at Case Western Reserve, he edited a magazine called Engineering and Science Review. The tagline of the magazine was "The art of science and technology." Since I was little, I have always been remembered being fascinated by the sciences and by technologies, just like my father. I am greatly interested in the space program and follow scientific breakthroughs intently with my family. The 2015 Chemistry Illustrated Poem Contest increased my scientific interests and brought my two great strengths—science and writing—together.*

*I enjoy writing immensely, and I have been told by my parents, teachers, and many others that I have a great writing capability and that I should nurture it as much as I can. Currently, I am working on a novel with which I am about a third done, and almost daily I take pleasure in putting pen to paper and writing short stories and even novellas for others to read.*

*The Chemistry Illustrated Poem Contest has fueled my imagination with ideas of science and, since the poem was about candy, sweets. When I first wrote my poem for the contest, the words came spilling out of me. I spent hours piecing together the tiny rhyming phrases, and by the time I was done, I was exhausted, yet pleased to know that I had written something that both my parents (who read the poem and immediately liked it) and I delighted in. When I received news of being a winner of the contest, I was blown away, and my parents alike. My poem had been rejected at school, and after a period of rushing to submit my*

*poem directly. I finally got it sent in on my own, with my mother's help. I had made it! It felt as if I had accomplished one of the hardest things in the world.*

*The contest taught me that persistence pays off, even if others reject you or put you down, and that nurturing your skills really does help. I was able to use my skills of science and writing to get to my goal, and I also discovered a part of me that I had never seen fully before—a part of tough and true determination.*

*The 2015 Chemistry Illustrated Poem Contest has truly been a wonderful event to be part of. Not only have I won at my 6th grade level, I have learned to stay strong throughout whatever happens, and to try to succeed no matter what. It's been my honor to be here at this Awards Ceremony, and I would like to congratulate all the other winners of the contest. I hope all of you have a good evening and nothing but success in the times to come. Thank you.*

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It's this sort of response that makes our efforts worthwhile and keeps us coming back to the NCW Planning Committee to create a new year's Program.