



## **American Chemical Society North Jersey Section's New Strategic Plan**

**(From left to right) Les McQuire, Monica Sekharan, Bill Suits, Valerie Kuck, Alan Cooper, Jeannette Brown, Ashley Tennyk, Jackie Erickson, Lauren Castelli, Kathleen Schulz, Jeff Tilley, Diane Krone, Xiaohua Zhang, Amber Hinkle, Amber Charlebois, Katelyn Lewis**

*(Photo courtesy of Amber Charlebois)*

*(See page 6.)*

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## ZeaChem Begins Production of Cellulosic Chemicals and Ethanol, Advances Toward Commercialization

### Facility will prove biorefining process for commercial-scale production

LAKEWOOD, Colo. – ZeaChem Inc., developer of highly-efficient biorefineries, today announced that it has produced commercial-grade cellulosic chemicals and ethanol at its 250,000 gallons per year (GPY) biorefinery in Boardman, Ore.

Among the first operational cellulosic biorefineries in the world, this demonstration facility showcases the scalability of ZeaChem's biorefin-

ing process and serves as a key stepping-stone toward large-scale commercial production.

Similar to a petrochemical refinery that makes multiple fuels and chemicals, ZeaChem's demonstration facility is employing its C2 (two-carbon atom) platform to produce cellulose-based ethanol and intermediate chemicals such as acetic acid and ethyl acetate. The commercial market potential for all C2 products is \$485 billion.

Unlike conventional biorefineries, ZeaChem can convert nearly any non-food biomass into fuels and chemicals.

Please visit [www.zeachem.com](http://www.zeachem.com) for more information.

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**CONTENTS**

|                                |       |
|--------------------------------|-------|
| Advertisers Index              | 16    |
| Call for Nominations           | 15    |
| New York Meetings              | 11-13 |
| NoJ 50 & 60 Year Members       | 7     |
| NoJ Strategic Plan             | 6     |
| North Jersey Meetings          | 8-9   |
| Others                         | 15    |
| Professional/Product Directory | 16    |

**EDITORIAL DEADLINES**

|              |                   |
|--------------|-------------------|
| June         | April 20          |
| September    | July 20           |
| October      | August 20         |
| November     | September 20      |
| December     | October 20        |
| January 2014 | November 20       |
| February     | December 20, 2013 |
| March        | January 20, 2014  |
| April        | February 20       |
| May          | March 20          |

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## May Calendar

### NEW YORK SECTION

**Wednesday, May 1, 2013**

Westchester Chemical Society  
See page 11.

**Thursday, May 2, 2013**

Brooklyn Subsection  
See page 12.

**Thursday, May 2, 2013**

Chemical Marketing & Economics  
See page 12.

**Friday, May 24, 2013**

Biochemical Topical Group  
See page 13.

**The Indicator is posted to the web on the 15th of the previous month at [www.TheIndicator.org](http://www.TheIndicator.org)**

### NORTH JERSEY SECTION

**Tuesday, May 7, 2013**

Mass Spectrometry Discussion Group  
See page 8.

**Wednesday, May 8, 2013**

North Jersey Teacher Affiliates  
See page 8.

**Monday, May 13, 2013**

Careers in Transition Group  
See page 8.

**Tuesday, May 14, 2013**

North Jersey 50 & 60 Year Awardees  
See page 7.

**Wednesday, May 15, 2013**

NMR Topical Group  
See page 9.

**Thursday, May 16, 2013**

Laboratory Robotics Interest Group  
See page 9.

**Deadline for items to be included in the June 2013 issue of *The Indicator* is **April 20, 2013****

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## THIS MONTH IN CHEMICAL HISTORY

Harold Goldwhite, California State University, Los Angeles

• [hgoldwh@calstatela.edu](mailto:hgoldwh@calstatela.edu)

A correspondent recently reminded me about other significant historical anniversaries that we should celebrate in 2013, and I will take his advice and do so in this column. The correspondent is Eric Scerri, distinguished historian and philosopher of chemistry at U.C.L.A., and author of the very best recent books about the periodic table. Here is what he wrote:

"I wonder if you are aware that it is also the 100th anniversary of Moseley's groundbreaking paper on the use of X-rays to 'count' the elements and also of Bohr's famous trilogy paper in which he introduced the Bohr model for the H atom and had a pretty good stab at listing electronic configurations for several many-electron atoms? I realize that these are not quite chemistry discoveries but of course they had a huge impact on chemistry.

I also see that you did mention Moseley in passing."

Yes, Moseley deserves much more than a reference in passing. His is one of the most uplifting and yet poignant stories in science. Henry Gwynn Jeffreys Moseley was born in Dorset, England in 1887. Both his father, a Professor of Anatomy at Oxford, and his grandfather, a mathematician, were Fellows of the Royal Society. It was an impressive scientific tradition that Henry Moseley was heir to. After the "usual" progression of the sons of comfortable county family members through Eton and Oxford he broke away from the pattern and went to Manchester to work with Ernest Rutherford. There after investigating the beta emission from radium he began the X-ray work that occupied the rest of his career. Using a photographic recording method of his own he investigated the X-rays that the Braggs had worked with a couple of years earlier and demonstrated in a 1913 paper that the frequencies of the K emission lines from different metals arranged in order of increasing atomic mass changed in a regular way.

Always ingenious as an experimenter Moseley invented an X-ray tube in which the target could be changed with minimal increase of the necessary very low pressure in the main tube. This innovation speeded up his work. Following van den Broek's suggestion of a little earlier Moseley agreed that the fundamental quality that governed his observations was not the atomic mass of the target but rather its ordinal position in the periodic table, which he called the atomic number. Moseley moved back to Oxford in 1913 continuing his work in Townsend's laboratory. He soon published a paper on X-ray spectra of some 30 elements including predictions as to where in the periodic table new elements were to be discovered. As Soddy later put it "Moseley, as it were, called the roll of the elements." Soon some of the "missing" elements were discovered and the connection between atomic number and nuclear charge was established.

As the son of a county family Moseley did what was expected and, after the Great War broke out in August 1914, obtained a commission in the Royal Engineers in late 1914. In June 1915 he sailed with many others on the ill-fated expedition (one of Winston Churchill's worst wartime blunders) to Gallipoli. Just a few weeks later Moseley along with hundreds of others was killed in battle. It took the British government many months before it realized that there were much better things to do with talented scientists and engineers than use them as cannon fodder.

A reminder: I have just published "A Chemical Chrestomathy: Chemical History Sketches, Vol. 1: Chemists". It is available (at a modest price!) from Amazon.com. Just search for the title. The book contains many short sketches of the careers of chemists, slightly modified from the forms in which they first appeared in a number of ACS Local Section journals.

## AMERICAN CHEMICAL SOCIETY NORTH JERSEY SECTION'S NEW STRATEGIC PLAN

**Vision:** The North Jersey Community of Chemistry Professionals will improve people's lives through the transforming power of science.

**Mission:** To advance the broader chemistry enterprise and its practitioners for the benefit of our communities.

Fourteen dedicated and enthusiastic members the NJ section came together for a week-end of strategic planning. The retreat was facilitated by Amber Hinkle and Kathleen Schulz both from the Leadership Advisory Board of the ACS. The group began by working to define the section's mission and vision and then went on to develop four goals for the section to be accomplished over the next 3-5 years. The general ideas for the four goals developed are:

- Goal 1: Double the number of people actively involved in section leadership.
- Goal 2: Stabilize within 2 yrs, the number of members in the North Jersey Section. Increase membership by 10% over the next 5 years.
- Goal 3: Become a key resource for career information & guidance to students, the unemployed and working professionals.
- Goal 4: Promote the public recognition and appreciation of chemists and chemistry by increasing participation in outreach programs and activities through a larger pool of leaders and volunteers.

For each goal, there were several strategies developed to be accomplished over the next 12 months. A later edition of the Indicator will include more details as these ideas continue to be fleshed out and finalized. It was an amazing experience and there is much enthusiasm in the group as we move forward. If you are interested in participating in any of these efforts send an email expressing your interest to [monicasekharan@njacs.org](mailto:monicasekharan@njacs.org)

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## North Jersey Meetings

<http://www.njacs.org>

### NORTH JERSEY 50 & 60 YEAR MEMBERS AWARDS DINNER

**Date:** Tuesday, May 14, 2013

Time: Social 5:00 PM

Dinner and Presentation of  
Certificates 6:30 PM

Place: Fairleigh Dickinson University  
College at Florham  
Lenfell Hall, the Mansion  
Madison, NJ

Cost: \$35.00

Directions: can be found at

<http://view.fdu.edu/default.aspx?id=238>

Reservations: Please make your reservation at our website, [www.njacs.org](http://www.njacs.org) prior to **Tuesday, May 7, 2013**

Questions: Call (973) 822-2575 or e-mail [chemphun@optonline.net](mailto:chemphun@optonline.net)

**Congratulations to the members of the North Jersey Section who have reached 50 and 60 years of service!**

Here are the lists of 50 and 60 year members:

#### 50 YEAR MEMBERS

Mr. Joseph I. Bach  
Mr. Michael G. Boudjouk  
Mr. Rene R. Brochu  
Dr. Francis Chee Keu Chan  
Dr. Albert C. Chen  
Mr. Robert Dworkin  
Dr. Arthur Fabian  
Dr. Gary J. Gerardi  
Mr. William S. Gilman  
Mr. Donald W. Graham  
Mr. Jorg Haeberli  
Mr. Willis B. Hammond  
Dr. Deran Hanesian  
Mr. John Hodgkiss  
Mr. Dominick D. Iacobelli  
Dr. Robert E. Landers  
Dr. Lester L. Maravetz  
Mr. Matthew A. Morales  
Mr. Eugene F. Nowoswiat  
Dr. John J. Rose

Dr. Ira E. Rosenberg  
Mr. Anthony Scerbo  
Dr. Leonard N. Schoenberg  
Mr. Girish Chandula Shah  
Mr. Peter Michael Swist  
Dr. Joseph George Tajar  
Dr. Deger Tunc  
Dr. David G. Vickroy  
Mr. Stanley Frank Wanat  
Mr. Jay Weinstein  
Dr. Gisela Witz

#### 60 YEAR MEMBERS

Dr. Robert Leo Augustine  
Mr. Julio Herman Basto  
Ms. Elizabeth Anne Bellamy  
Mr. Frank M. Furman  
Mr. Anthony J. Giordano  
Dr. Charles Frederick Howell  
Dr. John J. Jaruzelski  
Mr. William Blair Kauffman  
Mr. Stephen Willard Klein  
Dr. George Mortimer Kramer  
Dr. Jack Lasky  
Dr. Robert W. Ledeen  
Mr. Nathan B. Levine  
Mr. John Thomas Moynihan  
Mr. Walter D. Niegisch  
Dr. Arthur A. Patchett  
Dr. Walter Thomas Reichle  
Mr. Avery Rosegay  
Dr. Edwin C. Rothstein  
Mr. Joseph A. Ruffing  
Dr. George Joseph Schmitt  
Mr. Donald C. Seeley  
Mr. John Victor Teutsch  
Mr. Arthur Montgomery Thomas  
Mr. Robert J. Turbett  
Mr. Thomas Joseph Welsh

**Congratulations to all our  
50 & 60 Year Awardees!**

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## MASS SPECTROMETRY DISCUSSION GROUP

### Implementing an Ultrasensitive and Advanced New LC-MS/MS Platform, Xevo TQ-S, in a Regulated BA Lab

*Speaker:* Xinping Fang, Ph.D.  
VP, Head of Bioanalytical &  
Acting Head of Drug  
Metabolism/Biotransformation  
XenoBiotic Laboratories, Inc.  
Plainsboro, NJ

### Advances in Front-end Technologies for bioanalysis

*Speaker:* Paul Rainville  
Senior Manager of Scientific  
Operations, ESD  
Pharmaceutical & Life Sciences  
Business Operations  
Waters Corporation

*Sponsored by:* Waters Corporation

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**Date:** Tuesday, May 7, 2013

**Place:** Holiday Inn Somerset-Bridgewater  
195 Davidson Avenue  
Somerset NJ

**Times:** Social and registration 5:30 PM  
Complimentary dinner 6:15 PM  
Welcome and opening remarks  
7:00 PM

Dr. Xinping Fang 7:05 PM  
Mr. Paul Rainville 8:00 PM  
Closing remarks 8:55 PM

## NORTH JERSEY TEACHER AFFILIATES

**Date:** Wednesday, May 8, 2013  
**Time:** 4:00 PM  
**Place:** College of St. Elizabeth  
Convent Station, NJ



## CAREERS IN TRANSITION MEETINGS

### Job Hunting??

We offer assistance at Students2Science to help members with their job search on the second Monday of each month. Topics at this free workshop are:

- Techniques to enhance resume effectiveness
- Interview practice along with responding to difficult questions
- Networking to find hidden jobs
- Planning a more effective job search

**Date:** Monday, May 13, 2013

**Times:** Meeting 5:30 - 9:00 PM  
Pizza snack and soda 6:30 PM

**Place:** Students 2 Science, Inc.  
66 Deforest Avenue  
East Hanover, NJ

**Cost:** \$5.00 for pizza and soda

**Reservations:** at

[www.njacs.org/careers.html](http://www.njacs.org/careers.html)

A job board and networking assistance is offered at most topical group meetings. Appointments with Bill can be arranged for personal assistance at (908) 875-9069 or [billsuits@earthlink.net](mailto:billsuits@earthlink.net).

See [www.njacs.org](http://www.njacs.org) under the Career tab for Jobs hidden from sight and relevant blogs.



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## NMR TOPICAL GROUP

### Mapping the Energy Landscape of Protein Function using NMR and Calorimetry

Sponsored by Agilent Technologies, Inc.

*Speaker:* Dr. Tony Mittermaier  
Associate Professor  
Department of Chemistry  
McGill University  
Montreal, Canada

Biological macromolecules are inherently dynamic and in many cases depend on changes in conformation and flexibility to perform their physiological roles. In order to understand how they function at an atomic level, it is necessary to map the energetic interactions that govern their structures and dynamics. NMR spectroscopy is well suited to addressing this problem, since it can provide detailed information on molecular conformation and internal motions. Many NMR measurements can be interpreted quantitatively in terms of exchange rates or thermodynamic differences between conformational states, such as folded and unfolded or ligand-free and ligand-bound forms. In this regard, biological NMR data are highly complementary to those of bio-calorimetry, for example isothermal titration calorimetry (ITC) and differential scanning calorimetry (DSC). These methods directly detect the heat absorbed and released during protein binding and folding reactions. In fact, the combination of calorimetric and NMR methods provides a clearer picture of molecular processes than does either technique alone. Microcalorimetry is extremely sensitive to the energetics of conformational transitions and macromolecular interactions. However it can be difficult to relate these measurements to specific changes in molecular structure and flexibility without additional information. Conversely, NMR is sensitive to conformation and dynamics at the level of individual atoms, but thermodynamic information is obtained indirectly. Combining NMR and calorimetric measurements has the potential to improve our understanding of how macromolecular structure, dynamics, energetics and function are related, and to redefine our description of biological systems at the atomic level. I will discuss some recent examples from our lab in which NMR and calorimetry have been applied in concert to study fundamental aspects of protein

function including folding, molecular recognition, and allostery.

Bill Marathias  
NMR Applications Scientist  
Agilent Technologies, Inc.  
Agilent Update and the News from the ENC

**Date:** Wednesday, May 15, 2013

**Times:** Dinner at 6:00 PM  
Seminar at 7:00 PM

**Place:** Fuji Japanese Sushi & Seafood  
1345 US Route 1  
North Brunswick, NJ

**Cost:** Dinner — no charge thanks to Agilent Technologies' sponsorship

**Directions:** <http://www.fujiseafoodbuffet.com/directions.php>

Please note that Path Mark is no more. Fuji is on US 1 Southbound.

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Register online at <http://www.njacs.org/nmr.html> or via e-mail to [gvts@cabm.rutgers.edu](mailto:gvts@cabm.rutgers.edu)



## LABORATORY ROBOTICS INTEREST GROUP, MID ATLANTIC CHAPTER

### The Nineteenth Annual Technology Exhibition & Presentations

The annual technology exposition will be held on May 16, 2013. There is no charge to attend the meeting but pre-registration is requested. There will be free parking and free Asian, Middle Eastern, Italian and American foods. We expect that there will be about 400 people attending the exposition. For information on exhibiting please contact Richard Norton ([richard.arthur.norton@gmail.com](mailto:richard.arthur.norton@gmail.com)). To register for the meeting or any of the workshops, please use the meeting and registration links on the chapter web page: [http://lab-robotics.org/mid\\_atlantic/](http://lab-robotics.org/mid_atlantic/)

**Date:** Thursday, May 16, 2013

**Times:** Vendor Sponsored Workshops  
2:30 PM to 4:00 PM  
Exhibits and Presentations  
4:00 PM to 8:00 PM

**Place:** Doubletree at Somerset  
200 Atrium Drive  
Somerset, NJ

## TRI-STATE CHINESE AMERICAN CHEMICAL SOCIETY (CACS)

### Annual Symposium: New Challenges and Opportunities in the Global Chemistry Enterprise

**Speakers:** Marinda Wu  
ACS president

numerous corporate leaders from the global chemical (Dow, Sinopec) and pharmaceutical industries (Merck, J&J)

#### Vendor Show

A vendor exhibition will be held in parallel to podium presentations. Vendors are welcome to participate.

#### Career Opportunities

Several companies will post job openings and collect resumes at the symposium. Bill Suits & Marinda Wu, career consultants with ACS, will provide career advice on-site.

**Date:** Saturday, June 22, 2013

**Times:** 8:30 AM - 4:00 PM

**Place:** Douglass Campus Center  
Rutgers University  
100 George Street  
New Brunswick, NJ

**Cost:** Free and open to public.  
Complimentary breakfast and lunch will be provided.

**Registration:** <http://tristatecacs.org> for registration, additional information and updates

**Contact:** Mark Zhen at  
[markyzen@yahoo.com](mailto:markyzen@yahoo.com)

CACS- Tristate Chapter is a nonprofit organization that has served the Tri-state region

since 1981. Its mission is to provide opportunities of self-development, learning and relationship-building.



## CHEM TAG

The March 8th ChemTAG meeting was held at the Waksman Conference Center and Museum on Cook Campus, Rutgers University. Dr. Douglas Eveleigh gave a dynamic presentation that detailed the work of Dr. Selman Waksman and his colleagues with comments on the Museum displays. Teachers received information on two lab activities to use with their students- "Winogradsky Column, Muddy Microbes, and Pigments" and "Antimicrobial Properties of Nanosilver." Educational materials from ACS National Historic Chemical Landmarks were also shared.



Dr. Eveleigh discusses the personal lab book and other books authored by Dr. Selman Waksman.



Seated (from l-r) Frank Ferrara, Judy McLoughlin, Amanda Smith, Jayasree Sankar, Eve Krupka. Standing (from l-r) Cheryl Litman, Karen Posluszny, Morgan O'Neil, Bobbi Gorman, Claire Miller, Dr. Douglas Eveleigh, Haig Alexander.

(Photos courtesy of Diane Krone)

## New York Meetings

[www.newyorkacs.org](http://www.newyorkacs.org)

### NEW YORK SECTION BOARD MEETING DATES FOR 2013

The dates for the Board Meetings of the ACS New York Section for 2013 were chosen and approved at the November 30, 2012 Board Meeting. The meetings are open meetings – all are welcome. If non board members would like to attend the meeting, please let the New York Section office know by emailing Mrs. Marilyn Jespersen at [njesper1@optonline.net](mailto:njesper1@optonline.net) or calling the office at (516) 883-7510.

The 2013 Board Meetings will be held on the following Fridays at 6:30 PM at St. Johns University, D'Angelo Center, Jamaica, NY. Dr. Philip H. Mark will chair the meetings.

Friday, June 7  
Friday, September 27  
Friday, November 15

More information will be posted in future issues of *The Indicator* and on the New York website at <http://www.NewYorkACS.org>.



### WESTCHESTER CHEMICAL SOCIETY

#### THE DISTINGUISHED SCIENTIST AWARD AND DINNER AND COLLEGE STUDENT ACHIEVEMENT AWARDS

#### One Droplet at a Time: Crystallization at the Liquid-Liquid Interface

*Speaker:* Sunghee Lee, Ph.D.  
Chair, Department of Chemistry  
Iona College  
New Rochelle, NY

Our research focuses on the interfacial chemistry of aqueous microdroplets mediated by self-assembled structures at the liquid-liquid interface. A major focus is the nucleation of crystals in single aqueous nanoliter microdroplets surrounded by an oil phase. This offers numerous advantages to crystal science, owing to the confinement of the crystal, and the possibility of engineering the soft water/oil interface. We describe the nucleation behavior of model inorganic crystals. An aqueous microdroplet of a crystallizable polytypic inorganic solute surrounded by a dewatering oil can be driven to supersaturation by water transport from the droplet, and polymorph control can be achieved depending on amphiphile structure. We also demonstrate the propensity of specific anions to disrupt the

crystal templating ability of the monolayer, with a trend that follows a Hofmeister series. Finally, we have attained ultra-rapid droplet crystal nucleation in a system that employs a droplet interface bilayer for membrane crystallization.

Dr. Sunghee Lee has been on the Chemistry faculty at Iona College, New Rochelle, NY since 2004 and has been chair of the department since 2010. Previously she had taught in the Science Department at Bergen Community College (Paramus, NJ). She received her B.S. and M.S. degrees from Sung Kyun Kwan University and Pohang University of Science and Technology, respectively, both in South Korea, and her Ph.D. from Brown University in Providence, RI (Best Ph.D. Thesis-Potter Award in Chemistry). She also held post-doctoral positions at Texas A&M University (College Station, TX) and at Duke University (Durham, NC). Much of her current research is focused on understanding how surfactant monolayers at water-oil interfaces are capable of templating the formation of inorganic crystals. Further, she has a strong emphasis on involving undergraduates in research. She has more than 20 peer-reviewed publications, and at least 70 conference papers and presentations. Many of these include undergraduate co-authors. She has also contributed a chapter to a book and holds two U.S. patents. In addition to the Potter Prize, noted above, she has won three Iona College awards (Dean of Arts and Science Award, Presidential Teaching Scholar, Honors Program Teacher/Advisor of the Year Award), and the ACS Women Chemists Committee Rising Star Award. Dr. Lee's research has been funded by NSF, ACS – Petroleum Research Fund, Dreyfus Foundation, and Patrick J. Martin Foundation.

**Date:** Wednesday, May 1, 2013

**Times:** Social 5:00 PM  
Lecture and Awards 6:00 PM  
Dinner 7:00 PM

**Place:** Pace University  
861 Bedford Road – Entrance #2,  
The Campus Center, Butcher Suite  
Pleasantville, NY

**Cost:** Students \$20  
All Others \$30

RSVP Required – [pwrc@earthlink.com](mailto:pwrc@earthlink.com)

For more information, contact Paul Dillon:  
E-Mail [PaulWDillon2@hotmail.com](mailto:PaulWDillon2@hotmail.com)  
Phone (914)393-6940

For Pace University information:  
[eweiser@pace.edu](mailto:eweiser@pace.edu)

Westchester Chemical Society Webpage:  
[http://www.newyorkacs.org/sub\\_west.php](http://www.newyorkacs.org/sub_west.php)

## BROOKLYN SUBSECTION

### Brooklyn College H. Martin Friedman Lecture – “Manipulating Quorum Sensing to Control Bacterial Pathogenicity”

*Speaker:* Bonnie L. Bassler  
Squibb Professor in Molecular  
Biology  
Princeton University

Bacteria communicate with one another via the production and detection of secreted signal molecules called autoinducers. This cell-to-cell communication process, called “Quorum Sensing”, allows bacteria to synchronize behavior on a population-wide scale. Behaviors controlled by quorum sensing are usually ones that are unproductive when undertaken by an individual bacterium acting alone but become effective when undertaken in unison by the group. For example, quorum sensing controls virulence, biofilm formation, sporulation, and the exchange of DNA. Thus, quorum sensing is a mechanism that allows bacteria to function as multi-cellular organisms. Gram-negative bacteria use acyl-homoserine lactone (AHL) autoinducers, which are detected by one of two receptor types, cytoplasmic LuxR-type receptors or membrane-bound LuxN-type receptors. We found small molecule antagonists of LuxN-type receptors that are also potent antagonists of LuxR-type receptors, despite differences in receptor structure, localization, AHL specificity, and signaling mechanism. Structural studies combined with mutagenesis allowed us to pinpoint the amino acid residues in the receptors that are critical for conferring agonist and antagonist activity to different ligands. Our most potent quorum-sensing antagonist protects animals from quorum-sensing-mediated killing by pathogenic bacteria and prevents biofilm formation in model microfluidics chambers that mimic medical devices. These results validate the notion that targeting quorum sensing has potential for antimicrobial drug development.

**Date:** Thursday, May 2, 2013

**Time:** 12:30 PM

**Place:** 2310 Ingersoll Hall  
Brooklyn College  
2900 Bedford Avenue  
Brooklyn, NY

## CM&E ACS NY SECTION

### Shaping Tomorrow at Braskem

*Speaker:* Fernando Musa  
President and CEO  
Braskem America

*Host:* George Rodriguez  
Director, Argenti

The 21st century is an era of unprecedented opportunities and few companies have grown as rapidly as Braskem. The Company controls the two largest petrochemical complexes in Brazil which supply ethylene and propylene to polymer units and is a global producer of polyethylene and polypropylene.

Braskem also supplies benzene, butadiene, toluene, xylene and isoprene. Braskem is the Americas' top thermoplastic resins producer. With 36 industrial plants spread across Brazil, United States and Germany, the company produces over 35 billion pounds of thermoplastic resins and other petrochemicals per year. Braskem is also the world's leading biopolymers producer with its 440 million pound Green PE plant that produces polyethylene from sugarcane-based ethanol.

Join us on May 2, to hear compelling insights on the strategies that are shaping tomorrow at Braskem.

Mr. Musa is currently CEO of Braskem America. Prior to this role, he served as Vice President of Planning and Business Development at Braskem S.A. in Brazil and as Quattor's vice-president in 2010 responsible for the integration with Braskem following Braskem's acquisition.

Mr. Musa holds a bachelor's degree in mechanical engineering from Instituto Tecnológico da Aeronáutica (ITA) and served in leading Strategic Planning positions in several companies prior to joining Quattor, including Dow Química, McKinsey, Editora Abril, and Monitor Group. Mr. Musa holds a MBA degree from INSEAD in France.

**Date:** Thursday, May 2, 2013

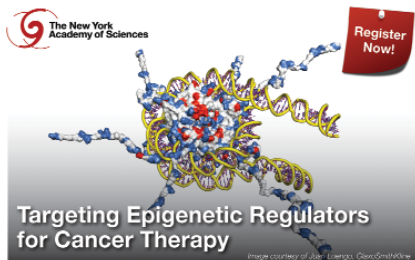
**Time:** 11:00 AM - 2:00 PM

**Place:** The Yale Club  
50 Vanderbilt Avenue  
New York, NY

**Cost:** Luncheon \$90 for non-CM&E members; \$70 for 2013 CM&E, ChemPharma members  
Webcast Fee: \$30

**Registration:** <http://www.cmeacs.org>  
Check website for earlybird discounts.

**BIOCHEMICAL TOPICAL  
GROUP — JOINT MEETING  
WITH THE NYAS BIOCHEMICAL  
PHARMACOLOGY DISCUSSION  
GROUP**



**Targeting Epigenetic Regulators for  
Cancer Therapy**

**Organizers:** Dash Dhanak, PhD  
GlaxoSmithKline  
Liang Schweizer, PhD  
and  
Susan Wee, PhD  
Bristol-Myers Squibb  
Jennifer Henry, PhD  
The New York Academy of  
Sciences

**Speakers:** Scott A. Armstrong, MD, PhD  
Memorial Sloan-Kettering  
Leukemia Center  
Stephen Baylin, MD  
The Johns Hopkins University  
School of Medicine  
Robert Copeland, PhD  
Epizyme

Klaus Edvardsen, MD, PhD  
GlaxoSmithKline  
Haitao Li, PhD  
Tsinghua University, China  
Shirley Liu, PhD  
Dana Farber Cancer Institute  
Robert Sims, PhD  
Constellation  
Alexander Tarakhovskiy, MD, PhD  
The Rockefeller University

Epigenetic research has shown that heritable changes in cancer cell transformation occur beyond the primary DNA sequence. This symposium reviews epigenetic regulators in cancer development and progress in designing therapies targeting the epigenome.

**Date:** Friday, May 24, 2012  
**Time:** 8:30 AM – 5:30 PM  
**Place:** New York Academy of Sciences  
7 World Trade Center  
250 Greenwich Street – 40th Floor  
New York, NY 10007  
**Cost:** This event is has reduced-rate registration for ACS and NYAS members, at \$30 or \$15 (for students and post-docs). Please select the appropriate non-member Registration Category and use the Priority Code ACS. Non-members may attend for a fee of \$85 (corporate), \$65 (non-profit or academic) or \$45 (students and post-docs).

For more information and to register for the event, go to:

[www.nyas.org/EpigeneticRegulators](http://www.nyas.org/EpigeneticRegulators)

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## NY ACS YOUNGER CHEMISTS COMMITTEE

### Food Chemistry Webinar

On February 28th, the NY ACS Younger Chemists Committee held a food chemistry event at The Cooper Union in Manhattan. The event got off to a wonderful start with a presentation from Ms. Elaine Kellman-Grosinger, a flavor chemist at Citromax. Elaine defined what a flavor chemist does as well as discussed the importance of flavors and fragrances in the food industry. She did a wonderful job of engaging the audience, and at the end passed around samples of different fragrances and flavors for the participants to identify.

After Elaine's talk, we had a delicious dinner prepared by Frankie's Kitchen (the cafeteria at Cooper Union). I-Ching Sandy Chen, a Ph.D. student at St. John's University, then gave a live demonstration on how to make a cherry foam using lecithin. Everyone seemed to enjoy her cooking skills and the tasty snacks she prepared!

The evening finished with an internet broadcast of "A Date with Science: Dinner and Dessert Chemistry" by Sally Mitchell and Guy Crosby. The webinar was provided by ACS Webinars and the ACS Younger Chemists Committee. During this presentation, the audience learned about various aspects of food science, such as why certain foods "pair" well with others, and what specific chemical components are responsible for certain taste sensations. More than fifty chemists attended the event, from institutions and businesses from all around New York City, Long Island, and Westchester. Most of the attendees were undergraduate and graduate students, though there were also a significant number of high school teachers, professors and senior scientists at companies. Networking and socializing was done over refreshments provided in the room.

Overall, the event was a great success and it is hoped that similar events will follow. The symposium came about due to the hard work of the NY ACS YCC Board, which is currently composed of I-Ching Sandy Chen, Elizabeth Onufrey, Ruben Savitzky and Avigail Soloveichik. Anyone looking to find out more about YCC events should go to our webpage ([http://www.newyorkacs.org/comm\\_ycc.php](http://www.newyorkacs.org/comm_ycc.php)) or get in touch via email.

## NEW YORK ELECTION

### Thank You, New York Section Members!!

The NY Section switched to electronic balloting last year and you, our members, increased the voting rate from 10% to 15% of the membership. This year we hope to do better.

Prior to the election we will send three e-mail messages asking if you want to receive a paper ballot this year. Please respond **ONLY IF YOU WANT A PAPER BALLOT**. Otherwise, you will receive an electronic ballot in mid-April with a **deadline of May 31**. Two voting reminders will also be sent.

Thank you, in advance, for voting in the 2013 New York Section elections.



## NY SLATE OF CANDIDATES

At the January Section-wide Conference, the Nominating Committee presented the candidates for office for the 2013 elections. The biographies of the candidates can be found on the New York Section website at <http://www.NewYorkACS.org>. The Board of Directors extends a sincere thank you to the following candidates for accepting the nomination to run for office, and sincerely encourages ACS New York Section members to vote.

Electronic ballots will be sent to the membership in mid-April and voting will be conducted according to ACS guidelines for confidentiality and security. Members requesting paper ballots will receive them **by May 1, 2013**. If a member does not receive voting materials by then, please contact the New York Section Office at (516) 883-7510 or [njesper1@optonline.net](mailto:njesper1@optonline.net).

### Chair Elect for 2014

George Rodriguez (Argeni LLC)  
Paris Svoronos (Queensborough CC CUNY)

### Treasurer for 2014 and 2015

Robert P. Nolan (International Environmental Research Foundation)

### Director at Large for 2014

Daniel Amarante (Coll. of Mount St. Vincent)  
Theresa R. Cea (Retired/Kraft)  
Steven J. Chaterpaul (Bard HS Early Coll.)  
Gina M. Florio (St. John's University)  
Rolande R. Hodel (AIDSfreeAFRICA)  
Luis Vargas (Nassau CC SUNY)

### Councilor for 2014-2016

Richard D. Cassetta (Retired, Emeritus,  
College of New Rochelle)  
Donald D. Clarke (Fordham University)  
Jean D. Delfiner (Retired, NYC Dept. of Ed.)

Neil D. Jespersen (St. John's University)  
 Patricia A. Redden (St. Peter's College)  
 Frank R. Romano (Agilent Technologies)



## EMPLOYMENT AND PROFESSIONAL RELATIONS COMMITTEE OF THE NEW YORK SECTION

### To Human Resources Departments in Industry and Academia

The Employment and Professional Relations Committee maintains a roster of candidates who are ACS members seeking a position in the New York metropolitan area. If you have job openings and would like qualified candidates to contact you, please send a brief job description and educational/experience background required to [hessytaft@hotmail.com](mailto:hessytaft@hotmail.com).

Candidates from our roster who meet the requirements you describe will be asked to contact you.

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## Call for Nominations

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### WILLIAM H. NICHOLS MEDAL AWARD FOR 2014

The New York Section is accepting nominations for the William H. Nichols Medal Award for the year 2014. This distinguished award, established in 1902 by Dr. William H. Nichols, for the purpose of encouraging original research in chemistry, is the first award authorized by the American Chemical Society. It is presented annually in recognition of an outstanding contribution in the field of chemistry, and consists of a gold medal, a bronze replica and \$5000. The medals are presented at the William H. Nichols Meeting that consists of a Distinguished Symposium related to the medalist's field of expertise and a Medal Award Dinner.

Investigators who have published a significant and original contribution in any field of chemistry during the five calendar years preceding the presentation meeting are eligible for consideration by the Nichols Medal Jury. The New York Section encourages nominations from academia, government and industry.

Each nomination requires a completed nomination form, biographical and professional data, and seconding letters. Since the nomination process utilizes the New York Section website, please access the nomination form and instructions at <http://www.newyorkacs.org/meetings/Nominations/Nichols.php>

Nominations must be received by **May 31, 2013**. The Nichols Medal Award Jury will meet in June 2013 to select the Nichols Medalist for 2014.

Questions regarding the nomination procedure should be directed to the ACS, New York Section Office, at [njesper1@optonline.net](mailto:njesper1@optonline.net).



### EDWARD J. MERRILL AWARD FOR OUTSTANDING HIGH SCHOOL CHEMISTRY TEACHER FOR 2013

Now is the time to begin thinking about nominations for the Edward J. Merrill Award, North Jersey Section, for Outstanding High School Chemistry Teacher for the year 2013.

Go to the web site, [njacs.org](http://njacs.org) under education and obtain your preliminary nomination form and guidelines. The full packet takes time to do a good job!

We all know an outstanding high school chemistry teacher. Perhaps one from your town, your son's or daughter's teacher or just one that you have heard about or worked with at some point. The award carries \$500 for the teacher, \$500 in supplies for the teacher's classroom and a plaque to display at home or in the classroom.

Any questions or help needed contact Bettyann Howson, [chemphun@gmail.com](mailto:chemphun@gmail.com).

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## Others

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### NJIT – OTTO H. YORK DEPARTMENT OF CHEMICAL, BIOLOGICAL AND PHARMA- CEUTICAL ENGINEERING

#### Graduate Seminar Series – Spring 2013

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#### May 6

"Nanoclusters of Boron and Gold"  
*Professor Lai-Sheng Wang*  
 Dept. of Chemistry  
 Brown University

OPEN TO PUBLIC

Times: Refreshments 2:30 PM  
 Seminars 2:45 PM  
 Place: Room 117, Kupfrian Hall, NJIT

Seminar Coordinator: Professor Reginald  
 Tomkins, (973) 596-5656,  
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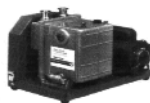
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**Ad Index**

**ANALYTICAL**

EuTech Scientific Servies . . . . . 4  
 Micron Inc. . . . . 8  
 New Jersey Institute of Technology . . . 16  
 NuMega Resonance Labs. . . . . 16  
 Robertson Microlit Labs . . . . . 2  
 Vacuubrand . . . . . 6

**EDUCATION**

MIT Professional Education . . . . . 13

**EQUIPMENT**

Eastern Scientific Co. . . . . 16  
 Mass Vac, Inc. . . . . 2

**GENERAL**

ACS-NY/NoJ Sections . . . . . 7  
 ACS-NY/NoJ Sections . . . . . 16  
 ACS-NY/NoJ Sections . . . . . 16