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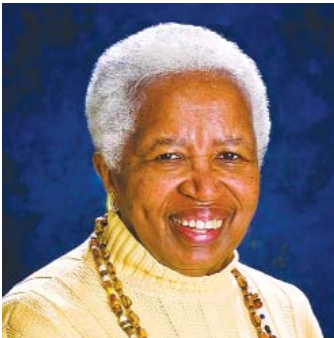
Celebrate Our Project SEED Coordinators



Susan Fahrenholtz



Nadia Makar



Jeannette Brown

See article on page 23.

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THIS MONTH IN CHEMICAL HISTORY

Harold Goldwhite, California State University, Los Angeles • hgoldwh@calstatela.edu

Let me take you back to 1843 and a dip into “The Year Book of Facts in Science and Art” (I wish I could reproduce the delicious Victorian typography of the original), the earliest in the series that I recently acquired. Published in London by Tilt and Bogue of Fleet Street, the slim and small volume, crammed with information in a tiny type face, is profusely illustrated. The front illustrations are devoted to earth science and paleontology, with a splendid skeletal rendering of “The Missouri Leviathan”, based on fossils found in 1838 in that state. The leviathan was an extinct member of the mastodon family.

But let me turn to chemical science in 1843. MM. Marchond and Erdmann have reported on new determinations of atomic weights with a view to proving Prout’s hypothesis - that all atomic weights are integral multiples of that of hydrogen - is correct. Oxygen, carbon, nitrogen, calcium, and silver fall nicely into line (go and check your atomic weight table) but their result for chlorine at 36 is outside acceptable limits even for 1843. An adjacent paragraph mentions that Laurent and Berzelius get results for chlorine that are not in accord with Prout’s hypothesis.

There is a long report by Lyon Playfair on Liebig’s celebrated book on Organic Chemistry as Applied to Physiology and Pathology, but that topic is so important that I plan to devote a whole column to it in the near future.

Mr. Marsh, of the celebrated test for arsenic, reports a new and improved process for the preparation of gaseous oxygen which consists of heating powdered potassium chlorate with a small admixture of manganese dioxide, a preparative method repeated in thousands of elementary chemistry texts and laboratory courses to this very day. New experiments by M. Magnus on the coefficient of dilatation of elastic fluids (coefficients of thermal expansion of gases in current scientific language) have shown that this coefficient, accepted generally to be 1/480 for each degree Fahrenheit, actually is slightly different for different gases.

A preparation of noiseless Congreves (chemical matches) is reported by Dr. Boettger. The crackling of ordinary Congreves, according to Boettger, is due to the potassium chlorate they contain. The least noise is observed from a mixture of gum Arabic, phosphorus, saltpeter, and vermilion. “In order to prevent the injurious influence of the atmosphere on the mass, it is advisable to cover the points of the matches, after being dipped and dried, with a dilute varnish of copal, or with a solution of gum containing saltpeter.”

Mr. Croft read to the British Association (for the Advancement of Science) a paper by Professor Bunsen “On Kakodylic Acid, and the Sulphurets of Kakodyl”. Bunsen did extensive researches on cacodyl (modern spelling) which we now recognize as the dimethylarsino group. The 1840’s were a period in which attempts were being made to organize organic chemistry in terms of radicles (1840’s spelling) which were advanced as being to organic compounds as the elements were to inorganic compounds. Liebig and Woehler characterized the first organic radicle, the benzoyl radicle, in 1832. Bunsen’s work on cacodyl cost him dearly; an explosion lost him the sight of one eye. But he persevered, as this article shows, characterizing bis(dimethylarsino) sulfide, and disulfide and the acid we call dimethylarsonic acid, “A very remarkable fact with respect to this body [the acid] is, that the poisonous properties of the arsenic seem totally annihilated; eight grains administered to a rabbit exerted no poisonous action.” Incidentally Bunsen’s “free” cacodyl radicle was later shown to be the dimer tetramethyldiarsine.

I will close this brief look at some of the significant chemistry reported in 1843 with a comment about another well-known compound. Nicotine was first isolated in a state of purity by the great French analyst Vauquelin in 1809. M. Barrul presented a refined analysis of nicotine in 1843 and reported on some of its properties: “... a powerful alkali, under the form of a liquid, with a very low equivalent ... as compared with other vegetable alkalis. It is also a very energetic poison: a single dropp placed on the tongue of a middle-sized dog, killed him in three minutes.”

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The monthly newsletter of the New York & North Jersey Sections of the American Chemical Society. Published jointly by the two sections.

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Address advertising correspondence to Advertising Manager. Other correspondence to the Editor.

February Calendar

NEW YORK SECTION

Tuesday, February 3, 2015

NY Nanoscience Discussion Group
See page 5.

Thursday, February 5, 2015

Long Island Subsection
See page 6.

Thursday, February 7, 2015

20th Annual HS Poster Session
See page 6.

Wednesday, February 11, 2015

Westchester Chemical Society
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Friday, February 13, 2015

New York Section Board Meeting
See page 5.

Tuesday, February 24, 2015

Biochemical Topical Group
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Friday, February 27, 2015

High School Teachers Topical Group
See pages 8-9.

also

**Thursdays, March 5, April 2,
and Friday, April 24, 2015**

Long Island Subsection
See page 9.

**Thursday, March 26, 2015; Wednesday,
April 22, 2015; and Early October 2015**

Westchester Chemical Society
See page 10.

Tuesday, April 7, 2015

NY Nanoscience Discussion Group
See page 5.

Saturday, May 9, 2015

63rd Annual URS
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NORTH JERSEY SECTION

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Careers in Transition
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Tuesday, February 10, 2015

Drug Metabolism Discussion Group
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Tuesday, February 10, 2015

Mass Spectrometry Topical Group
See page 16.

Wednesday, February 18, 2015

NMR Topical Group
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Monday, February 23, 2015

North Jersey Executive Committee
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Tuesday, February 24, 2015

Younger Chemists Committee
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also

Monday, April 27, 2015

Drug Metabolism Discussion Group
Spring Symposium and Vendor Exposition
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Sunday-Friday, June 7-12, 2015

Drew University Res-Med Seminar
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**The Indicator is posted to the web on the
15th of the previous month at
www.TheIndicator.org**

**Deadline for items to be included in the
March 2015 issue of *The Indicator* is
January 20, 2015**

New York Meetings

www.newyorkacs.org

NEW YORK SECTION BOARD MEETING DATES FOR 2015

The dates for the Board Meetings of the ACS New York Section for 2015 have been selected and approved. The meetings are open to all – everybody is welcome. All non-board members who would like to attend any (or all) meetings ought to inform the New York Section office by emailing Mrs. Marilyn Jespersen at njesper1@optonline.net or by calling the Section office at (516) 883-7510.

All 2015 Board Meetings will be held on the following dates at St. John's University, 8000 Utopia Parkway, Jamaica, NY. Dr. Paris Svoronos will chair all meetings. Refreshments will be available starting at 6:00 PM while the actual meeting will start at exactly 6:30 PM. Please check Marilyn Jespersen for the exact building and room number. You may also be added in the mailing list if you so desire.

Friday, February 13, 2015

Friday, April 24, 2015

Friday, June 5, 2015

Friday September 18, 2015

Friday November 20, 2015

In addition please mark your calendar with the dates of the following major events:

Friday, April 17, 2015, William H. Nichols Medal Award Symposium and Dinner, Crowne Plaza Hotel, White Plains, NY

More information will be posted in future monthly issues of *The Indicator* and on the New York website at

<http://www.NewYorkACS.org>.

NEW YORK NANOSCIENCE DISCUSSION GROUP

2014-2015 Sessions

Speakers to be announced

Hosted by: New York University
Department of Chemistry

The NYNDG is an ACS Topical Group that meets in the New York University Department of Chemistry. Sessions feature three 30-minute presentations on nanoscience, one each with strong orientation in biology, chemistry, and physics/applied mathematics. Presentations will be focused on discussion of recent work, although speakers will place the work in a context understandable to a broad audience.

Mark your Calendars!

Dates: Tuesday, February 3, 2015
Tuesday, April 7, 2015

Times: Refreshments at 7:00 PM

Science at 7:30 p.m.

Place: NYU Silver Center
Room 1003 (10th floor)
31 Washington Place
(between Washington Square
East and Greene Street)
New York, NY

For more information, contact: James Canary (james.canary@nyu.edu)

Topical Group History:
<http://www.nyu.edu/projects/nanoscience>



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LONG ISLAND SUBSECTION

Discovery and Development of Purine-scaffold Hsp90 Inhibitors for the Treatment of Cancer

Speaker: Tony Taldone, PhD
Senior Research Scientist
Memorial Sloan Kettering
Cancer Center

Heat shock protein 90 (Hsp90) is a molecular chaperone exploited by cancer cells to aid in their survival. The recognition of Hsp90 as a critical facilitator for oncogene addiction and survival of cancer cells has opened a promising new niche for cancer treatment. The serendipitous discovery that the broad spectrum anticancer activity of the natural products geldanamycin (GM) and radicicol (RD) was a result of inhibition of Hsp90 resulted in the development of improved derivatives of these natural products. One of these was 17-AAG, a closely related analog of GM, and was in fact the first Hsp90 inhibitor to enter the clinic. However, GM and its analogs suffer from poor "drug-like" properties and this served as a strong impetus for the development of novel synthetic Hsp90 inhibitors. One class to exhibit enhanced potency and improved pharmacokinetic properties is the purine-scaffold. A number of small-molecule Hsp90 inhibitors based on the purine-scaffold are currently being evaluated in clinical trials for cancer. Here, I will discuss their initial discovery and development into potential anti-cancer agents.

Date: Thursday, February 5, 2015

Times: Social – 5:30 PM
Seminar – 6:00 PM

Place: CUNY Queensborough
Community College
Science Building, S-112

Directions: <http://www.qcc.cuny.edu/about/driving.html>



NEW YORK SECTION OF ACS AND ST. JOSEPH'S COLLEGE

20th Annual High School Poster Session

Sponsored by: The New York Section of the American Chemical Society and St. Joseph's College

The annual poster session provides an opportunity for talented high school students from the metropolitan area to compete and be recognized for their research accom-

plishments.

The program includes:

- Judging of posters by scientists working in industry and academia
- Guest speaker: Carlo Yuvienco, PhD, Physical Sciences Department, St. Joseph's College
- Certificates to all participants
- Prizes to the four winning presenters.

Protein-based Drug Delivery Agents

Featured Keynote Speaker:



Carlo Yuvienco, PhD
Physical Sciences
Department
St. Joseph's College

With the advancement of technologies to probe and manipulate biophysical matter, the scientific community continues to ever better engineer biological systems with the complexity and elegance in design that is necessary to address biomedical challenges. The growing maturity of the field of protein engineering is a testament to this proclamation.

Dr. Carlo Yuvienco holds a PhD in Biomedical Engineering from New York University and a BE in Chemical Engineering from the Cooper Union for the Advancement of Science and Art. His research focus is currently the application of engineered protein constructs for drug delivery applications.

Date: Saturday, February 7, 2015

Times: 9:00 AM - 1:00 PM
Place: St. Joseph's College
245 Clinton Avenue
Brooklyn, NY

For more information or to register visit:

www.sjcnyc.edu/postersession.
Professionals willing to be a judge, please contact Rhomesia Ramkellowan at rramkellowan@sjcnyc.edu or sjhighschoolpostersession@gmail.com. (Include HS Poster Session in the subject line).

WESTCHESTER CHEMICAL SOCIETY

WINTER/SPRING MEETINGS

Special Seminar – “Anammox: Nitrogen Removal for the 21st Century”

Speaker: Mahsa Mehrdad
 Research Associate
 (Ph.D. Candidate)
 Department of Civil Engineering,
 Environmental Engineering
 Program
 The City College of New York
 New York, NY

The requirement to minimize the impact of domestic effluent on public and environmental health is an important component of wastewater treatment. Removal of nutrients such as nitrogen and phosphorus is a big concern as the combination of these two can cause uncontrolled algae blooms, which choke waterways. As the discharge permit limits the amount of nitrogen for New York City's waste water treatment plants (WWTPs), New York City Environmental Protection (NYCEP) embarked on a comprehensive nitrogen control program by implementing biological nitrogen removal (BNR) technologies in the main flow of its plants and separate sidestream treatment for centrate, an internal high ammonia concentration sidestream generated during the dewatering of the anaerobic digested sludge.

Typically, ammonia is converted to nitrogen gas in a two-step nitrification/denitrification process. This nitrogen removal method entails significant use of energy for aeration, chemicals to supplement alkalinity, and carbon which accounts for most of the operating costs. A more promising method is the anammox process which further reduces the energy cost, reduces the alkalinity required, eliminates the need for a carbon source, reduces the production of sludge solids, and diminishes the carbon footprint. In 2011, NYCEP in conjunction with City College of New York (CCNY) assessed the application of the anammox process in centrate treatment using a moving bed biofilm reactor (MBBR) located at the 26th Ward wastewater treatment plant, in Brooklyn, NY. Up to 70% nitrogen removal was achieved without alkalinity addition.

Ms. Mehrdad studied Chemical Engineering at Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran (BS,

2007, and MS, 2010). During these studies, she was an intern in petrochemical process engineering at Sazeh Consultants Company in Tehran and a research assistant to Prof. Babak Bonakdar at Amirkabir University studying the catalytic effects of different redox mediators on the decolorization of azo dyes in a Sequencing Batch Reactor. In 2010, she was awarded a PhD fellowship by the City College of New York and joined Professor John Fillos's research group. As a part of the research group, she was involved in the operation and performance optimization of the anammox MBBR pilot at 26th Ward wastewater treatment plant. Her independent activities included the mathematical modeling of the process and the investigation of microbial population diversity.

Wednesday, February 11, 2015

Times: Refreshments 5:30 PM

Lecture 6:00 PM

Place: Westchester Community College
 Gateway Building, Room 110
 75 Grasslands Road
 Valhalla, NY

Cost: Free and Open to the Public

Further Information: Paul Dillon

PaulWDillon2@hotmail.com

(914) 393-6940

Or:

Anthony Durante

anthony.durante@bcc.cuny.edu

(718) 289-5542 or 5569

Note: Inclement Weather: Cancellation Due to Inclement Weather

Should Westchester Community College's Valhalla campus close due to inclement weather (or has delayed opening or closes early) the meeting will be cancelled. Decisions about delay/closure are made around 6:00 AM for day courses and 3:00 PM for evening courses. The college will communicate delays, closings or early dismissals on their website (www.sunywcc.edu), Facebook, Twitter, and the (914) 606-6900 phone line.

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BIOCHEMICAL TOPICAL GROUP – JOINT MEETING WITH THE NY ACADEMY OF SCIENCES BIOCHEMICAL PHARMACOLOGY DISCUSSION GROUP

Harnessing the Potential of Genome Editing for Drug Discovery: Translational Frontiers of *in vitro* and *in vivo* Applications

Organizers: Mercedes Beyna, MS
Pfizer

Mi Cai, PhD
Pfizer

Sandra J. Engle, PhD
Pfizer

Samuel Hasson, PhD
Pfizer

Sonya Dougal, PhD
The New York Academy of Sciences

Speakers: Chad Cowen, PhD
Massachusetts General Hospital

James Inglese, PhD
National Center for Advancing Translational Sciences (NCATS)

J. Keith Joung, MD, PhD
Massachusetts General Hospital

Randall Platt, MSc
Massachusetts Institute of Technology

Lei (Stanley) Qi, PhD
University of California San Francisco

Yi Yang, PhD
Novartis Institutes for Biomedical Research

The emergence of genome editing technologies such as TALEN and CRISPR/Cas9 are revolutionizing our ability to rapidly engineer mammalian systems. This symposium explores the frontiers of genome editing and potential to aid therapeutic development.

Abstract submissions are invited for a poster session; several abstracts will be selected for short presentations. For instructions, please send an e-mail to GenomeEditing@nyas.org with the words "Abstract Information" in the subject line. The deadline for abstract submission is **January 23, 2015**.

Date: Tuesday, February 24, 2015

Time: 8:30 AM – 4:30 PM
(reception to follow)

Place: The New York Academy of Sciences
7 World Trade Center
250 Greenwich Street – 40th Floor
New York, NY 10007

Cost: This event 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/GenomeEditing.

To become a Member of the Academy, visit www.nyas.org/benefits



HIGH SCHOOL TEACHERS TOPICAL GROUP I

Materials Chemistry in a Virtual Laboratory: Structure, Transport, and Functionalization

Speaker: Mark E. Tuckerman
Department of Chemistry
and Courant Institute of
Mathematical Sciences
New York University
mark.tuckerman@nyu.edu

The design and characterization of new materials requires an integrative approach involving a synergy between theory/mathematical modeling, computation, experimentation, and engineering. In this synergy, theory and computation are playing an increasingly important role as the power of high-performance computing architectures and sophistication of the underlying algorithms increase. In this talk, I will describe the efforts being made in my research group to develop new computational methodologies that address specific applications in materials chemistry. Specifically, I will outline our strategy for enhancing sampling of conformational equilibria in complex systems and demonstrate its performance in the prediction of polymorphism in molecular crystals and the exploration of biomolecular structure. I will also

review our work employing first-principles dynamics in the study of proton transport processes underlying many electrochemical devices. Finally, I will discuss our recent efforts to understand and design new candidates for the functionalization of semiconductor surfaces through the creation of organic/semiconductor interfaces.

Date: Friday, February 27, 2015

Time: Social and Dinner — 5:45 PM

Place: White Oak Tavern
21 Waverly Place
NE corner at Greene Street
(site of the former M&G Pub)
New York, NY

Time: Meeting — 7:15 PM

Place: New York University
Silver Center Room 207
32 Waverly Place (South-east
corner Washington Sq. East)
New York, NY3

Security at NYU requires that you show a picture ID to enter the building

In case of unexpected severe weather, call John Roeder, (212) 497-6500, between 9:00 AM and 2:00 PM to verify that meeting is still on; (516) 385-4698 for other info.

Note: On street parking is free after 6:00 PM.



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.

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

LONG ISLAND SUBSECTION

Upcoming Meetings

“Spice Tales”: Rapid Detection and Quantification of Synthetic Cannabinoids

Speaker: Ling Huang, PhD
Department of Chemistry
Hofstra University

Date: Thursday, March 5, 2015

Electrophilic Cyclizations of Alkynes—Facile Approaches to Heterocyclic and Carbocyclic Molecules

Speaker: Yu Chen, PhD
Department of Chemistry
Queens College

Date: Thursday, April 2, 2015

The 15th Annual LI-ACS Chemistry Challenge

The Long Island subsection of the NY-ACS invites you to participate in the 15th Annual Chemistry Challenge, to be held at CUNY Queensborough Community College. The Chemistry Challenge is a fun, fast-paced “Jeopardy-style” competition between Chemistry students of local colleges. Timed, multiple choice questions (~75% General and 25% Organic Chemistry) will be asked during the competition. Students will discuss the questions with their team members and select a final answer using electronic “Clickers.” Medals and prizes will be awarded to the top student teams. The atmosphere is exciting and brings both students and mentors together!

To register a student team or obtain more information, please contact Paul Sideris at psideris@qcc.cuny.edu. To view photographs from prior Chemistry Challenge events, please visit: <http://www.qcc.cuny.edu/chemistry/chemchallwinner.html>

Date: Friday, April 24, 2015

Times: Dinner — 5:00 PM
Chemistry Challenge — 6:00 PM

Place: CUNY Queensborough
Community College
Science Building, S-111

Directions: <http://www.qcc.cuny.edu/about/driving.html>

WESTCHESTER CHEMICAL SOCIETY

WINTER/SPRING MEETINGS

Special Seminar – “Nanoscience of Graphene and Other Two-dimensional Materials”

Speaker: Phaedon Avouris, PhD
IBM Fellow
Manager, Nanometer Scale
Science & Technology
IBM Research Division
T.J. Watson Research Center
Yorktown Heights, NY

Abstract and CV will be supplied in a later issue.

Date: **Thursday, March 26, 2015**

Times, Place, Cost and Further Information:
See information on page 7.

Special Seminar – “Hydrogen Bonding in Redox and Nanoparticle Construction”

Speaker: Marc A. Walters, PhD
Department of Chemistry
New York University
New York, NY

Abstract and CV will be supplied in a later issue.

Tentative Date:

Wednesday, April 22, 2015

Times, Place, Cost and Further Information:
See information on page 7.

Special Seminar – “How Your Grandmother’s Diet May Have Changed Your Life”

Speaker: Hailey Clancy, PhD
Lieutenant Colonel, US Army
Assistant Professor
Department of Chemistry
and Life Science
United States Military Academy
West Point, NY

Abstract will be supplied in a later issue.

Lieutenant Colonel Hailey Clancy graduated from Westminster College in Fulton, Missouri with a double major in Biology and Spanish and was commissioned into the US Army in 1992. While on active duty with the US Army, she earned a MS Degree in Environmental Toxicology from Cornell University where she developed a biosensor to detect the bacterium that causes Anthrax. In 2012 she earned a PhD in Molecular

Toxicology and Carcinogenesis from New York University, where she conducted research on the effects of human exposure to nickel and its role in lung cancer. LTC Clancy’s military assignments include service as a Transportation and Logistics officer in Germany (Nürnberg, Kaiserslautern, Wiesbaden, and Baumholder), Bosnia-Herzegovina, Iraq (Balad, Diyala, Baghdad), and Fort Drum, NY. She is currently assigned as an Assistant Professor in the Department of Chemistry and Life Science at West Point, NY, where she teaches General Chemistry and Biology. Her military awards include the Bronze Star (with oak leaf cluster), Meritorious Service Medal (with two oak leaf clusters), Joint Service Commendation Medal, Army Commendation Medal (with oak leaf cluster), Army Achievement Medal (with oak leaf cluster) and the Meritorious Unit Citation.

Tentative Date: **Early October, 2015**

Times, Place, Cost and Further Information:
See information on page 7.



WESTCHESTER CHEMICAL SOCIETY

In 2015 the board of directors for the Westchester sub-section will remain the same but there will be some changes in officers. Specifically, Dr. Rolande Hodel will share chairmanship duties with Dr. Paul Dillon as Co-Chairmen. Dr. Dillon will continue as Co-Program Director along with Dr. Anthony Durante. Continuing in their current positions are Dr. Peter Corfield as Treasurer and Education Director, Dr. Jody Reifenberg as Westchester Community College Liaison and Insurance Director and Ms. Joan Laredo-Liddell and Ms. Jean Delfiner as Directors-At-Large.

Submit photos (remember to include captions and photo credits) for use in *The Indicator* by e-mailing Photos@TheIndicator.org

	ACS Chemistry for Life™	63rd	ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM
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The Student Activities Committee of the New York Section of the American Chemical Society

Saturday, May 9th, 2015 at Queensborough Community College

8:00 am – 3:00 pm (breakfast, luncheon and award reception included)

Sign up as an attendee at <http://www.newyorkacs.org/meetings/urs/urs.php>

Keynote Speaker: Dr. JaimeLee Rizzo

Department of Chemistry and Physical Sciences, Pace University

JaimeLee Iolani Rizzo is a Professor of Chemistry in the Department of Chemistry and Physical Sciences at Pace University, NYC campus. A native of Honolulu, Hawai'i, Dr. Rizzo received her associate's degree from Queensborough Community College followed by a bachelor's and a master's degree in Chemistry from Queens College, CUNY. She completed her graduate studies under the tutelage of Robert Ralph Engel at Queens College, CUNY, where she developed an interest in organic synthesis particularly polyammonium compounds. A series of these compounds were covalently bound to macromolecules where host/guest binding interactions were investigated.

In 2001, Dr. Rizzo joined the faculty at Pace University, where her laboratory co-developed a method to bind polycationic organic compounds to carbohydrate-based surfaces which exhibits antimicrobial activity. This work has led to the acquisition of 14 patents and 5 publications. Johnson & Johnson Wound Management Division and Prismatic Dyeing and Finishing Company have supported this endeavor and are collaborators on some patents.



Keynote Address

Constructing Killer Surfaces

Our laboratory has been developing an array of new surfaces that kill bacteria and fungi on contact. We have successfully synthesized antimicrobial surfaces that destroy bacteria and fungi where the mode of action is through an electrostatic disruption of the cell wall. The antimicrobial activity of the surface is continual with regard to the agent that is covalently bound to the surface because it is not consumed in the process of invasion and disruption of the cell wall. This makes it unlikely that microorganisms could become resistant to this type of attack as it would involve a major modification of their cell-wall structure. Surfaces which have been prepared include carbohydrate-based materials as in wood, cotton cloth, paper; proteinaceous-based as in wool and silk; chitosan; agarose; gelatin β . The agents that are covalently bound to a given surface are a series of quaternary ammonium salts. The salts are then attached via a simple two-step procedure that involves activation of the surface followed by an SN_2 reaction of the salt with the activated surface. The synthesis, characterization, and bacteriological results will be presented.

SIGNIFICANT DATES FOR 63rd URS

Deadline for Abstract Submission - **March 20, 2015** Abstract acceptance notification – April 6, 2015
Deadline for Symposium Advanced Registration – April 10, 2015

2015 Co-chair Dr. Justyna Widera Adelphi University widera@adelphi.edu	2015 Co-chair Dr. Yolanda Small York College - CUNY ysmall@york.cuny.edu	2015 Co-chair Dr. Paul Siderie Queensborough CC - CUNY psiderie@gcc.cuny.edu	2015 Co-chair Dr. Sharon Lal-Ramnarine Queensborough CC - CUNY slalramnarine@gcc.cuny.edu
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FREE Registration for student members of the National ACS, faculty mentors who register in advance and sponsors. For non-ACS members and guests, the registration is \$35 in advance. All on-site registration is \$45 for faculty, staff and guests. Checks for the registration fee should be made out to: "NY ACS URS" and sent to: Prof. Justyna Widera, Adelphi University, Department of Chemistry, Science 201, 1 South Avenue, Garden City, NY 11530.

See Call for Papers, page 21.

**Learn how you could get involved
in ACS by e-mailing
Volunteer@TheIndicator.org**

 **2015 WILLIAM H. NICHOLS MEDAL DISTINGUISHED SYMPOSIUM AND AWARD DINNER** 

Symposium: MOLECULAR SURFACE SCIENCE AND ITS APPLICATIONS. NANOMATERIALS, THE SURFACE CHEMICAL BOND, BIOINTERFACES, AND CATALYSIS

Award Recipient: **PROFESSOR GABOR A. SOMORJAI**
University of California - Berkeley

Date: Friday, April 17, 2015

Time: 1:00 PM Registration 1:30 PM – 5:30 PM Symposium
5:45 PM Reception 6:45 PM Award Dinner

Place: Crowne Plaza Hotel, White Plains, NY

PROGRAM

- 1:30 PM Welcome Professor Paris Svoronos
2015 Chair, ACS, New York Section
CUNY - Queensborough Community College
- 1:35 PM Opening of the Distinguished Symposium Professor Alison G. Hyslop
2015 Chair-elect, ACS, New York Section
St. John's University
- 1:45 PM Metal-organic Frameworks Professor Omar M. Yaghi
University of California-Berkeley

Metal-organic frameworks (MOFs) represent an extensive class of porous crystals in which organic 'struts' are linked by metal oxide units to make open networks. The flexibility with which their building units can be varied and their ultra-high porosity (up to 10,000 m²/g) have led to many applications in gas storage and separations for clean energy. This presentation will focus on (1) how one can design porosity within MOFs to affect highly selective separations (carbon dioxide), storage (hydrogen and methane) and catalysis, and (2) a new concept involving the design of heterogeneity within crystalline MOFs to yield sequences that code for specific separations and chemical transformations.

- 2:30 PM Exploring the Interactions of Ions, Peptides, and Proteins with Lipid Membranes Professor Paul Cremer
Pennsylvania State University

Biological membranes often contain negatively charged lipids such as phosphatidylserine, phosphatidylglycerol, phosphatidic acid, and gangliosides. The groups of these lipids can strongly interact with positively charged aminoacids from peptides and (i.e. Arg and Lys residues), metal cation from the extracellular solution as well as positively charged drug molecules. These negatively charged lipids are highly regulated within cells and are highly abundant in certain organelles while almost completely absent in others. Moreover, their concentration within a particular leaflet of a given membrane is often tightly regulated. Despite the high degree of control of lipid composition within cells, little is often known about the reason for it or even the specific nature of ligand-receptor binding interaction with such moieties. To remedy this, we have employed a combination of spectroscopic techniques, microfluidic platforms, monolayer and planar supported bilayer architectures to explore the specific biophysical chemistries of these interactions. This includes the development of a novel analytical tool that employs a pH sensitive fluorophore to probe subtle changes in the surface potential of lipid bilayers upon ligand or ion binding. Both thermodynamic and molecular level details of these systems have been obtained. The results reveal that binding can be highly dependent on the concentration of specific lipids within the membrane. Moreover, the presence or absence of various uncharged lipids can also greatly influence the binding properties. Interestingly, specific interactions involving hydrogen bonding, charge transfer, and hydrophobic interactions often dominate over simple electrostatic effects.

- 3:15 PM Coffee Break

- 3:45 PM The Surface Chemical Bond: Explorations of Structure and Dynamics Professor Steven L. Bernasek
Princeton University

The tools of molecular surface science developed over the past fifty years have enabled the examination of the nature of the surface chemical bond and its dynamic behavior in unprecedented molecular detail. In my lecture I will discuss two examples of this sort of work. I will comment on the insights that have been gained in the basic understanding of surface chemical processes using this approach, which has been pioneered by this year's recipient of the Nichols Award. This understanding provides important foundations for the range of applications described in this symposium.

The first example focuses on the process of molecular self-assembly at characterized surfaces. The use of molecular beam scattering as well as scanning probe microscopy, coupled with electron spectroscopic and microscopic methods, provides information about the formation and energetics of chiral and achiral organic monolayers and designed nanostructured surfaces. Implications for the understanding of homochirality in biological systems, and applications in organic electronic device design will be mentioned.

The second example uses the tools of surface science, coupled with optical pulse shaping methods, to address the quantum control of surface chemical dynamics. Carefully designed self-assembled monolayer samples along with surface sum frequency generation as a feedback signal, have been used to optimize selective bond manipulation at the surface. Possible applications to heterogeneous catalysis and electronic device preparation will be presented.

4:30 PM The Genesis and Integration of Heterogeneous, Homogeneous, and Enzyme Catalysis on the Nanoscale Professor Gabor A. Somorjai
NICHOLS MEDALIST

The synthesis of metal and bimetallic nanoparticles in the 1-10 nm range, and mesoporous high surface area oxides, were utilized as heterogeneous catalysts. The rates and chemical selectivity of multi-path reactions were dependent on the nanoparticle size and the oxide-metal nanoparticle interface composition. Instruments including laser spectroscopy (sum frequency generation vibrational spectroscopy) and synchrotron based x-ray spectroscopies and scanning tunneling microscopy reveal the mobility and dynamic restructuring of adsorbed and reacting molecules and catalyst surfaces under reaction conditions. The formation of covalent bonds between the adsorbed molecules and the diverse structures of the catalyst surfaces are one important ingredient of catalytic selectivity. The charge transfer of oxide-metal interfaces to the reacting molecules (acid-base catalysis) is the other important property of catalytic reactivity. Metal nanoparticles at 1 nm size (40 atoms) and below behave as single metal-ion transition metal homogeneous catalysts. Studies of adsorbing enzyme catalysts on oxide surfaces explore how their rates and chemical selectivities are altered in progress.

5:45 PM Social Hour

6:45 PM William H. Nichols Medal Award Dinner Professor Kenneth B. Eisenthal (Columbia University) will introduce the Medalist

More information on the William H. Nichols Medal Events is available on the New York Section's website at <http://www.NewYorkACS.org>.

Tickets may be reserved using the following form, or preferably through the New York Section website that accepts credit cards or Paypal. <http://www.NewYorkACS.org>.

RESERVATION FORM

2015 WILLIAM H. NICHOLS DISTINGUISHED SYMPOSIUM & MEDAL AWARD BANQUET in honor of Gabor A. Somorjai

Return to: ACS, New York Section, c/o Dr. Neil D. Jespersen, Department of Chemistry, St. John's University, 8000 Utopia Parkway, Queens, NY 11439 (516) 883-7510

- Please reserve _____ places for the symposium & banquet at \$120/person, ACS member
- _____ places for the symposium only at \$40/person, ACS member
- _____ places for the banquet only at \$110/person, ACS member
- _____ places for the symposium & banquet at \$150/person, Non-member
- _____ places for the symposium only at \$60/person, Non-member
- _____ places for the banquet only at \$120/person, Non-member
- _____ places for the symposium only at \$25/person, Students, Unemployed
- _____ places for the symposium only complimentary for 50 year + ACS members

(For table reservations of 8 or more, use the ACS member \$120/person rate for combination tickets)

Reserve a table in the name of: _____

Names of guests are:	e-mail Addresses:
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_____	_____
_____	_____
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_____	_____
_____	_____

Indicate numbers in your group who choose:	Mail Tickets to:
Chicken _____	Name: _____
Prime Rib _____	Address: _____
Salmon _____	_____
Vegetarian _____	_____

BANQUET RESERVATION DEADLINE: APRIL 7, 2015

Please make checks payable to: ACS, NEW YORK SECTION Check for \$_____ enclosed

WESTCHESTER CHEMICAL SOCIETY

Despite having to brave a Nor'easter, an enthusiastic audience on December 9, 2014 attended a seminar, "What's Beyond the Lithium Ion Battery?", given by Dr. Lin-Feng Li, the founder, president and chief technology officer of Bettergy Corp. Dr. Li, and his company, are deeply involved in cutting-edge battery research. Of particular importance, especially for batteries to be used in electric vehicles, is improving the energy density (kilowatt-hours per kilogram), which has plateaued for run-of-the-mill lithium ion batteries. These improvements must be

made while maintaining reasonably low cost (materials are a large fraction of battery cost). In addition, the ability to retain a high energy density through many discharge/recharge cycles is critical. Dr. Li described several approaches, involving variations of both the anode and cathode and also of the separator materials. During and after Dr. Li's talk, given at the Westchester Community College in Valhalla, N.Y., there were lively question and answer, and discussion, periods. Several attendees, including the speaker, then enjoyed a dinner together at a nearby restaurant. The photo below is of Dr. Li and the WCS board of directors who attended the meeting.



Rolande Hodel, Paul Dillon, Lin-Feng Li, Jody Reifenberg and Anthony Durante.

(Photo courtesy of Paul Dillon)



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North Jersey Meetings

<http://www.njacs.org>

NORTH JERSEY EXECUTIVE COMMITTEE MEETING

Section officers, councilors, committee chairs, topical group chairs, and section event organizers meet regularly at the Executive Committee Meeting to discuss topics of importance to running the section and representing the membership. All ACS members are welcome to attend this meeting and to become more involved in section activities.

Date: Monday, February 23, 2015

Times: Dinner 6:15 PM
Executive Meeting 7:00 PM

Place: Rutgers University
Center for Advanced
Biotechnology and Medicine
679 Hoes Lane West
Piscataway, NJ

Directions can be found here:
<http://rumaps.rutgers.edu/?id=C71942>

For reservations please call (732) 463-7271 or email chemphun@gmail.com prior to **Wednesday, February 18, 2015**.

Dinner cost is payable at the door; however, if you are not able to attend and did not cancel your reservation, you are responsible for the price of your dinner.



CAREERS IN TRANSITION MEETINGS

Job Hunting??

Resume & LinkedIn writing and key word search rules are changing. To be found, come and utilize our latest insights. Our ACS trained Career Consultants 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, February 9, 2015

New from now on is a second CIT meeting in East Windsor on the third Monday. Contact Bill for details.

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

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 bill suits@earthlink.net.

See www.njacs.org under the Career tab for Jobs hidden from sight and relevant blogs.



NJACS PARTNERS WITH STUDENTS2SCIENCE

Members are encouraged to volunteer at their East Hanover facility and explore their website at www.students2science.org to learn more about this innovative program.

S2S continues to expand their exciting laboratory experience the disadvantaged children. Many of our members continue to volunteer as mentors. At their 2 million dollar analytical lab, every 40 kids are assisted by 16 professional volunteer mentors. The experiments performed really make chemistry and science come alive using state of the art analytical equipment working with students starting in 6th grade up to HS seniors. Each day is optimized for grade level and curriculum.

Now the program has further expanded with internet video and experiments performed in the classroom for 4 & 5th grades. Internet allows views of the lab in operation and relates to simpler experiments setups done in the classroom with their teacher and a partnering chemist.

North Jersey members who volunteered benefited in many ways. Those in transition expanded their network and received job finding assistance. Retired chemists met up with old friends and made many new friends. Those with jobs used the volunteer hours as part of the company outreach programs and team training. All feel great about making a difference in the lives of the youth who may have never met a scientist or considered a career in the sciences.

Please consider volunteering and discovering more about this innovative program. If you want to learn more, you can speak with Don Truss at (908) 334-8435.

NORTH JERSEY DRUG METABOLISM DISCUSSION GROUP

February Dinner Meeting and Seminar

Sponsored by: AB Sciex

Additional details and a full schedule of events will be posted on our website at <http://www.njacs.org/topical-groups/mass-spectrometry>, along with a registration link. The evening is free for attendees, courtesy of our sponsor, AB Sciex, but we request that all interested in attending register.

Date: Tuesday, February 10, 2015

Times: 5:30 - 9:00 PM

Place: Holiday Inn Somerset-Bridgewater
195 Davison Avenue
Somerset, NJ

Cost: Free for attendees, courtesy of our sponsor, AB Sciex

We request that all interested in attending register on our website.



MASS SPECTROMETRY TOPICAL GROUP

Sponsored by AB Sciex

Date: Tuesday, February 10, 2015

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

Speaker #1 7:05 PM

Speaker #2 8:00 PM

Closing remarks 8:55 PM

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

Cost: Free, compliments of our sponsors

NMR TOPICAL GROUP

Solid-State NMR Investigation of Pharmaceutically Interesting Biomacromolecules

Speakers: Yongchao Su, PhD
Merck Research Laboratories
West Point, PA
Department of Chemistry and
Francis Bitter Magnet Lab
Massachusetts Institute of
Technology

Date: Wednesday, February 18, 2015

Times: Dinner 6:00 PM

Seminar 7:00 PM

Place: TBA

Cost: Dinner: \$15 employed
\$5 students, postdocs, retired,
unemployed
No charge for seminar only.

For registration, driving directions and updates, please check our website:
<http://www.njacs.org/nmr.html>



YOUNGER CHEMISTS COMMITTEE

Chemistry on the Silver Screen

Science is finding a bigger place on the silver screen and in our living rooms. But what's behind this new attraction and how is Hollywood influencing the public's view? Tune in for a discussion on how Hollywood is working to incorporate science and meet the people that are making it happen.

Date: Tuesday, February 24, 2015

Place: Rutgers University

For further information, please check our website: <http://www.njacs.org/yc>



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NORTH JERSEY DRUG METABOLISM DISCUSSION GROUP

**Spring Symposium and
Vendor Exhibition**

Details will be posted at <http://www.njacs.org/topical-groups/drug-metabolism>.

Date: Monday, April 27, 2015
Times: 8:00 AM to 4:00 PM
Place: The Palace at Somerset Park
333 Davidson Avenue
Somerset, NJ



RES MED: RESIDENTIAL SCHOOL ON MEDICINAL CHEMISTRY AND BIOLOGY IN DRUG DISCOVERY

The ResMed School offers an intensive week long graduate-level course organized to provide an accelerated program for medicinal chemists, biologists and other industrial and academic scientists who wish to broaden their knowledge of drug discovery and development. The aim of the school is to concentrate on the fundamentals that are useful in drug discovery spanning initial target assay evaluation through clinical development. Several case histories of recent successful drug development programs will also be presented. The five-day program consists of lectures, seminars and case histories.

Date: Sunday-Friday, June 7-12, 2015
Place: Drew University
Madison, NJ

For more information and application forms visit our website, www.drew.edu/resmed, email resmed@drew.edu, phone (973) 408-3787 or fax 973/408-3504.

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ResMed: Residential School on Medicinal Chemistry and Biology in Drug Discovery
June 7-12, 2015
Drew University, Madison, NJ

This graduate level course concentrates on the fundamentals that are useful in drug discovery spanning initial target assay evaluation through clinical development. Several case histories of recent successful drug development programs will also be presented. The five-day program covers:

Principles of Med Chem	DMPK
Cheminformatics	Toxicophores
Lead ID & Optimization	GPCRs
Epigenetics	Kinase Inhibitors
Fragment-based Drug Design	Ion Channels
Structure-based Drug Design	Enzyme Inhibitors
Drug-like Properties	Bioisosteres
Plasma Protein Binding	Preclinical Tox
Molecular Modeling	Clinical Dev
Protein-Protein Interactions	Case Histories

W. Greenlee, V. Gullo and R. Doll –Co-organizers

For more information and application forms:
www.drew.edu/resmed
e-mail: resmed@drew.edu
phone: 973/408-3787; fax: 973/408-3504

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2014 CREATIVITY IN MOLECULAR DESIGN AND SYNTHESIS AWARD AND SYMPOSIUM

The 2014 Award for Creativity in Molecular Design and Synthesis was presented to Professor David MacMillan, James S. McDonnell Distinguished University Chair and Professor of Chemistry at Princeton University, at a symposium held at the Robert Wood Johnson Medical School, Rutgers University in Piscataway, NJ on December 6, 2014. More than 130 industrial chemists, students, and faculty from North Jersey and surrounding sections attended. Dr. MacMillan was recognized for his "initiative, creativity, leadership, and perseverance in pure and/or applied chemistry."

In his keynote address, Professor MacMillan described his lab's cutting-edge research on photoredox catalysis to organic synthesis. Its implementation has led to the discovery of a myriad of individual reactions. Other speakers included Stephen Buchwald, Camille Dreyfus Professor of Chemistry at Massachusetts Institute of Technology, whose research combines elements of organic chemistry, organic synthesis, and organometallic chemistry to devise catalytic processes; Rob Knowles, Professor of Chemistry at Princeton University, whose research focuses on synthetic applications of proton-coupled electron transfer (PCET) reactions; Gary A. Molander, Hirschman Makineni Professor and Chair at the University of Pennsylvania, whose research interests are in the development of new synthetic methods for organic synthesis; and, Paul J. Reider, Teaching Professor at Princeton University, where his research is focused on new drugs for Malaria, TB and other neglected diseases.

Dr. Ronald Kong, Award Chair and Chair-elect of the North Jersey Section, welcomed the guests and described the award. Dr.

Monica Sekharan, Section Chair presented the award plaque and honorarium to Professor MacMillan. Dr. Les McQuire, NJ-ACS Awards Chair gave the closing remarks and invited attendees to send him names of NJACS members who deserve recognition for their scientific accomplishments and volunteerism.

Awardees are acknowledged for their broad impact in the areas of chemical synthesis, method development, bioorganic/medicinal chemistry, pharmaceutical sciences, and/or molecular recognition. Visit the North Jersey Section's website, www.njacs.org, for more details.

NJACS is grateful to the sponsors of this event—Merck, WuXi AppTec, Agilent Technologies, and Rutgers University.



North Jersey Section Chair Monica Sekharan presents the 2014 Creativity in Molecular Design and Synthesis to Professor David MacMillan, James S. McDonnell Distinguished University Chair and Professor of Chemistry, Princeton University.



Attendees view posters and socialize during the Refreshment Break.

(All photos courtesy of Tom Krone)



Dave MacMillan, 2014 Creativity in Molecular Design and Synthesis Awardee, and his wife Jean Kim, VP of Chemistry at Kadmon Corporation



Attendees at the 2014 Creativity in Molecular Design and Synthesis Symposium And Award Ceremony

Professor MacMillan and Symposium Speakers. Left to right: Dr. Rob Knowles, Dr. Dave MacMillan, Dr. Gary Molander, Dr. Paul Reider, Dr. Stephen Buchwald



Professor MacMillan, Symposium Speakers, and NJACS Creativity Award Committee. Back Row: Bill Suits, Bettyann Howson, Amjad Ali, Diane Krone, Monica Sekharan; Front Row: Eric Mertz, Ron Kong, Prof. Rob Knowles, Prof. Dave MacMillan, Prof. Gary Molander, Prof. Paul Reider, Prof. Stephen Buchwald, Alan Cooper, Les McQuire.

NJACS NEW MEMBERS SOCIAL

The North Jersey Section held its first New Member Reception on December 6th at Robert Wood Johnson Medical School in Piscataway. New members had an opportunity to meet our Executive Committee Members, network with each other and leaders from our Topical Groups and Committees, and to learn more about what our section has to offer.



Alan Cooper and Jeannette Brown, NJACS Councilors discuss benefits of NJACS with new member Marc N'Doumi.



New members have a chance to network with each other.



2015 Chair-elect Luciano Mueller socializes with new member Ellen Rubinstein



Nandini Isaac and Nikki Heron were winners of door prizes.




Members from NJIT and Essex County College Student Chapters attended along with new member Bhavani Balasubramanian and Student Advisor Nidhal Marashi.



New members had a chance to learn about the benefits of membership in the North Jersey Section.

(All photos courtesy of Tom Krone)

Call for Papers

 ACS Chemistry for Life®	63rd	ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM
<p>Call for Papers for the 63rd ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM sponsored by the Student Activities Committee of the New York Section of the American Chemical Society. The symposium provides an excellent opportunity for undergraduate chemistry students in the NY metropolitan area to present the results of their research. The program includes a keynote address by Dr. JaimeLee Rizzo, Department of Chemistry and Physical Sciences, Pace University, presentation of student papers, followed by a luncheon.</p>		
<p>Date: Saturday, May 9th, 2015 Place: Queensborough Community College, Queens, NY</p>		
<p>To:</p> <ol style="list-style-type: none"> 1. Submit an abstract on-line (Please follow the abstract template form and included instructions) 2. Print a flyer for posting - Click "Download Flyer" in the blue frame 3. Obtain directions to Queensborough Community College <p>Go To: http://www.newyorkacs.org/meetings/urs/urs.php</p>		
<p>SIGNIFICANT DATES FOR 63rd URS Abstract submission and online registration opens - February 2, 2015 Deadline for abstract submission - March 20, 2015 Notification of the abstract acceptance – April 6, 2015 Deadline for early registration – April 10, 2015</p>		
<p>FREE Registration for student members of the National ACS, faculty mentors who register in advance and sponsors. For non-ACS members and guests, the registration is \$35 in advance. All on-site registration is \$45 for faculty, staff and guests. Students can obtain a discounted 1-yr membership to the ACS for \$25 by visiting http://undergrad.acs.org/</p>		
<p>Checks for the registration fee should be made out to: "NY ACS URS" and sent to: Prof. Justyna Widera, Adelphi University, Department of Chemistry, 1 South Avenue, Garden City, NY 11530</p>		
<p>If you have any questions please contact: nyacsurs2015@gmail.com</p>		

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slalramnarine@qcc.cuny.edu

Call for Volunteers

MARM 2016

The New York Section will be hosting MARM 2016, June 9-12, 2016 at the College of Mount Saint Vincent, Riverdale, NY 10471. The section will be celebrating its 125th Anniversary during its event. The theme has yet to be determined. The General Chairs for this meeting are Dr. Pamela Kerrigan and Dr. Daniel Amarante from the College of Mount Saint Vincent's Division of Natural Sciences. To volunteer in planning and/or for further information, please contact them at the following emails:

Pamela.kerrigan@mountsaintvincent.edu

or

Daniel.amarante@mountsaintvincent.edu

Grants and Awards

LSAC SUBCOMMITTEE ON GRANTS AND AWARDS

LSAC is now accepting Local Section Innovative Project Grant (IPG) proposals for consideration in the Spring 2015 cycle.

What is the IPG program?

The purpose of the Local Section IPG Program is to seed projects in local sections to increase member involvement, improve services to members, and increase the public's understanding of chemistry. Each local section IPG proposal can be funded up to \$3,000. It is a requirement that local sections submit final reports for any previously funded IPGs in order to be considered for new proposals. Complete a final report.

Before you Apply

Be sure to adhere to the IPG guidelines, procedures, and restrictions found on www.acs.org/localsectionipg to maximize chances for funding. In addition, carefully consider the Frequently Asked Questions (FAQs) section, where you can learn more about ways to be innovative, review recently funded IPGs, and read through several model proposals.

How to Apply

Once any outstanding final reports are received, your local section can apply for an IPG by completing this application form.

Upon clicking "submit" on this online form, your application will automatically transmit to lsac@acs.org. The deadline for receipt of proposals is **January 31, 2015**.

We look forward to reviewing many competitive proposals this round!

Sincerely,
Martin Rudd, Chair
Committee on Local Section Activities

Stephanie Watson, Chair
LSAC Subcommittee on Grants and Awards

Pittcon

2015 TECHNICAL PROGRAM

Pittcon is pleased to announce the **2015 Technical Program** that includes over 2,000 technical presentations offered in symposia, oral sessions, workshops, awards, and posters. This year's program covers a wide range of applications such as, but not limited to, biotechnology, biomedical, drug discovery, environmental, food science, fuels/energy, genomics, lab management, materials science, nanotechnology, polymers/plastics, proteomics and water/wastewater. The Technical Program begins on **Sunday, March 8 and runs through Thursday, March 12, 2015**.

To help celebrate the International Year of Light, there will be two special symposia:

"Fundamental Science-driven Infrared Spectroscopic Imaging for Clinical Diagnostic Systems" will be presented by the SAS (Society of Applied Spectroscopy), March 9, at 9:45 AM.

"The Early Days of Modern Infrared Spectroscopy: The First Three Years of FT-IR." The Coblenz Society/SAS will present a "60 Year Celebration of the Coblenz Society" organized by Peter Griffiths, March 9, 8:35 AM.

We will once again be co-programming with the ACS Division of Analytical Chemistry with a Monday afternoon poster session and eight symposia on analytical methods and advancements in areas such as environmental science, food science, life science and nanotechnology.

See a complete list of all co-programming and technical sessions at pittcon.org.

Project SEED



At left is Jeannette Brown with one of her Project SEED students at the North Jersey Awards Ceremony in May 2014.

Project SEED is designed to encourage economically disadvantaged high school students to pursue career opportunities in the chemical sciences.

Jeannette Brown was the first of the North Jersey Project SEED Coordinators. She began the poster session for Project SEED, and Chaired the National Project SEED Committee.

Susan Fahrenholtz succeeded Jeannette, and increased the number of participating schools and students. Hundreds of SEED students from NJ SEED have gone on to college, most of them in a scientific field. Several have received MD degrees, and have become mentors themselves. A number of our students have received both ACS Project SEED (for the economically disadvantaged) and ACS Scholars (for minorities) assistance.

Jeannette and Susan are both Legacy Donors to Project SEED. Particular thanks are owed to the NJ and NY mentors who are the lifeblood of SEED, and the high school teachers who have recommended and advised the students. Seton Hall is to be specially thanked for hosting a poster session every year, as are the judges who give their time to encourage the students.

Mentors are truly the backbone of the SEED program; their number is the limiting factor in how many students can be assisted. In some instances, high school teachers run their own programs or collaborate with NJ or NY programs.

To become a SEED mentor this summer, to receive a grant and interview students, for

- North Jersey please contact Susan Fahrenholtz (fahrenholtz@fordham.edu or (973) 338-6588) or John Piwinski (jpofnj@embarqmail.com).
- New York, please contact Nadia Makar (Coordinator of the New York Section Program) nmakar@union-city.k12.nj.us.

By Nadia Makar



At left is a picture of me with one of my former students, Elaine Gomez, who is now getting her PhD at Columbia University in Environmental Chemistry. Elaine did SEED 1 and SEED 2 and won several awards and medals locally, statewide and national. She also represented the state at the Intel International Science and Engineering Fair and won a medal. The Intel/ISEF was attended by 1600 students from over 67 nations and all 50 states.

I have been coordinating the Project SEED program for the New York Section for over twenty years. Thousands of students have participated in the NY section program which is one of the largest in the nation. Most of the past participants have pursued careers in the STEM fields and are now working for very large international companies.

Many have attended Ivy League Schools, graduated and are now serving as mentors for the new Project SEED students. This is a wonderful program that has changed the lives of not only the students who participated in the program but also has changed the dynamics of their families. In several instances, the parents ended up going to college and improving their economic status. The program has also served as a catalyst to improve the lives of the economically disadvantaged by moving them into the middle class. Elaine comes from a family where her parents did not even get a high school education. Being the youngest of three girls, she was the first one to go to college. Her success has encouraged her older sisters to attend college and they are both now getting a college education. This is only one example that demonstrates how Project SEED has affected the lives of the members of this family. Project SEED has had positive effects on many families.

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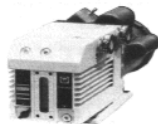
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