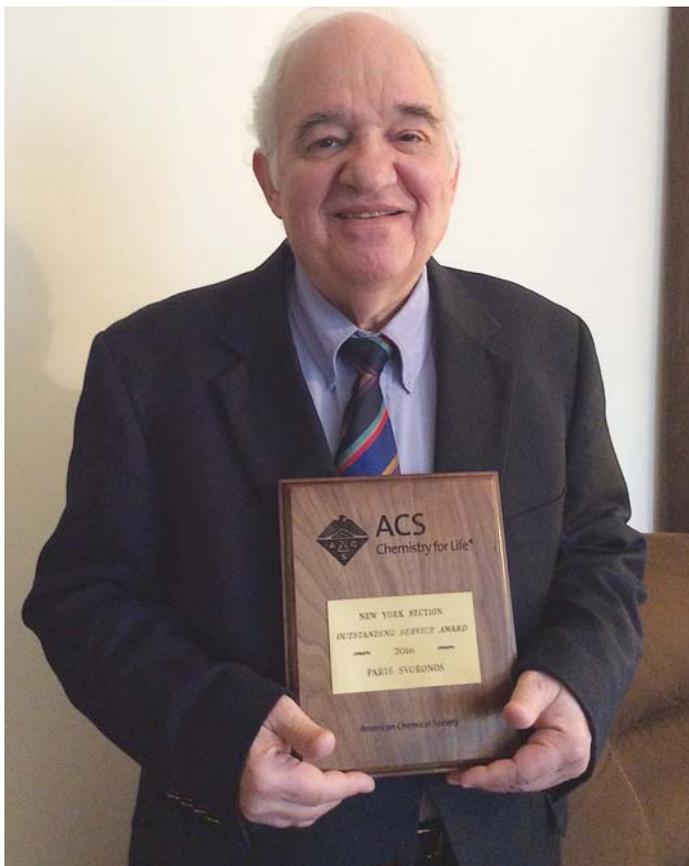


## **Professor Paris Svoronos 2016 New York Section's Outstanding Service Awardee**



***See Article on page 5.***

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## **THIS MONTH IN CHEMICAL HISTORY**

Harold Goldwhite, California State University, Los Angeles • [hgoldwh@calstatela.edu](mailto:hgoldwh@calstatela.edu)

In my last column and this one I am looking at the careers of two extraordinary women who made fundamental contributions to our understanding of surface chemistry. Last month I focussed on Agnes Pockels, a self-taught German experimenter. This month it is the turn of Katharine Burr Blodgett, an American scientist who made her significant contributions as an industrial chemist. Katharine Blodgett was born in Schenectady, New York on January 10, 1898. To her family and friends she was always known as Katie. Her father was a patent attorney for General Electric, but Katie was born just after his death. They were left well-supported and moved to New York city, then to France when Katie was 3, and back to New York when she entered her teens. She attended high school in New York, showed an aptitude for mathematics, and graduated at 15. Earning a scholarship to Bryn Mawr she earned her bachelor's degree at 19. It was there that she developed an interest in physics. She revisited some of her father's old friends at Schenectady and was introduced at General Electric's laboratories to Irving Langmuir. On his recommendation she continued her education; at the University of Chicago she earned a Master's degree with a thesis on gas masks (it was the time of World War I). She was immediately hired by General Electric in Schenectady but was encouraged to continue her education and joined Rutherford's team at Cambridge University in England working on ionization in mercury vapor. She became the first woman awarded a Ph.D. in physics at Cambridge.

Back at General Electric she was a frequent collaborator of Langmuir's. He was then working on thin films on water surfaces and had invented the Langmuir trough to explore this field. (Agnes Pockel had developed a very similar apparatus for her investigations decades earlier, but her work was not well-known at the time). Blodgett and Langmuir examined very thin films of oils, lipids, polymers etc. on water, glass, and metal surfaces. Blodgett improved the techniques to the stage where she was able to attach films one molecule thick on top of each other on what became known as the Langmuir-Blodgett trough. A practical application soon followed; a film of barium stearate on glass cut down reflection until the glass was 99% transmissive – invisible glass. This Langmuir-Blodgett coating was used on cameras during and after World War II.

Blodgett's inventions continued. Her color gauge measured accurately the thicknesses of molecular coatings on surfaces. Together with Langmuir she improved the performance of incandescent light bulbs. They also began studies on electric discharges in gases that helped advance plasma physics. In all Katie authored eight patents and over thirty scientific articles. She was honored with the Garvan medal of the A.C.S. in 1951; an Achievement Award from the American Association of University Women in 1945; recognition from the U.S. Chamber of Commerce; the Katherine Blodgett Day in Schenectady in 1951; and posthumous induction into the National Inventors Hall of Fame in 2007.

But it wasn't all science for Katie. She was an enthusiastic amateur actress; an amateur astronomer; and a renowned cook. Her popovers and applesauce were locally famous, but alas that was one area where she left us no publications. She never married but had long-term relationships with two other women - called (quaintly) at that time "Boston Marriages". She died quietly at home on October 12, 1979 at the age of 81.

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## April Calendar

### NEW YORK SECTION

#### Thursday, April 6, 2017

Long Island Subsection Seminar  
See page 9.

#### Tuesday, April 11, 2017

Biochemical Topical Group  
See page 10.

#### Wednesday, April 12, 2017

Westchester Chemical Society  
See pages 10-11.

#### Wednesday, April 19, 2017

MetroWomen Chemists  
See pages 11-12.

#### Friday, April 21, 2017

Long Island Subsection - Chem Challenge  
See page 10.

#### Friday, April 21, 2017

High School Teachers Topical Group -  
Demo Derby II  
See page 12.

#### Friday, April 21, 2017

Hudson-Bergen Chemical Society  
See pages 12-13.

#### Sunday, April 23, 2017

Earth Day Celebration  
See page 13.

#### Tuesday, April 25, 2017

Biochemical Topical Group  
See pages 13-14.

#### Thursday, April 27, 2017

Long Island Subsection Board Meeting  
See page 10.

#### Friday, April 28, 2017

New York Section Board Meetings  
See page 9.

*also*

#### Tuesday, May 2, 2017

Westchester Chemical Society  
See pages 14-15.

#### Thursday, May 4, 2017

2017 Brooklyn Frontiers in Science Lecture  
See page 15.

#### Saturday, May 6, 2017

65th Annual Undergraduate Research  
Symposium  
See page 16.

#### Friday, May 19, 2017

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See page 17.

#### Tuesday, June 6, 2017

New York Nanoscience Discussion Group  
See page 17.

#### Thursday, May 25, 2017

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#### Fridays, June 9, September 15, and November 17, 2017

New York Section Board Meetings  
See page 9.



### NORTH JERSEY SECTION

#### Monday, April 10, 2017

Careers in Transition  
See page 6.

#### Wednesday, April 12, 2017

Mass Spec Discussion Group  
See page 7.

#### Monday, April 17, 2017

North Jersey Executive Committee Meeting  
See page 6.

#### Wednesday, April 19, 2017

MetroWomen Chemists  
See pages 11-12.

#### Thursday, April 20, 2017

Drug Metabolism Discussion Group  
See pages 7 and 8.

#### Friday, April 28, 2017

69th Annual Undergraduate Research  
Symposium  
See page 7.

*also*

#### Wednesday, May 10, 2017

Mass Spec Discussion Group  
See page 7.

**Deadline for items  
to be included in  
the May 2017 issue  
of *The Indicator* is  
March 28, 2017**

## 2016 New York Section's Outstanding Service Awardee

### PROFESSOR PARIS SVORONOS

Dr. Paris Svoronos, Professor of Chemistry at Queensborough Community College, is the winner of the 2016 Outstanding Service Award of the ACS New York Section. This award, created in 1976 and presented annually, recognizes the efforts of the members of the New York Section who provide their time, leadership skills and dedicated service to promote high quality programs that contribute to the excellence of the Section. Prof. Svoronos has been an active and enthusiastic member of the NY Section for nearly two decades. The Award was presented to Dr. Svoronos in January 2017 at the Annual Sectionwide Conference, held at Queensborough Community College (QCC).

To summarize Dr. Svoronos' service to the NY Section, he was the force behind acquiring two Mid-Atlantic Regional Meetings (MARM), where he also served as General Co-Chair in 2008 and as Program Co-Chair in 2016. In addition, the 2008 MARM was hosted by Dr. Svoronos at QCC. He served as Chair of the NY Section in 2015, and thus also served several years on the executive board and multiyear terms on several NY Section committees. He served as Chair of the LI Subsection in 2002 and several years on the LI Subsection Executive Board. As Chair of the subsection he was also a member of the NY Section Board. He hosted two NY Section Undergraduate Research Symposia at QCC, in 2004 and in 2008. He was the creator of the annual LI Chem Challenge, which has now been running for over 15 years.

Paris Svoronos earned his PhD in Organic Chemistry from Georgetown University, and has promoted excellence in chemistry among community college students for



**Awardees Prof. Alison Hyslop (Outstanding Service as 2016 Chair) and Prof. Paris Svoronos (New York Section 2016 Outstanding Service Award.)**

over 30 years. He has been a principal in over six different grants promoting research for undergraduates at the community college level, and in 2003 was named Outstanding Community College Professor of the Year by the CASE/Carnegie Endowment Foundation. In 2016, he received the E. Ann Nalley Award for Volunteer Service to the ACS in 2016. He is known for pushing all of his students to do their best and during his term as Chair of the Chemistry Department at QCC the department was awarded the 2008 Stanley Israel Award for Advancing Diversity in the Chemical Sciences.

Dr. Svoronos has contributed a great deal of time and energy to many activities of the New York Section, and to his many students at Queensborough Community College. His service to the Section is truly outstanding and we thank him again for all of his hard work and dedication!

## 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, April 17, 2017

**Time:** 6:30 PM

**Place:** Location TBD & Teleconference  
(See [www.njacs.org](http://www.njacs.org) for details)



### 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, April 10, 2017

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

**Times:** Meeting 2:30 - 5:00 PM

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

**Cost:** No charge

**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.

For related CAREERS article, see under "OTHERS" page 22.

### NJACS PARTNERS WITH STUDENTS2SCIENCE

Members are encouraged to volunteer at their East Hanover facility and explore their website at [www.students2science.org](http://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 4th & 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 either Ellen Barrabee (908) 244-4328 or Fran Nelson (201) 220-2680.

**S U R P R I S E**

our editor by calling and saying you appreciate the quality and content of our newsletter. Our editor works hard to maintain a publication of interest to our membership. Oh, and by the way, you could also give credit to our advertisers who financially support us.

## NoJ MASS SPEC DISCUSSION GROUP

### Upcoming 2017 Meeting

**Date: Wednesday, April 12, 2017**

(Sponsored by AB Sciex)

**Wednesday, May 10, 2017**

(Sponsored by Bruker)

Times: Social and Registration 5:30 PM  
Complimentary Dinner 6:15 PM  
Welcome and Opening Remarks  
7:00 PM

Presentations 7:05 PM

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

Registration will open approximately 2 week prior to the meeting on our website (<http://www.njacs.org/topical-groups/mass-spectrometry>). Meeting updates will also be posted here.



## METRO WOMEN CHEMISTS

**Date: Wednesday, April 19, 2017**

See details on pages 11-12.



## NoJ DRUG METABOLISM DISCUSSION GROUP

### Spring Symposium

(See page 8 for program.)

**Date: Thursday, April 20, 2017**

Time: 8:00 AM - 3:45 PM

Place: The Palace at Somerset Park  
333 Davidson Avenue  
Somerset, NJ

### Registration:

Pre-registration fee is \$125 (pre-register by April 15, 2017).

Registration fee at the door is \$150 (Checks only)

Registration fee for students and postdocs is \$10 and \$50 for faculty

Registration is free for unemployed

- **Please plan to pre-register as a group**, as coordinated by a member of the NJACS DMDG steering committee from your organization (see list).

- If you have no DMDG member at your company, please contact Bo Wen ([bo.1.wen@gsk.com](mailto:bo.1.wen@gsk.com)) for registration.
- Payments by personal or company checks. Sorry, credit cards are not accepted.
- Checks should be made payable to: NJ Drug Metabolism Discussion Group.
- Please also visit our website: <http://www.njacs.org/topical-groups/drug-metabolism>

### Exhibitors:

- Please contact Anima Ghosal ([ghosala@aol.com](mailto:ghosala@aol.com)) for information concerning exhibits



## NORTH JERSEY SECTION'S 69th ANNUAL UNDERGRADUATE RESEARCH CONFERENCE

The Sixty-Ninth Annual Undergraduate Research Conference provides an opportunity for talented undergraduate students in the North Jersey Section to give an oral presentation on their research results. All undergraduate students in the North Jersey Section are invited to participate in this very rewarding event. The research presentations will be judged by local chemists working in industry or academia and the student giving the best presentation will be given the 2017 Jean Asell Duranna Award. In addition the top three presenters will be awarded cash prizes. The student award winners and their advisors will then be invited to attend the North Jersey Section's Annual Awards Dinner held on the Fairleigh Dickinson University campus in Madison, NJ.

Abstract Information: Clearly indicate the title of the presentation and all authors. Abstracts must be no more than 200 words and need to be submitted as a word document attached to an email to Matthew Mongelli at [mmongell@kean.edu](mailto:mmongell@kean.edu)

Abstracts **deadline is Wednesday April 12, 2017**

**Date: Friday, April 28, 2017**

Times: Noon until 5:00 pm

Place: Drew University  
Crawford Hall in the Ehinger Center  
Madison, NJ 07940

For more information about this event contact Matthew Mongelli at [mmongell@kean.edu](mailto:mmongell@kean.edu)

**NoJ DRUG METABOLISM DISCUSSION GROUP****2017 Spring Symposium and Vendor Exhibition**

*Sponsored by the*  
**North Jersey American Chemical Society**  
**Drug Metabolism Discussion Group**

**“Translating Preclinical Drug Disposition in Clinical Development”**

The Palace at Somerset Park  
 April 20, 2017  
 8:00 am – 3:45 pm

**Program**

- 8:00 a.m.      **Registration / Continental Breakfast / Vendor Exhibit**
- 9:00 a.m.      **Introductory Remarks**  
*Bo Wen, Chair, NJ DMDG*
- 9:10 a.m.      **Metabolomic and Transcriptomic Analysis of BCRP/Abcg2 and PGP/Abcb1 WT and Double KO Rat Tissues to Identify Endogenous, Dietary and Xenobiotic Substrates**  
*Erin Schuetz, PhD, Member, Department of Pharmaceutical Sciences, St Jude Children’s Research Hospital, Memphis, TN*
- 10:00 a.m.     **Assays to Guide the Way at NCATS: Drug Transporters and Drug Efficacy**  
*Matthew Hall, PhD, Biology Group Leader, National Center for Advancing Translational Sciences (NCATS) Chemical Genomics Center, National Institutes of Health, Rockville, MD*
- 10:45 a.m.      *Vendor Exhibit & Coffee Break*
- 11:30 p.m.     **Emerging Role of Non-P450 Enzymes in Drug Metabolism and Toxicity**  
*Deepak Dalvie, PhD, Sr. Principal Investigator, Department of Drug Metabolism and Pharmacokinetics, Celgene, San Diego, CA*
- 12:15 p.m.      *Lunch & Vendor Exhibit*
- 1:45 p.m.      **Is it Possible to Accurately Predict the Risk that a Drug Candidate Will Cause Idiosyncratic Drug Reactions?**  
*Jack Uetrecht, PhD, Professor of Pharmacy and Medicine and the Canada Research Chair in Adverse Drug Reactions, University of Toronto, Toronto, Ontario, Canada*
- 2:30 p.m.      *Vendor Exhibit & Coffee Break*
- 3:00 p.m.      **ADME Analysis of Therapeutic Peptides: Preserving Product Value**  
*Jerome Hochman, PhD, Sr. Principal Scientist, Department of Pharmacokinetics Pharmacodynamics and Drug Metabolism, Merck & Co. West Point, PA*
- 3:45 p.m.      *Program Closure*

## New York Meetings

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

### NEW YORK SECTION BOARD MEETING DATES FOR 2017

The dates for the Board Meetings of the ACS New York Section for 2017 have been selected and approved. The meetings are open to all – everybody is welcome. All non-board members who would like to attend any of the meetings should inform the New York Section office by emailing Mrs. Marilyn Jespersen at [njesper1@optonline.net](mailto:njesper1@optonline.net) or by calling the Section office at (516) 883-7510.

All 2017 Board Meetings will be held at The Graduate Center, Science Center, Room 4102, 365 Fifth Avenue, New York, NY 10016, except for the January 21 Section-wide Conference and March 24 Nichols Symposium. Prof. Brian Gibney will chair all meetings. Refreshments will be available starting at 6:00 PM while the actual meeting will start at exactly 6:30 PM.

The board meetings dates for 2017 will be

**Friday, April 28, 2017**

Friday, June 9, 2017

Friday, September 15, 2017

Friday, November 17, 2017

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

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

### LONG ISLAND SUBSECTION

#### Spring Seminar – “Copper-Promoted Aromatic Acyloxylation”

*Speaker:* Dr. Fabiola Barrios Landeros  
Yeshiva University

Cross-coupling reactions catalyzed by transition metals have revolutionized the field of organic synthesis. The functionalization of aromatic rings can be achieved using a large variety of nucleophiles to form C-C or C-heteroatom bonds. However, carboxylic acids have rarely been used as coupling partners. We have identified reaction conditions to successfully couple aryl halides with aliphatic and aromatic carboxylic acids using salts of copper(I) and copper(II). This system offers an alternative to the traditional Fischer esterification method which requires phenol as starting material. It also offers a one-step strategy for the synthesis of protected phenols from aryl halides. The reaction progress has been monitored to better understand the reaction mechanism; product mixtures from crossover experiments have been analyzed to understand the active intermediate species. The experimental evidence is consistent with a catalytic cycle where transmetalation of carboxylate to the Cu(I) salt is the first step, followed by oxidative addition to break the C-X bond, and reductive elimination to form the C-O aromatic bond. Halide exchange, via an aromatic Finkelstein reaction, also takes place under the reaction conditions.

**Date:** Thursday, April 6, 2017

**Time:** 5:30 PM

**Place:** Queensborough Community College, Science Building Room S-112

\*\*\*\*\*

(continued on page 10)



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## LONG ISLAND SUBSECTION

(continued from page 9)

### OTHER EVENTS:

#### Chemistry Challenge

**Date:** Friday, April 21, 2017

\*\*\*\*\*

#### Board Meeting

**Date:** Thursday, April 27, 2017

**Time:** 6:30PM

**Place:** Nassau Community College  
Life Science Building  
Chemistry Dept, 2nd Floor



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

### Gene Therapy for Rare Diseases

**Organizers:** Tim Miller, PhD  
Abeona Therapeutics  
George Zavoico, PhD  
JonesTrading Institutional Services  
Sonya Dougal, PhD  
The New York Academy of Sciences  
Caitlin McOmish, PhD  
The New York Academy of Sciences

**Speakers:** Katherine A. High, MD  
Spark Therapeutics  
Barry Byrne, MD, PhD  
University of Florida  
Maria Escolar, MD, MS  
Children's Hospital of Pittsburgh  
Kevin Flanigan, MD  
Nationwide Children's Hospital  
Brian Kaspar, PhD  
Nationwide Children's Hospital  
David Pearce, PhD  
Sanford Research  
R. Jude Samulski, PhD  
Bamboo Therapeutics  
Jakub Tolar, MD, PhD  
University of Minnesota

Gene therapy has been proposed as a promising therapeutic strategy for monogenic disorders. This symposium will explore recent advances in the field, and identify ongoing obstacles on the path to wider use of this approach.

**Date:** Tuesday, April 11, 2017

**Time:** 9:00 AM – 5:00 PM (reception to follow)

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

**Cost:** This event is has reduced-rate registration for ACS and NYAS members, at \$60 or \$25 (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 \$160 (corporate), \$105 (non-profit or academic) or \$70 (students and post-docs).

For more information and to register for the event, go to: [www.nyas.org/RareDiseases](http://www.nyas.org/RareDiseases).

To become a Member of the Academy, visit [www.nyas.org/benefits](http://www.nyas.org/benefits).



## WESTCHESTER CHEMICAL SOCIETY

### Special Seminar – “Cutting and Pasting with DNA: Genome Editing”

**Speaker:** Evan Merkhofer, PhD  
Assistant Professor (Biology)  
Mount Saint Mary College

Humans have long attempted to shape the world around them; in the field of biology this is no different. Through agriculture and domestication, humans have harnessed aspects of biology for their advantage. However, with rapidly evolving molecular biology tools and the post-genomic era of genetic information, the ability to manipulate DNA sequences has opened up a new world of potential implications in research, medicine, ecology and many more fields. The CRISPR/Cas9 system of genome editing allows precise modifications of DNA far superior to previous methods. The potential uses for this technology include somatic and germ cell therapy, gene drives, genetically modified crops and much more. However, these applications are not without biological

and societal implications. This presentation will address the uses and consequences of this paradigm-shifting technology.

Dr. Merkhofer obtained his B.S. in biochemistry and molecular biology, Magna Cum Laude, at Gettysburg College, Gettysburg, PA having completed an honors thesis, "Genetic Variation for the Thermal Stability of Leucine Aminopeptidase P in *Drosophila melanogaster*," working under Dr. Kazuo Hiraizumi in 2002. He was a cytogenetic technologist in the cytogenetics lab (Dept. of Pathology) at Brigham and Women's Hospital in Boston working with Dr. Cynthia Morton. He obtained his Ph.D. in Genetics and Molecular Biology from the University of North Carolina (UNC) at Chapel Hill, completing his dissertation, "Elucidating the Role of NF- $\kappa$ B in Her2+ Breast Cancer," for Dr. Albert Baldwin in 2010. He then commenced a postdoctoral fellowship at the University of California, San Diego (UCSD), Division of Biology, Molecular Biology Section, working for Dr. Tracy Johnson. For this work the research focus was coordination between chromatin and DEAD-box ATPases in co-transcriptional pre-mRNA splicing and spliceosomal rearrangements, using *Saccharomyces cerevisiae* as a model organism. Since 2014, Dr. Merkhofer has been an assistant professor of Biology in the Division of Natural Sciences at Mount Saint Mary College, where he has mentored a number of undergraduate students. In addition to his current post at the College of Saint Mary, Dr. Merkhofer has held positions as an instructor, a lecturer or guest lecturer at UNC (Chapel Hill), UCSD and San Diego State University. He is also active in diversity services, academic service, community service and professional societies.

**Date:** Wednesday, April 12, 2017

Times: Refreshments 5:30 PM

Lecture 6:00 PM

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

Cost: Free and Open to the Public

Further Information: Paul Dillon

[PaulWDillon2@hotmail.com](mailto:PaulWDillon2@hotmail.com)

(914) 393-6940

**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 6am for day courses and 3pm for evening courses. The college will communicate delays, closings or early dismissals on their website ([www.sunywcc.edu](http://www.sunywcc.edu)), Facebook, Twitter, and the (914) 606-6900 phone line.



## METRO WOMEN CHEMISTS

### Nitric Oxide Signaling in Bacteria: Discovery of a New Mechanism for Regulating Bacterial Biofilms

*Speaker:* Dr. Elizabeth Boon  
Associate Prof. of Chemistry  
Stony Brook University  
Stony Brook, NY

#### Abstract:

Bacteria colonize most surfaces, forming multicellular, antibiotic-resistant, communities known as biofilms. Biofilms cause chronic infections and persistent biofouling of medical implants, marine vessels, and environmental sensors. Biofilm dispersal by nanomolar nitric oxide (NO) appears to be a general phenomenon, but fundamental questions remain concerning the identity of the NO sensor and mechanism of signal transduction. NO has been reported to disperse bacterial biofilms through regulation of intracellular cyclic-di-guanosine monophosphate (c-di-GMP) concentrations. C-di-GMP is a tightly regulated second messenger-signaling molecule that is tightly correlated with biofilm formation. H-NOX (heme-nitric oxide/oxygen binding) proteins are well known NO sensors in eukaryotes that are also conserved in many environmental and opportunistic pathogenic bacteria. Indeed, we have shown that NO/H-NOX signaling disperses bacterial biofilms through a mechanism consistent with c-di-GMP signaling. However, H-NOX proteins are not conserved in most human pathogens, even those for which the mechanism of action is known to involve c-di-GMP signaling. Therefore, an alternate NO sensor must also exist. We have identified a potential alternate NO sensor, a novel hemoprotein we named NosP (nitric oxide sensing protein). NosP domains are conserved in 91% of bacterial genomes, they bind NO, but not molecular oxygen, as expected for a NO-specific sensor, and they are encoded as fusions with, or in close chromosomal proximity to, proteins annotated as c-di-GMP synthesis or hydrolysis enzymes. Therefore

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## METRO WOMEN CHEMISTS

(continued from page 11)

we hypothesize that NO generally disperses bacterial biofilms through regulation of intracellular c-di-GMP concentrations, but the sensor varies; both NosP and H-NOX can fill this role. Evidence from biochemical characterization of proteins in the NosP and H-NOX signaling pathways, as well as genetic and biofilm growth studies, will be presented to support our hypothesis.

### About the Speaker:

Dr. Elizabeth (Liz) M. Boon grew up in Durham, NC. She received her A.B. with Highest Honors in Chemistry from Kenyon College in 1997 and her Ph.D. in Chemistry from the California Institute of Technology in 2003. Liz completed a NIH Postdoctoral Fellowship in Biochemistry at the University of California, Berkeley before starting in the Chemistry Department at Stony Brook University in the fall of 2006. She has received several awards for her research including the Presidential Early Career Award for Scientists and Engineers (PECASE), the American Chemical Society PROGRESS/Dreyfus Lectureship Award, The NYSTAR Watson Young Investigator Award, the Office of Naval Research Young Investigator Award, and the Rising Star Award from the Research Foundation of the State University of New York. In 2011 the Kavli Foundation and the National Academy of Sciences elected Liz a Kavli Fellow. In 2016-2017 she is serving as an Honorary Faculty Member to the SUNY Research Foundation Council.

**Date:** Wednesday, April 19, 2017

**Times:** 12:15 PM – 1:15 PM

**Place:** Pace University  
Lecture Hall North (2nd Floor)  
One Pace Plaza  
New York, NY

Please contact Dr. Rita K. Upmacis (Chair of the Metro Women Chemists' Committee ([rupmacis@pace.edu](mailto:rupmacis@pace.edu)) if you plan to attend.



## HIGH SCHOOL TEACHERS TOPICAL GROUP

### “Demo Derby II”

**Date:** Friday, April 21, 2017

**Times:** Social and Dinner — 5:45 PM  
Meeting — 7:15 PM

**Place:** Social & Dinner — DoJo Restaurant  
14 West 4th St. (@Mercer Street)  
New York, NY  
Meeting — New York University  
Silver Center for Arts and  
Sciences, Room 207  
Enter from 32 Waverly Place  
South-east corner Washington  
Sq. East or Washington Place  
New York, NY



## THE HUDSON-BERGEN CHEMICAL SOCIETY, SIGMA XI CHAPTER AND THE SCHOOL OF NATURAL SCIENCES OF FAIRLEIGH DICKINSON UNIVERSITY

### The 19th Annual Student Research Symposium

This is a forum for students and their faculty mentors from colleges and universities that participate in the subsection's activities to present the results of their research. Outstanding graduating students are also being recognized (they receive the Hudson-Bergen Chemical Society Award consisting of a certificate and a book). All the presenters will receive certificates. Students who wish to present posters must send an abstract via e-mail to [meleonida@fd.edu](mailto:meleonida@fd.edu), by April 7, 2017. The abstract should be in MS Word format and must include the names and addresses of the student(s) and their faculty adviser(s) in addition to the title of the abstract. The abstract should not exceed 250 words. The name of the student presenting the poster should be underlined. The posters have to be self-supported. There is no registration fee.

This year's symposium also features the lecture:

### Multifunctional Nanostructured Materials: From Rational Design and Synthesis to Potential Applications in Catalysis and Nanomedicine

**Speaker:** Tewodros (Teddy) Asefa<sup>1,2,3</sup>

<sup>1</sup> Department of Chemistry and Chemical Biology, Rutgers University, <sup>2</sup> Department of Chemical and Biochemical Engineering, Rutgers University, <sup>3</sup> Institute for Advanced Materials, Devices and Nanotechnology (IAMDN), Rutgers University

## Abstract

The development of nanomaterials with unique structures can lead to various miniaturized nanoscale devices and nanopatterned surfaces for various optical, electronics, photonics, catalysis, sensor, and biological and medical applications. In this talk, research done by my research group over the last few years on two different but related areas involving the development of various novel multifunctional nanomaterials for catalysis and nanomedicine will be discussed.

In the first part, I will discuss the rational assembly of multifunctional groups on nanostructured materials composed of metal oxides, carbon nanomaterials, and mesoporous silicas and their efficient catalytic activities for synergistic or multi-step in one-pot tandem reactions. Some of the advantageous features of rationally juxtaposing two or more functional groups within nanoscale cavities will be discussed by using catalysis as an example. In addition, I will describe a novel "nanostructuring" route we have developed for making a series of core-shell nanomaterials that show efficient catalytic or electrocatalytic activities for alkane oxidation, water splitting, and for oxygen reduction reactions in fuel cells.

In the second part, I will discuss the design and assembly of novel drug-delivery nanosystems composed of multifunctional nanoporous materials having high surface areas, tunable nanometer pores, and easily modifiable surface groups. I will also demonstrate how various rationally synthesized nanomaterials have the ability to serve as efficient delivery systems for controlled release of drug molecules on demand for cancer treatment. Finally, I will present some results on the biocompatibility of the various drug-nanomaterial conjugates towards various cancer cell lines and some of their structure-dependent nanotoxicological properties.

**Date:** Friday, April 21, 2017

**Times:** Poster Session 5:00 PM.  
Dinner 6:00 PM  
Awards and Lecture 7:00 PM

**Place:** Jeepers Café  
Fairleigh Dickinson University  
Teaneck, NJ

**Cost:** \$10.00 for dinner (dinner cost for presenters will be waived).

**Reservations:** Dr. Mihaela Leonida  
(201)692-2338, e-mail: [mleonida@fdu.edu](mailto:mleonida@fdu.edu)  
**by April 17, 2017.**

## COME AND JOIN US CELEBRATE EARTH DAY



WITH OUR 6TH ANNUAL "WALK THE  
BROOKLYN BRIDGE" EVENT



**Keynote address "Achieving Global  
Sustainability: Green Chemistry Needs  
You!"**

**Speaker:** Prof. Rita Upmacis  
Pace University

We will meet at Pace University in the Bianco Room at 11 am for check-in followed by welcoming remarks, our keynote address, and our celebratory "Earth Day Parade" across the iconic Brooklyn Bridge! Participants will be provided with continental breakfast and Earth Day gifts.

**Date:** Sunday, April 23, 2017

**Time:** 11:00 AM – 3:00 PM

**Cost:** The event is free and open to all, but **EVERYONE must register by 4/7**. Past the registration deadline there will be a \$5 onsite fee at the event (cash only). To register:  
<http://www.newyorkacs.org/meetings/EarthDay/CCED.php>

**Contact:** Prof. JaimeLee Rizzo, CCED  
Coordinator — [jrizzo@pace.edu](mailto:jrizzo@pace.edu)



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

**Complement Pathways in Disease**

**Organizers:** Kishor Devalaraja, PhD, DVM  
Regeneron Pharmaceuticals  
Scott MacDonnell, PhD  
Regeneron Pharmaceuticals  
Lori Morton, PhD  
Regeneron Pharmaceuticals  
George Zavoico, PhD  
JonesTrading Institutional  
Services

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## BIOCHEMICAL TOPICAL GROUP

(continued from page 13)

Sonya Dougal, PhD  
The New York Academy of Sciences

Caitlin McOmish, PhD  
The New York Academy of Sciences

*Speakers:* V. Michael Holers, MD  
University of Colorado

David Apelian, MD, PhD  
Achillion Pharmaceuticals

Peter S. Heeger, MD  
Icahn School of Medicine at Mount Sinai

Miles Nunn, DPhil  
Akari Therapeutics

Richard J. Quigg, Jr, MD  
University at Buffalo  
The State University of New York

Peter A. Rice, MD  
University of Massachusetts Medical School

Bärbel Rohrer, PhD  
Medical University of South Carolina

Beth Stevens, PhD  
Boston Children's Hospital

The complement system is the first line of defense against infection, however we have yet to capitalize on its therapeutic potential. This symposium will focus on novel insights into the complement pathway in a number of clinical disorders.

**Date:** Tuesday, April 25, 2017

**Time:** 9:00 AM – 5:00 PM (reception to follow)

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

**Cost:** This event has reduced-rate registration for ACS and NYAS members, at \$60 or \$25 (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 \$160 (corporate), \$105 (non-profit or academic) or \$70 (students and post-docs).

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

[www.nyas.org/Complement2017](http://www.nyas.org/Complement2017).

To become a Member of the Academy, visit [www.nyas.org/benefits](http://www.nyas.org/benefits).



## 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.



## WESTCHESTER CHEMICAL SOCIETY

### FUTURE MEETING

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### Distinguished Scientist Award and Student Achievement Awards Dinner Meeting: Investigating the Impact Processing of Asteroids Using Quantitative Three-Dimensional Petrography of Ordinary Chondrites.

*Speaker:* Jon M. Friedrich, PhD  
Professor  
Department of Chemistry  
Fordham University  
and  
Research Associate  
Department of Earth and Planetary Sciences, American Museum of Natural History

### Abstract:

The major geologic process that has shaped the asteroids and led to development of their regoliths is impact. Thus, crucial to understanding the evolution of asteroids and their

regoliths is unraveling the collisional histories recorded in the meteorites derived from these bodies. We use a combination of traditional petrographic methods and synchrotron X-ray microtomography ( $\mu$ CT) derived data to interpret the impact history of the chondrite Northwest Africa (NWA) 7298. From the chondrite's textures, we found unique information on a series of sequential impacts that affected its parent asteroid.



**Jon M. Friedrich, PhD**

#### **Biography:**

Dr. Friedrich is a Professor of Chemistry at Fordham University and a Research Associate of the Department of Earth and Planetary Sciences at the American Museum of Natural History. Dr. Friedrich's research is focused on questions relating to the chemical and physical processing of material in the early solar system through studies of meteorites. Dr. Friedrich specializes in the use of x-ray microtomography for the examination of the physical properties of meteorites and their components.

**Date:** **Tuesday, May 2, 2017**

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

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

**Cost:** \$30.00  
Students: \$20.00

## **2017 BROOKLYN FRONTIERS IN SCIENCE LECTURE**

Please hold the date!!! The 2017 Brooklyn Frontiers in Science Lecturer will be Professor James Hone, Wang Fon-Jen Professor of Mechanical Engineering at Columbia University, who will speak about his research into nano-materials and nano-structures, especially atomically thin two-dimensional materials such as graphene. The lecture is scheduled for **Thursday, May 4**. Light refreshments will be served at 5:30 PM, and the lecture begins promptly at 6:00 PM in the Pfizer Auditorium at the NYU Tandon School of Engineering, 5 MetroTech Center, Brooklyn NY. The lecture is free and open to the public, but preregistration is required at <http://www.newyorkacs.org/meetings/Brooklyn/Frontiers.php>

**Date:** **Thursday, May 4, 2017**

**Times:** Light refreshments 5:30 PM  
Lecture 6:00 PM

**Place:** NYU Tandon School of  
Engineering  
5 MetroTech Center  
Brooklyn, NY

**Cost:** Free and open to the public, but preregistration is required



## **LONG ISLAND SUBSECTION**

### **FUTURE MEETINGS CALENDAR**

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#### **OTHER EVENTS:**

##### **Undergraduate Research Symposium**

**Date:** **Saturday, May 6, 2017**

*(See flyer on page 16.)*

##### **High School Awards**

**Date:** **Tuesday, May 9, 2017**

##### **Board Meeting Dates**

**Date:** **Thursday, May 25, 2017**

**Time:** 6:30PM  
**Place:** Nassau Community College  
Life Science Building  
Chemistry Dept, 2nd Floor

 <b>ACS</b> Chemistry for Life®	<b>65<sup>th</sup></b>	<b>ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM</b>
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## The Student Activities Committee of the New York Section of the American Chemical Society

**Saturday, May 6<sup>th</sup>, 2017 at Fordham University**

**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. Jin Kim Montclare*

NYU Tandon School of Engineering

Jin Kim Montclare is an Associate Professor in the Department of Chemical and Biomolecular Engineering (CBE) at NYU Tandon School of Engineering (NYU SoE), who is performing groundbreaking research in engineering proteins to mimic nature and, in some cases, work better than nature. Prior to joining NYU SoE, Jin was an NIH postdoctoral fellow at the California Institute of Technology in the Division of Chemistry and Chemical Engineering in the Tirrell lab. She received a Bachelor of Science in Chemistry from Fordham University as a Goldwater and Clare Boothe Luce undergraduate fellow, a PhD in Bioorganic Chemistry from Yale University as an NSF and Pfizer predoctoral fellow. In 2015 began serving as Graduate Studies Director for CBE and Associate Director for Technology Advancement for the NYU Materials Research Science and Engineering Center, while leading the multidisciplinary Center for Innovation and Entrepreneurship at NYU SoE. Among her many honors and awards are the 2016 ACS WCC Rising Star Award, 2015 Agnes Faye Morgan Research Award from Iota Sigma Pi, 2014 Executive Leadership in Academic Technology and Engineering Fellowship, and 2014 Distinguished Award for Excellence, Dedication to Invention, Innovation and Entrepreneurship.



### *Keynote Address*

#### **Intelligent Self-Assembling Biomaterials**

Through centuries of evolution, nature has developed biopolymers capable of folding and assembling into discrete structures with a functional consequence. Inspired by this, our lab focuses on engineering "intelligent" protein materials with entirely new properties and function. In particular, our lab has fabricated protein-derived nanomaterials: helix-elastin block polymers and coiled-coil fibers. We investigate the fundamental self-assembly and molecular recognition capabilities of these systems. More importantly, we are able to harness these structure as well as others to interface with small molecule therapeutics, genes, cells and inorganic metals. Central to this work is the integration of stimuli-responsive domains through rational design.

#### **SIGNIFICANT DATES FOR 63<sup>rd</sup> URS**

Deadline for Abstract Submission - **March 20, 2017**      Abstract acceptance notification – April 3, 2017

Deadline for Symposium Advanced Registration – April 21, 2017

2017 Co-chair <b>Dr. Paul Sideris</b> Queensborough CC - CUNY psideris@qcc.cuny.edu	2017 Co-chair <b>Dr. Ipsita Banerjee</b> Fordham University banerjee@fordham.edu	2017 Co-chair <b>Dr. Naphtali O'Connor</b> Lehman College - CUNY naphtali.oconnor@lehman.cuny.edu	2017 Co-chair <b>Dr. Meredith Foley</b> New Jersey City University mfoley@njcu.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. Paul Sideris, Queensborough Community College, Department of Chemistry, Science Building S-445, 222-05 56th Avenue, Bayside, NY 11364.**

## HIGH SCHOOL TEACHERS TOPICAL GROUP

### FUTURE MEETING

\*\*\*\*

#### The Development of Carolacton-derived Macrolactones for the Perturbation of Bacterial Biofilms

*Speaker:* Dr. Americo J. Fabroni  
Department of Chemistry  
Temple University  
Philadelphia, PA.

**Date:** Friday, May 19, 2017

*For times and place, see under April meeting, page 12.*



## NEW YORK NANOSCIENCE DISCUSSION GROUP

### 2017 Sessions

*Hosted by the New York University  
Department of Chemistry*

#### **Speakers and details to be announced.**

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.

**Dates:** Tuesday, June 6, 2017

Times: Refreshments at 7:00 PM  
Science at 7:30 PM

Place: New York University, Silver Center  
31 Washington Place (between  
Washington Square East and  
Greene St.), Rm. 1003 (10th Fl.)

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

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



## CANDIDATES FOR THE NEW YORK SECTION 2017 ELECTIONS

At the January Section-wide Conference, the Nominating Committee presented the candidates for office for the 2017 elections. The biographies of the candidates are posted on the New York Section website at [www.NewYorkACS.org](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 encourages ACS New York Section members to vote for these worthy candidates.

Electronic ballots will be sent to the membership in mid-April and voting will be conducted according to ACS guidelines for confidentiality and security. If your e-mail address has changed, please update it on the ACS website. If no e-mail address is associated with your membership number, a paper ballot will be sent to you automatically. Members that do have an e-mail address associated with their membership number will be asked in a survey if they want a paper ballot.

To receive all electronic messages from your New York Section, please be sure that your e-mail account will accept messages from [NYACS-L@stjohns.edu](mailto:NYACS-L@stjohns.edu) or [njesper1@optonline.net](mailto:njesper1@optonline.net) or [jespersn@stjohns.edu](mailto:jespersn@stjohns.edu)

Members requesting paper ballots will receive them by May 1, 2017. If any member does not receive voting materials by May 1, please contact the New York Section Office at (516) 883-7510 or [njesper1@optonline.net](mailto:njesper1@optonline.net)

The Candidates are:

#### **Chair Elect for 2018**

Mrs. Erin Rent Wasserman  
Dr. Justyna Widera-Kalinowska  
(Adelphi University)

#### **Treasurer 2018 and 2019**

Mr. Frank Romano (Agilent Technologies)

#### **Directors-at-Large 2018**

Dr. Yosra Badiel (Saint Peter's University)  
Dr. Paul Dillon (Siemens Healthcare  
Diagnostics Consultant)  
Dr. Meredith Foley (New Jersey City  
University)  
Dr. Peter DeRege (Firmenich, Inc.)  
Dr. Aaron Muth (St. John's University)

#### **Councilor 2018-2020**

Dr. Ronald D'Amelia (Hofstra University)  
Dr. Donad Clarke (Fordham University)  
Dr. Barbara Hillery (SUNY – Old Westbury  
College)  
Dr. Rolande Hodel (AIDSfreeAFRICA)  
Dr. Hiroko Karan (CUNY – Medgar Evers  
College)  
Dr. Patricia Redden (St. Peter's University)  
Dr. Marc Walters (New York University)

#### **Alternate Councilor – To Fill Vacancies**

Dr. Brian Gibney (CUNY – Brooklyn  
College)  
Dr. Rita Upmacis (Barnard College)

## ACS, NEW YORK SECTION'S 2017 SECTIONWIDE CONFERENCE, QUEENSBOROUGH COMMUNITY COLLEGE, BAYSIDE, NY

Members of the New York Section gathered together for the annual Sectionwide Conference on January 18 at Queensborough Community College in Bayside, NY. The conference featured numerous activities such as: a delicious continental breakfast, award presentations for volunteerism and achievement, a keynote address, poster displays of research conducted by SEED students, introduction of the 2017 election candidates, planning sessions for 2017 Section activities and a luncheon social. Prof. Brian R. Gibney of CUNY's Brooklyn College and Graduate Center and New York Section Chair for 2017 welcomed the Section's members and thanked them for their volunteer work in 2016. Dr. Diane Call, President of Queensborough Community College, offered greetings and congratulations to the Section and the Award Recipients.

At the award ceremony, Prof. Alison Hyslop was presented with the ACS past chair pin and plaque for her outstanding work as Chair of the New York Section in 2016. During her tenure as Chair, the Section celebrated the 125th Anniversary of its founding and hosted the 44th Middle Atlantic

Regional Meeting. The 2016 Outstanding Service Award went to Dr. Paris Svoronos who is a former Section Chair, Long Island Subsection Chair and host of two Regional Meetings. The Section presented the Nichols Foundation High School Chemistry Outstanding Teacher Award for 2016 to Kristyn Pluchino of Stuyvesant High School. Dr. Brian Gibney described Kristyn's very successful teaching methods and achievements.

Following the awards, 2017 Chair-elect Prof. Joseph Serafin of St. John's University presented the names of the candidates for the upcoming 2017 elections and introduced the candidates who were present.

Professor Rein Ulijn, the Director of the ASRC Nanoscience Initiative, City University of New York, Gave an excellent keynote address titled "*Peptide Nanotechnology: Building On The Building Blocks Of Life.*" It was a topic of high interest and many questions.

The annual planning session for subsections, topical groups, and committees was held during the last hour of the conference, to discuss goals and activities for the upcoming year. Each leader of the group, then, summarized their discussions. Following the conference, section members and family enjoyed lunch together at Maria's Mediterranean Restaurant in Bayside.

as well as chemists from academia and



2017 Chair, Prof. Brian Gibney, hosted the 2017 Sectionwide Conference.



Queensborough Community College President, Dr. Diane Call, offered greetings and congratulations to the Award Recipients, including Prof. Paris Svoronos pictured here.



**Prof. Alison Hyslop (2016 NY ACS Chair), Prof. Brian Gibney (2017 NY ACS Chair) and Prof. Joseph Serafin (2017 NYACS Chair-Elect)**



**Education Committees meeting during the planning session.**

**Additional pictures on page 5.**

*(All photos courtesy of Marilyn Jespersen)*



**Attendees enjoyed an excellent presentation by Professor Rein Ulijn, the Director of the ASRC Nanoscience Initiative, City University of New York.**

### ***KRISTYN PLUCHINO RECEIVES THE NICHOLS FOUNDATION HIGH SCHOOL CHEMISTRY TEACHER AWARD FOR 2016.***

Mrs. Kristyn Pluchino of Stuyvesant High School is the recipient of the ACS New York Section's Nichols Foundation High School Chemistry Teacher Award for 2016. This award was established in 1958 by Charles W. Nichols, Sr. for the purpose of recognizing highly effective teaching and inspirational leadership to students in chemistry within the New York Section of the ACS.

Kristyn received her Bachelors of Science in Chemistry in 2003 from Binghamton University and her Masters degree in 2004 from Johns Hopkins University. She holds a professional teaching certificate from New York State in Chemistry.

Kristyn is currently employed at Stuyvesant High School in New York. The school serves nearly 3400 students from all five boroughs. Kristyn started her career in education at Long Island City High School as a permanent substitute before finding a full-time teaching position at The Renaissance Charter School in Queens, where she taught Chemistry and Earth Science. Prior to becoming a teacher, Kristyn worked with the military as an independent contractor training Air Force personnel on using portable GC/MS instrumentation to detect and quantify chemical weapons.

Kristyn's teaching load has been primarily Regents Chemistry. She uses effective techniques to explain abstract and challenging concepts. Kristyn uses rare-earth magnets, refrigerator magnets, and balloons to

*(continued on page 20)*

## KRISTYN PLUCHINO

*(continued from page 19)*

demonstrate the strength of intermolecular forces and induced dipoles. She believes in the importance of having students learn in a hands-on environment, and provides many opportunities over the course of the year for them to do so. When introducing acids and bases, Kristyn sets up an activity to have students discover the general properties of acids and bases, such as taste, electrical conductivity, and reactivity with metals, through direct experimentation.

Two years ago, Kristyn created a lab-based elective entitled "Advanced Chemistry Lab." In this class students are in the lab every day. They conduct more involved experiments, such as synthesizing aspirin and quantitatively assessing its purity, and write lab reports. Former students frequently tell Kristyn how much this course helped them to be prepared and confident during their freshmen chemistry course in college.

Kristyn works hard to make each topic relevant to the real world. At the conclusion of the nuclear chemistry unit, Kristyn organizes a full-class debate on nuclear power and nuclear disarmament. Students are broken into teams, given time to research their perspective, and form a compelling argument. When teaching thermochemistry, Kristyn challenges her students by providing them with more advanced problems and projects. One such project involves a modified activity from the US Naval Academy on explosives. Students need to use their knowledge of stoichiometry, gas laws, and thermodynamics to answer the questions.

In the Advanced Chemistry Lab course, Kristyn inspires students to pursue chemistry by making it relevant to their everyday lives. Students investigate the concentration of food dye in sports drinks, the effectiveness of different antacid tablets, and recycle aluminum by synthesizing alum. Yi Dong Zhu, a former member of this class writes "I want to take the path of chemistry not because I'm simply good at it, but because I now know it has the ability to

affect the world." Another student, Irene Karnovsky, writes "I took this class in order to see if doing laboratory work is really what I want to do. I did not expect to come out of the class with this much confidence that, yes, this is what I want to do in life. Ms. Pluchino encouraged me the whole semester and in the end told me that this is something I should truly consider pursuing."

Scott Thomas, the Assistant Principal of Chemistry and Physics and Kristyn's supervisor writes, "Kristyn is a gifted and talented teacher who has shown a great deal of dedication and commitment to her instructional practice. She has gained a great deal of respect from her students and peers and has demonstrated a natural ability to present Chemistry in a meaningful way."

Congratulations, Kristyn! The ACS New York Section appreciates and acknowledges the high dedication and excellence that you bring to sharing your knowledge of chemistry with high school students. Best wishes always.



**Kristyn Pluchino**

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

## WESTCHESTER CHEMICAL SOCIETY

On February 8, 2017 Dr. Peter Corfield (our Treasurer and Education Secretary) spoke on "Yes, But Why Sulfuric Acid? - Young William H Nichols' Entry into 19th Century Chemical Industry". Nichols played an important role in the development of the American chemical industry, his endeavors ultimately becoming the Allied Chemical Corporation. He also played an important role in the creation of the American Chemical Society and its New York Section. In addition, he funded the NYACS Nichols Medal. Dr. Corfield discussed Nichols' life and contributions to a small but enthusiastic audience. His talk also had been presented at the Mid-Atlantic Regional Meeting (MARM) in June, 2016. The talk was given

at the Westchester Community College in Valhalla, N.Y. Dr. Corfield has taught as a full-time Lecturer at the Chemistry Department of Fordham University since August 2011, where he also engages in research with undergraduate students, and has published a dozen papers on old and new work since joining Fordham. Previously, he was Director of the Center for Science and Math Education at Purchase College, SUNY for sixteen years. Prior to that, he taught at The King's College, NY for twenty one years, as professor of chemistry and chair of the Division of Math and Science. After the talk several of the attendees enjoyed a dinner together at a nearby restaurant. The photo below is of Dr. Corfield and the other WCS board members who attended the meeting.



Rolande Hodel, Peter Corfield, Jody Reifenberg, and Kay Whiten

*(Photo courtesy of Rolande Hodel)*



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## Others

### THE ACS PRINCETON SECTION and THE ACS PHILADELPHIA SECTION

#### Presents

#### Non-Traditional Careers: A Panel Discussion and Networking Event

*Moderator:* Joe Martino  
ACS Career Consultant and  
Presenter

*Panelists:* Mr. J. P. Northrop  
Edward Jones Investments

Dr. Kevin Cannon  
Penn State Abington

Dr. Mukund Chorghade  
THINQ Pharma

Dr. Molly Hoke  
Mallinckrodt Pharmaceuticals

Dr. Paul Winslow  
Students 2 Science

Are you considering stepping away from a traditional chemistry environment and moving toward an exciting career outside of an industrial laboratory? If this describes your situation, then please join us for this informative panel discussion as Joe Martino moderates a conversation with experienced chemists who have done exactly that. We'll explore transitioning from the industrial laboratory to roles which support the industrial enterprise, academia, non-profits, and even transitioning away from chemistry. Ample opportunity for networking will be provided along with an enjoyable dinner. Please join us! Bowen Hall is on the campus of Princeton University near the corner of Prospect Avenue and Olden Street. It is readily accessible from US 1, US 206, NJ 27, I 95 and I 295. Free parking is available beginning at 5:00 PM in the North Garage which is right next to Bowen Hall.

**Date:** Thursday, May 11, 2017

**Times:** 5:30 PM – 10:00 PM

**Place:** Bowen Hall  
Princeton University  
Princeton, NJ

**Cost:** \$25.00 (Includes dinner)

## Call for Nominations

### COMMITTEE ON THE HISTORY OF THE NEW YORK SECTION

Over the past twenty-three years the New York Section has participated in the designation of seven National Historic Chemical Landmarks and four New York Section Historic Chemical Landmarks. A brief description of these National and local section landmarks may be found on the NY Section Home Page at [newyorkacs.org](http://newyorkacs.org), under the Committee on the History of the NY Section. These landmark programs recognize achievements in the chemical sciences and related areas, in order to enhance public appreciation for the contributions of the chemical sciences to modern life.

Please consider making a nomination for an historic chemical landmark. The Committee on the History of the NY Section will consider all nominations. In addition to a particular achievement, an historic library, building or association may be worthy of this distinction.

Please send your nomination, with supporting documentation, to the Chair of the Committee, Dr. Neil Jespersen, at [jespersn@stjohns.edu](mailto:jespersn@stjohns.edu)



### NEW YORK SECTION'S OUTSTANDING SERVICE AWARD FOR 2017

Many members of the New York Section provide their time, leadership talent, and knowledge to the New York Section. The tradition of excellence of the New York Section is attributable directly to the cumulative effect of these dedicated individuals. Each year the New York Section presents the Outstanding Service Award to a most deserving member of the section. The New York Section is now accepting nominations for this award.

A nomination letter with supporting data should be emailed to the 2017 OSA Committee Chair, Dr. Stephen Z. Goldberg at [goldberg@adelphi.edu](mailto:goldberg@adelphi.edu). Nominations will be accepted **until June 30, 2017**.

The nominations will be reviewed by a committee consisting of the previous five winners of the award. The Outstanding Service Award for 2017 will be presented at the New York Section's Section-wide Conference in January 2018.

For more information about the award along with a list of former award recipients, please visit the ACS New York Section's website at [http://www.newyorkacs.org/awards\\_nyacs.php](http://www.newyorkacs.org/awards_nyacs.php)



## THE WILLIAM H. NICHOLS MEDAL AWARD FOR 2018

The New York Section is accepting nominations for the William H. Nichols Medal Award for the year 2018. 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. The New York Section presents this award 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 includes the Distinguished Symposium, related to the medalist's field of expertise, and a Medal Award Dinner. The event is attended by members of the Nichols Family, officers of the American Chemical Society as well as chemists from academia and industry.

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 three supporting letters. The nomination process utilizes the New York Section website where the nomination form and instructions appear at <http://www.newyorkacs.org/meetings/Nominations/Nichols.php>

Nominations must be **received by May 31, 2017**. The Nichols Medal Award Jury will meet in June 2017 to select the Nichols Medalist for 2018.

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

## Call for Applications

### FREDDIE AND ADA BROWN AWARD

This Award recognizes and encourages high achieving middle- and high-school students, of African American and Native American heritage, to further develop their academic skills, with views on careers in the chemical sciences.

#### Award Amounts

Middle School \$100.00 Check and \$50.00 gift certificate : High School \$200.00 Check and \$100.00 gift certificate.

#### Who is Eligible

Middle School students enrolled in a science class : High School students who have completed a chemistry course

#### Grades

Middle School B Average or better in Science, B Average overall : High School B Average in Chemistry, B Average overall

#### Letter of Recommendation

Math or Science/Chemistry Teachers or Guidance Counselor

#### Statement

Middle School "Why I Like Science" : High School "Why I Like Chemistry"

#### Selection Criteria

Applicants must be African American (Black) or Native American (including Pacific Islander) or of mixed race.

#### Transcript

Official transcript required.

#### Financial Need

Not Required.

Applications available on the web:

[www.njacs.org/freddieadabrown](http://www.njacs.org/freddieadabrown)

or from your school guidance office.

#### Return Application To

Freddie and Ada Brown Award, NJACS Section Office, 49 Pippens Way, Morristown, NJ 07960

#### Due Date

Completed Applications must be post-marked no later than **March 31 Annually**

**Questions:** Contact Jeannette Brown [Jebrown@infionline.net](mailto:Jebrown@infionline.net) or (908) 239-1515

## Call for Applications

### OPEN-NJ Scholarship Program Department of Chemistry and Biochemistry



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*Summer Research Stipends available for highly qualified students.*

*Information:* <https://www.montclair.edu/csam/open-nj/>

<https://www.montclair.edu/graduate/news/article.php?ArticleID=16127>

#### Requirements for Program

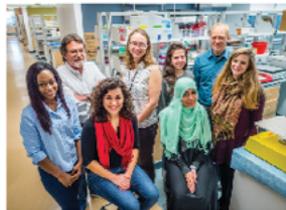
- Minimum overall 3.0 GPA (B.S. or B.A. degree)
- Completed General Chemistry I (with lab), General Chemistry II (with lab), Organic Chemistry I (with lab), Organic Chemistry II, Calculus I and II and a year of Physics.
- US citizen, national, admitted refugee or permanent resident
- Enrolling full time in an MSU Department of Chemistry and Biochemistry M.S. program
- Financial aid eligible as determined by the Office of Financial Aid.
- Committed to participating in all OPEN-NJ meetings including networking events.

#### Apply

Apply to the Graduate Program at Montclair State University (<http://www.montclair.edu/graduate/>) AND email Dr. Nina Goodey ([goodeyn@mail.montclair.edu](mailto:goodeyn@mail.montclair.edu)) to indicate interest in the OPEN-NJ Scholarship Program. The OPEN-NJ Selection Committee will use your graduate school application.

#### Questions?

Please, email Dr. Nina Goodey ([goodeyn@mail.montclair.edu](mailto:goodeyn@mail.montclair.edu)).



## Call for Volunteers

### OPPORTUNITY FOR ACS MEMBERS TO AID STUDENTS 2 SCIENCE IN A HYBRID VIRTUAL LAB PROGRAM

Can you spare a few hours of your time? Do you like working with students and would you like the opportunity to share your science knowledge in a classroom? Students 2 Science is seeking volunteers to aid in our Virtual Lab program. We have a series of elementary, middle, and high school experiments that we will be running in various schools across New Jersey. Members are especially needed to help with the North Jersey section's IPG funded project to bring hands-on science to South Jersey. We need professionals to help in the classroom with the students. It's great fun, a wonderful way to give back, and only requires a few hours of your time. Opportunities begin in November. For more information, contact Fran Nelson, [frannelson@students2science.org](mailto:frannelson@students2science.org) and visit our website at [Students2Science.org](http://Students2Science.org)



### SEMINAR SPEAKERS WANTED

The New York Section of the ACS is in search of speakers that we can add to our Speakers Bureau database of interested local area speakers who are available for Section-wide seminars and symposia. If you have an area of research or interest that would provide an interesting talk appropriate for our Section members, and would like to be included in our Speakers Bureau, please contact the New York Section Office at (516) 883-7510 or send an email to [njesper1@optonline.net](mailto:njesper1@optonline.net) with the following information that will be posted on the Section's website: your name, affiliation, a title, and 5-6 words briefly summarizing your area of specialty. We look forward to hearing from you about topics that you wish to share with our other members!

## In the News

### pHur WATER, A NEW NONTOXIC HOUSEHOLD CLEANER

pHur uses electro-oxygenating technology to transform our earth's most natural solvent--water. At two precise pH levels, water takes on powerful, yet completely safe, cleaning and disinfecting properties. pHur's revolutionary technology stabilizes water at these levels resulting in pHur™ Cleaning Water and pHur™ Disinfecting Water.

pHur™ Disinfecting Water is registered with the Federal and California Environmental Protection Agency.

pHur™ Disinfecting Water's hypochlorous makeup, is proven effective against 99.99% of known bacteria and viruses including MRSA, C.diff, E.coli, and Salmonella.

pHur™ Disinfecting Water passed the Boeing company's intensive in-cabin cleaning and disinfection tests showing a complete reduction of bacteria and zero adverse affect on electronics or delicate surfaces, calling pHur™ Disinfecting Water non-corrosive and absolutely safe.

pHur™ Disinfecting Water is being used in hospitals to clean and disinfect environmental surfaces, eliminating cross-contamination from hands of patients, visitors and health care workers.

"pHur Water has 95% efficacy killing bacterial whereas bleach has only 1%" according to one of the scientists on the new label's team.

If you're cleaning your kitchen counter-tops with chemical laden cleaners, chances are you're ingesting those chemicals. Don't you think it's time for a non-toxic alternative?

The scientists behind the new label are available for questions.

For more information go to [phurwater.com](http://phurwater.com).

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