

# THE Indicator

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## **Westchester Chemical Society's 2017 Distinguished Scientist Awardee, Dr. Jon Friedrich of Fordham University**



Jon Friedrich, Ph.D.

*(Photo courtesy of Jon Friedrich)*

*See Westchester Chemical Society's Awards Dinner  
Article on pages 12-15.*

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## THIS MONTH IN CHEMICAL HISTORY

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

I started my doctoral studies at Cambridge University in 1953, which qualifies these anecdotes as chemical history! I had half a bench in a large, probably hazardous, laboratory with about 20 graduate students and post-doctoral associates, and limited fume cupboard (hoods to most of my readers) space and draft. My Ph.D. advisor was Dr. B.C. Saunders whose research interest included enzymic oxidations of aromatic amines, and esters of phosphorus-centered acids. After a short and unrewarding foray into the former subject, I was redirected to the latter, and eventually presented my thesis on phosphorohalidic esters and their derivatives.

Dr. Saunders had a personal interest in that subject. During World War II (which had ended only 8 years before I started my Ph.D. work) he had been a leader of the British research effort on nerve gases. Together with colleagues he had synthesized many phosphorus-centered agents and with amazing courage they had tested the effects of some of them on themselves! One of those agents was di-isopropylphosphorofluoridate (DFP) that found a range of uses in biochemistry after the war. The group determined the mode of action of these compounds as anticholinesterases and looked at possible antidotes including atropine. My work was on other phosphorohalidates including bromidates; on tertiary butyl esters; and on the use of some of these esters as phosphorylating agents.

One day as I was weighing a sample for analysis for halogen content (we did many of our own analyses excepting those for C, H, and N which the laboratory analytical service provided) I could not get my sensitive chain balance (yes; this is way before digitals) to behave. I would get nice equal swings and then suddenly the balance went off-kilter. I finally tracked down the problem. An aphid was walking along the milligram chain! The back story: among the students in the laboratory was a group under the direction of Professor Alexander Todd (later a Nobel Laureate who was ennobled as Lord Todd) working on aphid pigments. They would go out into nearby orchards early in the morning, collect literally pounds of aphids, bring them back to the laboratory to be macerated in large blenders, and chromatograph the resulting slurry to isolate the pigments. "My" aphid was one that got away!

I'll close with another and more rewarding story about the Todd group; I was not involved but heard about it through the laboratory grape-vine. In addition to work on the aphid pigments; and the synthesis of nucleoside and nucleotides (for which he was awarded the Nobel Prize); Todd was also wrestling with the structure of Vitamin B-12 (cobalamin). His associates, particularly one Australian post-doctoral associate, had been trying for months to get a crystalline derivative of B-12 for a definitive structural study. Frustrated, the post-doc put his attempts into his refrigerator and went off for a couple of weeks skiing holiday. Serendipity rules. On his return he found a nicely formed small ruby crystal in one of his flasks. (I'm sure I don't have to point out the moral of this story, but perhaps you had better hide this issue of SCALACS from your graduate students and post-docs.)

The crystal, carefully wrapped to avoid damage, was conveyed to the laboratory of Dorothy Hodgkin in Oxford, another brilliant X-ray crystallographer and Nobel Laureate who happened to be female. Hodgkin and her associates got to work and a couple of months later shared their preliminary structure with Todd. The story goes that when he saw it he exclaimed that Hodgkin had got it wrong! She had indicated that there was a five-membered ring as part of the cobalamin ligand in addition to three six-membered rings. It just didn't look right to Todd – but of course he was wrong. The Hodgkin structure was confirmed as correct. The structure of Vitamin B-12 is unusual.

Have a good summer.

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## June Calendar

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### NEW YORK SECTION

**Tuesday, June 6, 2017**

New York Nanoscience Discussion Group  
See page 8 .

**Friday, June 9, 2017**

New York Section Board Meetings  
See page 8.

*also*

**Fridays, September 15, and November 17, 2017**

New York Section Board Meetings  
See page 8.

### NORTH JERSEY SECTION

**Monday, June 12, 2017**

Careers in Transition  
See page 5.

*also*

**Tuesday, September 12, 2017**

Mass Spectrometry Discussion Group  
See page 6.



**Deadline for items to be included in the September 2017 issue of *The Indicator* is**

**July 28, 2017**

***The Indicator* is posted to the web around the 15th of the previous month at**

**[www.TheIndicator.org](http://www.TheIndicator.org)**

## North Jersey Meetings

<http://www.njacs.org>

### NORTH JERSEY EXECUTIVE COMMITTEE MEETING

There will be no North Jersey Executive Meeting in June.



### 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, June 12, 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 [billherits@earthlink.net](mailto:billherits@earthlink.net).

See [www.njacs.org](http://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](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.

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## NJ-ACS MASS SPECTROMETRY DISCUSSION GROUP

### 2017 Symposium, Poster, and Vendor Show

By Kathleen Anderson  
NJ-ACS MSDG Director of  
Communications

The NJ-ACS Mass Spectrometry Discussion Group is pleased to announce the biggest event of our calendar year, the annual Symposium, Poster and Vendor Show which will take place on Tuesday, September 12 at the Holiday Inn Somerset, NJ. Every year this is a great time of networking and learning! Our goal is always to connect outstanding resources: vendors, posters, presentations, and colleagues for an exceptionally valuable time together. With that in mind, this year we are expanding our event to include an exciting workshop session for academics.

The planning for this annual event starts almost a year in advance, and we have been privileged every year to have renowned speakers from the mass spectrometry community. This year is no different. We are very excited and pleased to announce our 2017 Symposium speakers: Professor Scott A. McLuckey, John A.



**Prof. Scott A.  
McLuckey**

Leighty Distinguished Professor – Analytical Chemistry, Purdue University and Professor Brian Chait, Camille and Henry Dreyfus Professor, The Rockefeller University. Their specific topics will be announced this sum-



**Prof. Brian  
Chait**

mer on the [www.NJACS.org](http://www.NJACS.org) website and throughout our LinkedIn circulation.

The new workshop details are also well worth noting. Dr. Ben Garcia, Presidential Professor of Biochemistry and Biophysics, Epigenetics Program, Department of Biochemistry and Biophysics - University of



**Dr. Ben Garcia**

Pennsylvania will present "How to Obtain an Academic Faculty Position and Keep it!". This interactive event will run from 3:30-5:00PM as part of the Symposium. We thank Dr. Garcia for bringing this workshop to us, as it was just recently presented at the USHUPO in March of this year, and received rave reviews! As it is targeted at the next generation of MS scientists and is designed to give information, advice and support to those interested in an academic career, we will be reaching out to MS faculty in our region over the summer regarding this unique opportunity for career guidance.

**Date: Tuesday, September 12, 2017**

Times: 3:00-8:00 PM

Place: Holiday Inn  
Somerset, NJ

If there are any questions regarding this event, please contact Kathleen Anderson at [kmanderson@shimadzu.com](mailto:kmanderson@shimadzu.com). We look forward to another great time together!

**Learn more about  
the North Jersey  
Section at  
[www.NJACS.org](http://www.NJACS.org)**

## **NORTH JERSEY ANNUAL AWARDS AND RECOGNITION DINNER**

The North Jersey Section recognized its 50, 60, and 70 Year Members at the Annual Awards and Recognition Dinner which was held on Monday, May 22 at Fairleigh Dickinson University in Madison.

Congratulations and a special thank you are in order to:

### **50 Year Members**

Mr. Mushtaq Ahmad  
 Dr. Ronald Wayne Britt  
 Mr. Arthur M. Chagares  
 Dr. Yao Ming Cheng  
 Dr. Eui Won Choe  
 Dr. Barrington Cross  
 Mr. James P. Dillon  
 Mr. Ralph William Eberly, Jr  
 Dr. C. Anderson Evans  
 Dr. Seymour Grey  
 Dr. Fu Chih Huang  
 Dr. John Leonard Isidor  
 Dr. Sury Iyer  
 Dr. Rudolph Kassinger  
 Dr. William David Kwalwasser  
 Mr. Alan Bart Levy  
 Mr. Pradeep Madan  
 Dr. Thomas Anton Maldacker  
 Mr. William Louis Mandella  
 Dr. F. Wyman Morgan  
 Mr. Jeffrey S. Morrison  
 Dr. Bernard Ray Neustadt  
 Mr. Ralph Harry Obenauf, Jr  
 Prof. Ramesh C. Pandey  
 Dr. Angelo Joseph Perna  
 Dr. Michael A. Pesce  
 Mr. Stephen Barrett Shear  
 Dr. Peter Shubiak  
 Mr. Roger Grant Smith  
 Dr. Chalapathi Rao Surapaneni  
 Dr. Michael Dennis Swerdloff

Dr. Reginald Percy T. Tomkins  
 Mr. Arthur A. Tracton  
 Dr. Joan S. Tscherne  
 Dr. Constantine Tsonopoulos  
 Mrs. Linda A. Vag  
 Dr. Isidoros Vlattas  
 Dr. Richard Hsu Shien Wang

### **60 Year Members**

Dr. Robert Barnes  
 Mr. Lester I. Barsky  
 Dr. William Bartok  
 Mr. William F. Beach  
 Mr. Abe Berger  
 Dr. Gilbert W. Burton  
 Mr. Radko C. Chudacek  
 Mr. Jerome M. Cinnamon  
 Mr. Frank J. Dzierzanowski  
 Mr. Terry Gerstein  
 Mr. Floyd T. Kalish  
 Dr. John Kazan  
 Mr. T. Robert Luisi  
 Dr. Jerome B. Marks  
 Mr. Michael J. Martell  
 Dr. Louis R. Matlack  
 Mr. Raymond J. Mucci  
 Mr. K. Muller  
 Dr. Orest Popovych  
 Mr. Fred Louis Schmitt  
 Dr. John P. Sibilia  
 Mr. John S. Smith  
 Dr. Barry L. Tarmy  
 Dr. Thomas J. Wallace  
 Mr. Aaron J. Zale

### **70 Year Members**

Mr. Eugene Balzer  
 Mr. William Joseph Leanza  
 Dr. Jerry Peter Milionis  
 Dr. Robert Jules Perkel  
 Dr. Eric Jacob Simon

*(See associated article on page 19.)*



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## New York Meetings

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### 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, 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>.



### 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>



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

**To Human Resources Departments in Industry and Academia**

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

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



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## WESTCHESTER CHEMICAL SOCIETY

On April 12, 2017 Dr. Evan Merkhofer spoke on "Cutting and Pasting with DNA: Genome Editing". Dr. Merkhofer, an assistant professor of Biology at Mount Saint Mary College, Newburgh, NY, first presented a brief history of gene editing, noting that this has been accomplished, somewhat blindly, by selective breeding for centuries but that today we can make targeted, specific edits. The greatest part of the talk dealt with the CRISPR-Cas-9 gene editing technology, much in the news recently. This is based on a bacterial system that protects against viral DNA by identifying specific sequences and deleting them. The technology also can be used to replace target sequences, allowing us to swap out a malfunctioning allele by its functional counterpart. Enabling the guide nucleic acid to penetrate the cell membrane can limit therapeutic use of the technology. Dr. Merkhofer noted that a CRISPR modified product has been approved for sale but, in this case, CRISPR was used to silence, an at least economically deleterious gene, not add a new gene. CRISPR can also be used to edit the germ line, in which case it can power a "genetic drive" in which all alleles of a gene can be replaced by the same allele. If released in the wild, such an organism can

rapidly penetrate the population of that species. Dr. Merkhofer noted the possible environmental, and, for human germ-line editing, ethical and social, "unintended effects". On the other hand, if a genetic disease can be eliminated it may be difficult to prevent this being done in the germ line. There were lively discussions, especially about germ-line editing and possible eugenic use of the technology with the audience. The talk was given at the Westchester Community College in Valhalla, N.Y. Dr. Merkhofer obtained his B.S. in biochemistry and molecular biology, Magna Cum Laude, at Gettysburg College, Gettysburg, PA. He obtained his Ph.D. in Genetics and Molecular Biology from the University of North Carolina (UNC) at Chapel Hill, and had a postdoctoral fellowship at the University of California, San Diego (UCSD), Division of Biology, Molecular Biology Section, working for Dr. Tracy Johnson. Since 2014, Dr. Merkhofer has been an assistant professor of Biology in the Division of Natural Sciences at Mount Saint Mary College. After the talk Dr. Merkhofer and several of the attendees enjoyed a dinner together at a nearby restaurant. The photo below is of Dr. Merkhofer and the other WCS board members who attended the meeting.



**Joan Laredo-Liddell, Paul Dillon, Rolande Hodel, Evan Merkhofer, Kay Whiten and Peter Corfield**

*(Photo courtesy of Paul Dillon)*

## NEW YORK SECTION'S CHEMISTS CELEBRATE EARTH DAY

### 6th Annual "Walk the Brooklyn Bridge"

It was a beautiful, clear, and sunny day on Sunday, April 23rd – perfect for students and faculty, members of the New York Section of the ACS, and friends and families to come together to celebrate the 6th Annual Chemists Celebrate Earth Day's "Walk the Brooklyn Bridge" event!

<http://www.newyorkacs.org/meetings/EarthDay/CCED.php>

The following is a list of affiliations that were represented: ACDS, Adelphi University, Arizona State University, Borough of Manhattan Community College, Brooklyn Technical High School, Brooklyn College, Columbia Secondary School, Columbia University, Cottage Lane Elementary School, Covert Elementary, Graduate Center of CUNY, Hunter College, International Flavors and Fragrances, Kingsborough Community College, Manhattan Center for Science and Mathematics High School, Merck, Millbrook School, Mineola High School, Northeastern University, New York University, Pace University, Pfizer, Saint Peters University, Schrodinger, Inc., South Orange Town Middle School, St. John's University, St. Josephs College, Stony Brook University, Zewail University of Science and Technology.

There were more than 175 earth day lovers who gathered at Pace University (the host institution) at 11 am to begin the celebration. The morning started with a welcome by Dr. JaimeLee Rizzo, Assistant Chair of Chemistry, Pace and Coordinator of Chemists Celebrate Earth Day, followed by opening remarks by Dr. Brian Gibney, Chair of the ACS-NY Section. The Keynote Speaker, Prof. Rita Upmacis, Pace, delivered an enthusiastic and eye-opening talk entitled, "Achieving Global Sustainability: Green Chemistry Needs you!" Each participant was provided with breakfast, snacks, and earth day gifts (seeds including thyme, sage, cilantro, parsley, and oregano), a recyclable pot, and a reusable Hawaiian lei. We had a fun photobooth set up with props of fresh vegetables and fruits. Following the keynote address was the showing of the documentary, "Planet Earth". Popcorn was provided during the movie. We had our Chemists Celebrate Earth Day Banner which was carried to lead the way for our parade route from Pace University across the bridge. We then returned to Pace where we had lunch followed by an "Earth Day 2017" cake, other desserts, and freshly brewed coffee.

The event was co-sponsored by the Chemistry Club of Pace University, the Chemistry Club of St. John's University, Saint Joseph's College, and Kingsborough Community College.





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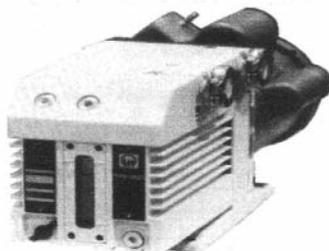
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## WESTCHESTER CHEMICAL SOCIETY AWARDS DINNER

On May 2, 2017 Dr. Jon Friedrich was presented the Westchester Chemical Society's (WCS) 2017 Distinguished Scientist Award "For innovative studies of the physical and chemical properties of small solar system bodies and for the passionate mentoring of undergraduate student investigators." The award was presented at the WCS Distinguished Scientist Award and Student Achievement Awards Dinner Meeting. This was held at Pace University, Pleasantville New York. Dr. Friedrich is a professor in the Department of Chemistry at Fordham University, Bronx NY and a Research Associate in the Department of Earth and Planetary Sciences at the American Museum of Natural History, New York, NY. Dr. Friedrich obtained his Ph.D. at Purdue U. in 2002 on chondrite genesis and evolution, and came to New York after post-doctoral work at the Max Planck Institute for Chemistry in Mainz, Germany. He has co-authored 40-50 publications and co-edited or written chapters for three books. His current research is focused on questions relating to the chemical and physical processing of material in the early solar system through studies of meteorites. His group uses x-ray microtomography for the examination of the physical properties of meteorites and their components.

Dr. Friedrich presented a talk entitled "Investigating the Impact Processing of Asteroids Using Quantitative Three-Dimensional Petrography of Ordinary Chondrites". During his talk, Dr. Friedrich noted that because it is difficult to visit the asteroids in our Solar System, we can use pieces of the asteroids – meteorites – as samples to learn about their physical and chemical properties. Impacts are among the main processes that have influenced the surfaces and internal structures of asteroids. Thus, crucial to understanding the evolution of asteroids and their surfaces is unraveling the collisional histories recorded in the meteorites derived from these bodies. In his work, he used a combination of traditional petrographic methods and synchrotron X-ray microtomography data – akin to a high resolution CAT scan – to interpret the impact history of a specific chondritic meteorite. The meteorite's unique textures were used to infer that a series of sequential impacts affected its parent asteroid.

In addition to the Distinguished Scientist

Award, the Westchester Chemical Society also presented a number of undergraduate and high school achievement awards. We thank Dr. Peter Corfield of our board and Fordham University for his considerable efforts in the selection of student awardees. These awardees were:

Bronx Community College Faculty: Anthony Durante	Manzour Bakere
College of Mount Vincent Faculty: Andrea Minei	Danielle Quaranto
College of New Rochelle Faculty: Elvira Longardo	Isabella Jean-Charles
Fordham University Faculty: Paul Smith	Annabel Azziz
Iona College Faculty: Mychel Varner	Mariamamma Njie
Manhattan College Faculty: John Regan	Alon Brown
Manhattanville College Faculty: Darlene Gandolfi	Marwa Soliman
Mercy College Faculty: Carl Embola	Natasha Wright
Pace University, Pleasantville Faculty: Ellen Weiser	Samantha Nidini
Ramapo College of NJ Faculty: Sarah Carberry	Rojina Shrestha
Rockland Community College Faculty: Lou Rosenfeld	Madison Knarich
Westchester Com. College Faculty: Jody Reifenberg	Daniel Kwame Owusu
Briarcliff High School Faculty: Robert Saar	Lauren Burnette
Ossining High School Faculty: Angelo Piccirillo	Skyler Jones
Horace Greeley HS, Chappaqua Faculty: Christina Provenzano	Aidan Leitch

The awards presentations and Dr. Friedrich's lecture were followed by a delicious dinner and socializing with each other.

The awards dinner is cosponsored by WCS and the Department of Chemistry & Physical Sciences of Dyson College of Arts and Sciences, Pace University (with thanks to their Dr. Ellen Weiser). We gratefully acknowledge financial support for this event from the Departments of Chemistry at Bronx Community College, Fordham University, Iona College, Manhattan College and Mercy College. **(Pictures on pages 13-15.)**



**Co-chair Dr. Rolande Hodel with Distinguished Scientist awardee Dr. Jon Friedrich.**  
*(Photo courtesy of Paul Dillon)*



**Dr. Robert Saar and awardee Lauren Burnette from Briarcliff High School.**  
*(Photo courtesy of Rolande Hodel)*



**Dr. Jody Reifenberg and awardee Daniel Kwame Owusu from Westchester Community College.**  
*(Photo courtesy of Rolande Hodel)*



**Dr. Carl Embola and awardee Natasha Wright from Mercy College.**  
*(Photo courtesy of Rolande Hodel)*



**Dr. Anthony Durante and awardee Manzour Bakere of Bronx Community College.**  
*(Photo courtesy of Paul Dillon)*



**Awardee Danielle Quaranto of The College of Mount Saint Vincent and Dr. Peter Corfield.**  
*(Photo courtesy of Paul Dillon)*

## WESTCHESTER CHEMICAL SOCIETY AWARDS DINNER

(continued from page 13)



**Dr. Darlene Gandolfi and awardee Marwa Soliman of Manhattanville College.**

*(Photo courtesy of Paul Dillon)*



**Dr. Paul Smith and awardee Annabel Azziz of Fordham University.**

*(Photo courtesy of Paul Dillon)*



**Dr. Peter Corfield and awardee Isabella Jean-Charles of The College of New Rochelle.**

*(Photo courtesy of Paul Dillon)*



**Dr. Mychel Varner and awardee Mariamma Njie of Iona College.**

*(Photo courtesy of Paul Dillon)*



**Dr. Lou Rosenfeld and awardee Madison Knarich of Rockland Community College.**

*(Photo courtesy of Paul Dillon)*



**Dr. Joseph Krumpfer and awardee Samantha Nidini of Pace University.**

*(Photo courtesy of Paul Dillon)*



Awardee Skyler Jones of Ossining High School and Dr. Peter Corfield .

*(Photo courtesy of Paul Dillon)*



Dr. Christina Provenzano and awardee Aidan Leitch of Horace Greeley High School.

*(Photo courtesy of Paul Dillon)*



Westchester Chemical Society Board of Directors with Distinguished Scientist: (front row from left) Jean Delfiner, Rolande Hodel (co-chair), Kay Whiten, Joan Laredo-Liddell; (rear row from left) Jody Reifenberg, Peter Corfield, Jon Freidrich (Distinguished Scientist), Paul Dillon (co-chair).

*(Photo courtesy of Paul Dillon)*



Co-chairs Paul Dillon and Rolande Hodel with 13 of the 15 student awardees.

*(Photo courtesy of Paul Dillon)*

## 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 seek-

ing 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!

## 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



**MONTCLAIR STATE**  
UNIVERSITY

Receive one of the scholarships (\$10,000/year for 2 or 3 years) to enter one of the following programs at Montclair State University

- *Masters in Pharmaceutical Biochemistry*
- *Masters in Chemistry*
- *Masters in Chemistry with a Concentration in Biochemistry*

*This program is open for the following majors: Biochemistry, Chemistry, Physics, Molecular Biology, Biology, Environmental Sciences, and related degrees (B.A., B.S.).*

*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)).



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## Call for Nominations

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### 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://www.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 [jespersen@stjohns.edu](mailto:jespersen@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).

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## National

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### LET'S RECOGNIZE OUR ACS 70-YEAR MEMBERS!

Dear Local Section Officers,

By now, you have received the annual packet of certificates for ACS members in your local section who have reached 50- or 60-years of ACS membership in 2017. For the first time, some of you will find your packet contains one or more certificates in recognition of members with 70 years of ACS membership.

When the ACS Senior Chemists Committee (SCC) raised the question "how many ACS members have 70 or more years of ACS membership?", we were surprised to hear from John Gardiner of ACS Membership that the answer was more than 550 as of December 2016, with a then unknown number of members reaching 70 years of membership in 2017. We know now that 2017 number is 118, spread among 70 ACS Local Sections.

Receipt of the packet in many local sections triggers the start of preparations for a lunch, dinner, or some other special event to recognize these important ACS service anniversaries, and in many sections it's an opportunity to hear some amazing career stories of how your members have "improved people's lives through the transforming power of chemistry".

SCC is asking local sections with 70-year certificates to be sure to include these members in your celebrations. We remind you, however, it may not be as simple as inviting them to participate with your 50- and 60-year honorees. Most of these members are in their 90's now and may have ambulatory or other issues which may preclude their joining you directly at your celebration. If you contact these members and find that to be the case, SCC hopes that you will take extra steps to acknowledge them, for example, a visit to the residence with a small delegation of section representatives, to bestow the certificate.

In order to understand whether the issuance of 70-year certificates should become annualized, SCC would value any feedback (sent to [seniorchemists@acs.org](mailto:seniorchemists@acs.org)) you wish to provide.

We thank you for your participation in this

experiment.

Best regards,  
Thomas R. Beattie  
Chair, ACS National Senior Chemists  
Committee (SCC)

### SEE OUR NORTH JERSEY 70- YEAR MEMBERS ON PAGE 7.



### MINI GRANTS AVAILABLE

#### May 31 Application Deadline

The ACS Committee on Local Section Activities is offering two mini-grant programs for local sections: the Local Section Science Café Mini-Grant and the Local Section Bridging-the-Gap Mini-Grant. Local Sections are invited to apply for either or both grant opportunities. The submission deadline to apply falls on the same date: May 31, 2017. What follows is a brief explanation of both grant opportunities.

#### Science-Café Mini-Grant

If you are looking to plan an activity for your Local Section geared toward the general public, consider organizing a science café! Funding of up to \$500 is available to local sections to host a single science café or ongoing science café series in their area. Science cafés provide a relaxed, open venue for non-scientists and scientists alike to discuss current general or special interest topics.

Note: if your Section was awarded this mini-grant in 2016, your Section must submit a summary report if it wishes to be considered for this grant period.

Learn more about Science Cafés and apply online.

#### Bridging-the-Gap Mini-Grant

The 2017 theme for this grant program is "ACS Membership Dues Assistance". With funding of up to \$500, Local Sections can plan events designed to gain new or retain existing members and assist specific member audience(s) with paying ACS membership dues.

Potential event ideas to target specific audiences can include, but are not limited to:

- Employment assistance events whereby attendees can be awarded dues assistance

*(continued on page 20)*

## MINI GRANTS

(continued from page 19)

as a prize or may be randomly chosen (targeted audience: unemployed or underemployed chemists and/or students)

- Student outreach events whereby attendees can be awarded dues assistance as a prize or may be randomly chosen (targeted audience: chemistry students and teachers/professors)
- Teacher outreach events (targeted audience: high school chemistry teachers)

Note: if your Section was awarded this mini-grant in 2016, your Section must submit a summary report if it wishes to be considered for this grant period.

Learn more about the 2017 Bridging-the-Gap Mini-Grant and apply online.

**Remember: May 31, 2017 is the deadline to apply for both the Science Café and Bridging-the-Gap Mini-Grant programs.**

If you have questions, concerns, or comments about either grant program, please contact [lsac@acs.org](mailto:lsac@acs.org).

Sincerely,  
Aviva Westheim  
Staff Liaison, Grants & Awards  
Subcommittee  
Committee on Local Section Activities  
(LSAC)  
1155 16th St., NW, Washington, DC 20036  
Tel. (202) 872-6096 | [www.acs.org](http://www.acs.org)

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## In the News

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### **Media Opportunity: With More Than 5,000 U.S. Deaths a Year Caused by Hazardous Foods, What Can Be Done About Food Safety?**

The U.S. Center for Science and Public Interest (CSPI) estimates that hazardous foods cause 75 million illnesses, 325,000 hospitalizations and more than 5,000 deaths in the United States per year. This epidemic has grown in the public consciousness as news of food recalls have parents and businesses alike apprehensive.

Ag Solutions inception in 2011 was to provide an alternative line of Organic products that will leave no toxic residues that can be easily purchased on line. Holly Yeatman, a spokesperson for Ag Solutions, is excited to spread the message that there are alternative ways to fight against pests, mold, blight and sanitation practices that are healthier and safer for the people applying them as well as the people who will eat the product. AG Solutions is out to help eliminate hazardous foods reaching the consumer as well as help the environment by limiting exposure to harmful chemicals.

For further context regarding the harms of inorganic pesticides, the Environmental Working Group's Shopper's Guide to Pesticides in Produce's (EWG) analysis of tests by the USDA found that nearly 70% of samples of 48 types of conventional produce were contaminated with the residues of one or more pesticides. USDA researchers found a total of 178 different pesticides and pesticide breakdown products on the thousands of produce samples they analyzed. The pesticide residues remained on fruits and vegetables even after they were washed and, in some cases, peeled.

Yeatman explains the Ag Solutions difference saying, "Ag Solutions offers products from farm to table that businesses and consumers can trust to provide non-hazardous foods. Organic fungicides/bactericides and sanitizers/disinfectants are applied pre-harvest, as well as through the transportation, processing, and packaging of the foods as well as in consumers kitchens.

According to Yeatman:

- Farmers, packing facilities, daycare facilities, and schools, kennel operations, arborists, and nurserymen should all think about using organic chemical free products in their businesses.
- Organic is the wave of the future!
- Ag Solutions offers fast shipment and stellar customer service to many industries.

Holly Yeatman is available to discuss what steps companies and farms can take to better protect the public, please contact Andrew Schetter at [aschetter@webimax.com](mailto:aschetter@webimax.com) or (856) 889-9178.

## Professional/Product Directory

# Congratulations, Dads and Grads!

*Wishing you much success and fulfillment in your chosen vocations.*

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**\*Elemental Analysis**

**NuMega Resonance Labs**

**numegalabs.com P- 858-793-6057**

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You can view both of these opportunities by going to the link below.

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- Companies for lab, management and sales personnel
- University & College teaching positions
- Hospitals for technical and research personnel

We provide more qualified resumes because of the highly targeted technical audience.

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