the Catalyst

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June 2017
Volume 102, No. 6

Scholastic Achievement Award Winners 2017

HIGHLIGHTS

A D V A N C E N O T I C E

SEPTEMBER MEETING
Thursday, September 28, 2017

Dr. Dennis Gross: *A Nano-Course in Drug Registration Strategy*

Pennsylvania Drug Discovery Institute
Pennsylvania Biotechnology Center
Doylestown, PA

See the SEPTEMBER issue of ***the Catalyst*** for details,
call the Section Office at (215) 382-1589 or email PhilaACS@gmail.com.

the Catalyst

ACS Philadelphia Section

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Comments From the Chair

Deborah Cook

This will be the last *Catalyst* until September. It is hard to believe that six months have gone by since I assumed the position of Section Chair and that summer is quickly approaching. The last few months have been a whirlwind of activity with a variety of awards presentations, poster sessions, the Spring National Meeting, Career Services events, PAGES™ activities, and of course other outreach events including the March for Science, Chemists Celebrate Earth Day, Chemagination, and the Philadelphia Science Festival, to name a few. By the time you receive this issue, MARM 2017 in Hershey, PA may have come and gone.

Our June Section event honors our 50-, 60-, and 70-year members. What an accomplishment! I hope there will be a large audience to recognize them. The event will be held at The Union League. Our speakers will be Dr. Thomas M. Connelly, Jr., ACS Executive Director and CEO, and Dr. Irving M. Shapiro, Anthony and Gertrude DePalma Professor of Orthopaedic Surgery, Sidney Kimmel Medical College, Rothman Institute, Thomas Jefferson University. Dr. Connelly will talk about *The Future of ACS and the Chemistry Professio*ns. Dr. Shapiro will address *How Chemistry Impacted and Changed Medicine*.

The summer is traditionally a time to refuel and recharge. If you find yourself longing for a chemistry fix, the Fall ACS National Meeting and Exposition, *Chemistry's Impact on the Global Economy*, will take place in Washington, DC August 20-24. Consider a trip to our nation's capital, a chance to see the total solar eclipse on August 21st, and an opportunity to network with the chemistry community all at once.

I wish you a restful and pleasant summer and look forward to seeing many of you again at our meeting on September 28th, at the Pennsylvania Drug Discovery Institute at the Pennsylvania Biotechnology Center in Doylestown, PA. Dr. Dennis Gross will present *A Nano-Course in Drug Registration Strategy*. Until then, best wishes for a great summer!

Interested in Serving in the Philadelphia Section?

We are drawing up the slate of candidates for the fall 2017 election. We are looking for members interested in serving the Section on the Board of Directors, as Chair Elect or as a Councilor of Philadelphia to the National ACS. The Board of Directors plays a significant role in training new officers and shares in the responsibilities of the positions. There are many outstanding volunteers in our Section! If you are interested or have more questions, please send an email to the section at PhilaACS.gmail.com.

NEWS ATOMS—*Alan Warren*

Shu Zhu of the University of Pennsylvania received the W.H. Peterson award of the ACS division of Biochemical Technology for her poster *Platelet-targeting thiol reduction sensor detects protein disulfide isomerase activity on activated platelets in mouse and human blood under flow*.

David Christianson of Penn received the Lindback distinguished teaching award. The Provost's award for distinguished PhD teaching and mentoring went to **Madeleine Joullié** and **George Pappas**.

DEATHS

Patricia A. Gawarecki, pharmaceutical scientist, December 20, 2016 at 74. She was employed by Rohm and Haas and then moved to Merck & Co. where she worked for 42 years, retiring in 2014. She would have become a 50-year member of ACS in 2017.

Timothy J. Sheehan, Jr., chemistry teacher, February 13, 2017 at 66. Following employment in the pharmaceutical industry he taught chemistry at the Gloucester Community College and was professor of chemistry in the chemistry and biochemistry department of Rowan University from 2009.

John Q. Griffith III, petroleum scientist, April 8th at 82. In 1989 he retired as research and development manager of Sun Oil Company after 35 years' service.

Paul Robert DeGregory, graduate student, April 14th at 27. He obtained his bachelor's degree in chemistry, graduating *summa cum laude* from Drexel University. He was a graduate student in bioanalytical chemistry at the University of Texas at Austin. DeGregory was the Philadelphia Section Baccalaureate Awardee in 2012.

Note: News Atoms seeks to report new hires, significant promotions, honors and awards, and those who have recently passed away from the field of chemistry in the greater Philadelphia area. If you have a news item for this column, send it by email to PhilaACS@gmail.com or by mail to the Philadelphia Section.

JUNE MEETING

THE PHILADELPHIA SECTION, AMERICAN CHEMICAL SOCIETY

presents

Luncheon Honoring 50-, 60- and 70-Year Members

Featuring:

Dr. Thomas Connelly, ACS Executive Director and CEO
The Future of ACS and the Chemistry Professions

and

Dr. Irving M. Shapiro, Anthony and Gertrude DePalma Professor of Orthopaedic Surgery, Sidney Kimmel Medical College, Rothman Institute, Thomas Jefferson University
How Chemistry Impacted and Changed Medicine

Registration 11:15 AM
Luncheon 12:00 PM
Speakers and Award Presentation 1:00 PM
https://www.eventbrite.com/e/philadelphia-section-acs-june-event-tickets-33274752681

June 22, 2017

The Union League
140 S. Broad Street
Philadelphia, PA 19102

Luncheon cost $45; Students with reservations and ID: $23

RESERVATIONS should be made by calling the Section Office, (215) 382-1589, or emailing PhilaACS@gmail.com by 5:00 PM. Friday, June 16th. Cancellations, if necessary, cannot be accepted after NOON on Tuesday, June 20th. UNCANCELLED RESERVATIONS WILL BE BILLED.

PARKING: Parking is available at **Midtown Parking Garage,** 1415 Sansom Street, Philadelphia, PA. Union League Members are guaranteed reduced parking rates. See: http://www.unionleague.org/directions-parking.php

Board Meeting following at 2:45 PM.

SPEAKERS' ABSTRACTS AND BIOGRAPHIES

Dr. Thomas M. Connelly, Jr., PhD
American Chemical Society Executive Director and CEO

The Future of ACS and the Chemistry Professions

Abstract: Dr. Thomas M. Connelly, Jr., ACS Executive Director and Chief Executive Officer will present the ACS Board of Directors latest thinking on issues related to the ACS Strategic Plan. One of our four strategic goals at ACS is to "Empower Members." By broadening the value we provide to our members, ACS can strengthen our position as a lifelong resource to chemists, chemical engineers and related scientists. Dr. Connelly will provide examples of how we are achieving this for scientists at all stages of their careers, whether they work in academia, industry or government—in the US, or beyond.

Biography: Thomas M. Connelly, Jr. is the Executive Director and CEO of the American Chemical Society. Prior to joining ACS, he served as Chief Science and Technology Officer, and then as Chief Innovation Officer for the DuPont Company. In these roles, he was responsible for science and technology, with special emphases on polymer science, chemical process development, and later, bioprocessing for chemical synthesis and production. At DuPont, Dr. Connelly led R&D organizations and businesses, while based in the US, Europe and Asia.

Dr. Connelly graduated with highest honors from Princeton University with degrees in Chemical Engineering and Economics. As a Winston Churchill Scholar, he received his doctorate in chemical engineering from the University of Cambridge. In 2016, Dr. Connelly was elected to the National Academy of Engineering. He has served in advisory roles to the US Government and the Republic of Singapore.

Dr. Irving M. Shapiro, BDS, PhD

Anthony and Gertrude DePalma Professor of Orthopaedic Surgery, Sidney Kimmel Medical College, Rothman Institute, Thomas Jefferson University

Molecular Engineering of an Orthopaedic Implant: From Bench to Bedside

The use of metallic implants has revolutionized the practice of orthopaedic surgery. While the safety and biocompatibility of these devices are excellent, a small percentage becomes infected. These infections are due to the formation of a biofilm that harbours bacteria encased in a complex extracellular matrix. The matrix serves as a barrier to immune surveillance as well as limiting the bio-

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HONORING OUR 50-YEAR MEMBERS

At our June Section meeting, we will honor our 50-year members, presenting them with a certificate and luncheon at the Union League in recognition of their long and faithful service to the Society. Those being honored include the following:

DR. JOSEPH M. BOHEN

Dr. Bohen received his BA in Chemistry from Temple University and a PhD from the University of Pennsylvania. His graduate work was on the chemistry and nature of a ketene sulfur dioxide adduct under the direction of Prof. Madeleine M. Joullié. He also holds an MBA from St. Joseph University in corporate finance and is a member of Phi Lambda Upsilon and Sigma Xi.

After graduating Penn, he joined Pennwalt Corp. where his responsibilities involved the synthesis and characterization of novel organo-sulfur based compounds. He is the author of more than 35 patents and publications.

While at Arkema (formerly Pennwalt), Dr. Bohen moved from R&D to the commercial sector working in new business development for the Additives Division. He eventually became the Worldwide Business Director for modifiers where he developed and implemented the global business strategy for a highly profitable acrylic modifier business.

After retirement in 2007, he began collaborating with Prof. Frank Mallory at Bryn Mawr College on the photocyclization of stilbene derivatives in the formation of long chain phenacenes. In 2012, he also started working with Prof. Joullié at Penn on novel substituted 1,2-indandione derivatives for latent fingerprint visualization.

Dr. Bohen and his wife of 48 years, Lydia, live in King of Prussia and are the parents of two adult girls. He enjoys travel, golf, bicycling and crafting 18th century furniture.

DR. ALAN R. BRANFMAN

Alan R. Branfman received a BA in Chemistry from Rutgers University in 1968, and a PhD in Organic Chemistry in 1973 from the University of Illinois, Urbana-Champaign, where he worked under the direction of Professor Kenneth L. Rinehart. Dr. Branfman was an NIH Postdoctoral Fellow in natural products chemistry, with Professor S. Morris Kupchan at the University of Virginia, Charlottesville, VA from 1973-1975. From 1975-1985, Dr. Branfman was a senior professional staff member at Arthur D. Little, Inc. in Cambridge, Massachusetts, directing the development of assays for experimental anti-cancer drugs; he also discovered and identified new human metabolites of caffeine. Dr. Branfman then joined Whitehall-Robins Healthcare in Hammonton, NJ, where he held a number of managerial positions in quality assurance and

research and development until 1998. He has contributed to over forty scientific papers, abstracts, and patents. Dr. Branfman is currently the president of the Branfman Family Foundation, which provides funds and scientific collaboration for the study of Parkinsons' disease.

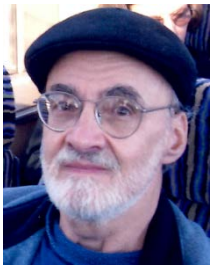
CAROL JEAN BRUNER

As a child, I enjoyed taking things apart and putting them back together, so that I did not get caught. Although I studied to become a chemistry teacher at Beaver College, I began being biochemical researcher at EPPI, on Henry Avenue. Then after taking a break to start a family, began as a research chemist at Esschem Company. Over nearly 30 years I moved to Quality Control, then Regulatory Affairs, and lastly leading up Health, Safety, and the Environment, where I actually did teach the employees until I retired to take care of medical problems.

I joined the ACS just after graduating from college, and became active in the Section after my daughter was born. I enjoyed working on the Social Committee, meeting and talking with many of the older members of the Section. I was inactive for a few years, to take care of medical problems, but I am currently active on the Social Committee.

I spend most of my spare time, being active in the Delaware Valley Science Council, which tests and give scholarships to the brightest high school juniors and seniors in the area. I also am active in my church, singing, and knitting and crocheting shawls and blankets. When not working for council or my church, I spend three days a week working retail, so I can get out and meet new people. Otherwise, I spend my time spoiling my grandchildren or in the company of my black cat.

DR. RICHARD J. DEMCHAK



After graduating from high school in Erie, PA I enrolled at Case Institute of Technology (now CWRU). Chemistry was both interesting and practical for employment. Graduate school seemed unlikely, but I was accepted by State University of NY (SUNY) at Buffalo. I began to enjoy both science and scientists, and focused on the physical chemistry of surfaces. Postdoctoral work at Clarkson College and CWRU completed my training. I accepted a position in the formulation of agricultural and veterinary products at American Cyanamid in Princeton, NJ. Ten years of experience was an education in the reality of developing commercial products, i.e., patents, scale-up, and costs. Concomitantly, Merck & Co. expanded their agricultural and veterinary business in New Jersey. I joined them for 15 years, and appreciated the scientific quality of their personnel. When Merck decided to divest those ventures, I elected for early retirement. In hindsight, chemistry gave me the opportunity for a worthwhile career. Also, it exposed me to a world of interesting people with diverse backgrounds. Several friendships from this past are still part of my life, so it was time well spent.

DR. JOYCE L. DEYOUNG

Joyce grew up just outside Erie, PA, graduated from Lawrence Park HS, then attended Hiram College in Hiram, OH, where she earned a BA in 1969, majoring in Chemistry. She earned a PhD in Pharmaceutical Chemistry at the Ohio State University in 1974.

Dr. DeYoung's first position in the pharmaceutical industry was in formulation development at what was then Merrell-National Labs in Cincinnati, OH. She later moved east to work at Wyeth, Johnson & Johnson, and finally back to Wyeth. She left in 2010 shortly after Pfizer took over Wyeth, then worked for several years as a consultant. During her nearly 40 years in the industry her career took her from R&D into manufacturing, then QC and QA. She served as Secretary and a member of the Board of Directors of the Parenteral Drug Association and chaired the Philadelphia Pharmaceutical Forum. Dr. DeYoung feels fortunate to have been able to work with many talented people to develop and produce a wide range of technically challenging and useful drugs, from traditional small molecules to vaccines and biotech products.

Now retired, she volunteers as a Medicare counselor in Chester Co., PA. She is active in Hiram College alumni activities and recently chaired the college Board of Visitors. She and her husband enjoy travel, volunteer with the Tredyffrin-Easttown Historical Society, and are active in the Philadelphia chapter of the Society for Industrial Archeology.

DR. MICHAELEEN PEIPON LEE

Dr. Lee received her BS in Chemistry from the University of Virginia in Charlottesville, VA in 1967. She continued at the University as a doctoral student and received her PhD in Biochemistry in 1972.

She retired from Bucks County Community College in 2014 after educating students there for almost 40 years. She enjoys having time to care for her home and to visit her children, grandchildren, and great grandson.

DR. BRUCE E. MARYANOFF

Dr. Maryanoff has made numerous contributions in medicinal and organic chemistry, and is a recognized expert in drug design and discovery. He has served as Associate Editor of *ACS Medicinal Chemistry Letters* for eight years and is affiliated with The Scripps Research Institute-La Jolla, Baruch S. Blumberg Institute, and Pennsylvania Drug Discovery Institute. Bruce earned a BS in Chemistry (1969) and a PhD in Organic Chemistry (1972) from Drexel University. Following postdoctoral studies at Princeton University, he joined McNeil Laboratories, in Johnson & Johnson (J&J). He advanced on the scientific ladder in J&J pharmaceutical units to the highest scientific position, Distinguished Research Fellow, and retired in 2010 after 36 years at J&J. Bruce worked on central nervous system therapeutics, whence he discovered and championed TOPAMAX® to-

piramate, a billion-dollar drug for treating epilepsy and migraine. He later pursued drugs for cardiovascular disease, metabolic disorders, and pulmonary inflammation. His research on enzyme inhibitors was pioneering in structure-based drug design. From his team-based efforts, 13 compounds advanced into human clinical trials. Bruce also made seminal contributions to the stereochemistry and mechanism of the Wittig olefination reaction. He published 280 scientific papers, is an inventor on 100 US Patents, presented 185 invited lectures, and mentored 11 post-doctoral associates. Bruce received three ACS national awards, Heroes of Chemistry Award-2000, Award in Industrial Chemistry-2003, and E.B. Hershberg Award-2013, as well as the 2009 Edward E. Smissman Award from the Division of Medicinal Chemistry. He was inducted into the Medicinal Chemistry Hall of Fame in 2008 and was elected Fellow of the AAAS, RSC and ACS. Since 2015, he and his wife Cyndie spend nearly half the year in Hawaii tending to the coffee company that they founded, Absolute Palate LLC, based on two Kona coffee farms. They grow, process, roast, and sell 100% Kona coffee.

MR. ALFRED (BUD) NORRIS

As I was graduating from Drexel University in 1967 (BS Chemistry) I was trying to choose between going on to graduate school and accepting one of the several offers I had from major chemical companies. (Back then, there were lots of job opportunities in chemistry.) Well, graduate school won out and I went to the University of Wisconsin, Madison. This was a decision that I will never regret. The University of Wisconsin opened a whole new world for me in chemistry and I got to meet many world-renown chemists. Unfortunately, the Vietnam War was raging, my student draft deferment was canceled, and I was the first number to be drawn in the new draft lottery system. I knew it was only a matter of time before Uncle Sam called me so I made a major effort to run some more experiments and wrote a Master's thesis, completing my work at the U of W in December of 1969. (As it turned out, only about 4 of the 16 students in analytical chemistry were able to continue on to their PhD.) I then took a position as a development analytical chemist with Rohm and Haas in the Bridesburg, PA location. Since R&H was classified as a defense contractor, I regained my deferment status. After two years at R&H I took advantage of a position at the Philadelphia Quartz Company (PQ) as supervisor of the quality control laboratory in Primos, PA which later moved to Lafayette Hill, PA. After six years at PQ I moved to Massachusetts to take a position as laboratory manager for the Ventron Division of Thiokol Corporation. I spent the next 19 years working for Ventron/Thiokol and later Morton/Thiokol initially as manager of analytical research and support and for the last 4 or 5 years as Director of Quality for the specialty chemicals division. Upon the merger with Rohm and Haas my position was eliminated and I took a position as Director of Quality with Metals USA in Philadelphia where I have been employed for 18 years. (Metals USA is now a division of Reliance Steel and Aluminum.) It has been a crazy journey but I have thoroughly enjoyed my work and look forward to what the next several years brings.

DR. GEORGE PRETI

Dr. George Preti was born and raised in Brooklyn, NY. He received his BS in Chemistry from the Polytechnic Institute of Brooklyn in 1966 and his PhD in Organic Chemistry in 1971 from the Massachusetts Institute of Technology, with a specialty in Organic Mass Spectrometry in the laboratory of Klaus Biemann. That same year he joined the Monell Chemical Senses Center, a renowned non-profit research institute focused on multidisciplinary basic research in olfaction and gustation. Currently a Member of Monell, Preti also holds an appointment as Adjunct Professor in the Department of Dermatology, Perelman School of Medicine at the University of Pennsylvania.

For more than 45 years, Preti's research has explored the nature, origin and functional significance of human bodily odors. Ongoing studies focus on odor-based human disease diagnosis related to ovarian cancer and hidden infections, as well as stress. Earlier work, based on clinical referrals, revealed a large, undiagnosed population of people suffering from trimethylaminuria, a rare malodor-producing genetic disorder. Preti has over 100 peer-reviewed scientific publications as well as reviews and holds numerous patents related to deodorancy, odor-mediated menstrual cycle regulation, and disease diagnosis. His research has resulted in frequent academic citations and extensive world-wide media coverage.

In addition to his research, Dr. Preti enjoys keeping physically active. He and his wife of 44 years enjoy their two grown children and three grandchildren.

DR. LESLIE SHAW

Dr. Leslie Shaw received a BS in Chemistry, cum laude, from LeMoyne College, Syracuse, NY in 1962, and a PhD in Biochemistry from SUNY Upstate Medical Center, Syracuse, NY in1968.

He did two NIH postdoctoral fellowships: 1968-70, Johns Hopkins University, chemical characterstics of gene regulatory proteins, and 1970-1972, University of Pennsylvania, Clinical Chemistry. He has been on the faculty in the Department of Pathology & Laboratory Medicine since 1972 and is currently a professor, Department of Pathology & Laboratory Medicine, and Director, Toxicology Laboratory and Director, Biomarker Research Laboratory.

Dr. Shaw's research focuses on biomarkers of Alzheimer's Disease in biological fluids, standardization of their measurement and implementation in treatment trials. He has had major funding since 2004 from NIH/NIA-Alzheimers Disease Neuroimaging Initiative and is director, Biomarker Core of this multicenter study of the natural progression of AD biomarkers over time under highly standardized conditions using mass spectrometry and immunoassays.

DR. LARRY G. SNEDDON

Following his 1974 appointment, Larry Sneddon spent the next 40 years on the Penn Chemistry faculty becoming full professor in 1984 and the department chair during 2002-2005, followed by appointment to the Edmund J. and Louise W. Kahn Chair in 2005 and then as the Blanchard Professor of Chemistry in 2007.

His Penn research focused on the syntheses and properties of inorganic molecular, polymeric and solid-state materials. He designed new metal-catalyzed methods for the systematic syntheses and transformations of numerous polyboranes. His interdisciplinary research on advanced nonoxide ceramics led to the formation of these technologically important materials in new nano- and micro-structured forms. Most recently, he made significant advances on methods needed for chemical hydrogen storage, a key technology required for the use of hydrogen as an energy carrier for transportation. In recognition of his research achievements, he received a number of awards, including the Philadelphia ACS Section Award and the national ACS Albert F. Cotton Award in Synthetic Inorganic Chemistry. His Penn honors include a Charles and Mary Lindback Award for Distinguished Teaching.

Following retirement in 2015, Larry remains active at Penn and with chemical consulting, but with a flexible schedule that allows him to share more time and travel with his lovely wife, Sarah, as they prepare to celebrate their 50th wedding anniversary.

DR. SHU-I TU

After completing my undergraduate education in chemistry at the National Taiwan University, I came to the US to continue my graduate studies. As a second-year graduate student majoring in Biophysical Chemistry at Yale University, I joined ACS in 1967. My PhD dissertation was related to converting light to chemical free energy associated with the Photosynthetic System I of plant photosynthesis. I continued my postdoctoral research in chloroplast photophosphorylation and mitochondrial oxidative phosphorylation. As a faculty member of the Chemistry Department of the State University of New York at Stony Brook, I investigated the mechanism of energy supported proton gradient formations in mitochondrial and purple membranes. In 1981, I was hired by the Agricultural Research Service (ARS) of USDA to study the mechanisms related to soil nutrient uptake and compartmentation controlled by the plasma and tonoplast membranes at its Eastern Regional Research Center in Wyndmoor, PA. In 1995, I started to develop rapid, sensitive, and specific processes for simultaneous and multiple pathogenic bacteria detection in foods using immuno magnetic beads and biosensors. Over the span of my research career, I published more than 150 refereed articles and made numerous presentations at domestic and international meetings and universities. I switched to ARS management in 2009 and served as a member of the Federal Senior Executive Service. I retired from Federal Service in 2013 to enjoy a less stressful life with my family. To keep me from completely indulging in

retirement life, I volunteer my services to the Franklin Institute Science Museum in Philadelphia and to the Historic Commission of Warrington Township in Bucks County.

DR. JOHN R. WILLIAMS

Dr. Williams graduated from UWA in 1966 with a PhD in Organic Chemistry. He discovered and named Templetine, a new lupin alkaloid from *Templetonia retusa*. Little did he know he would finish up at Temple University. He moved to Bethesda MD, USA as a National Institutes of Health (NIH) Postdoctoral Fellow. After an NIH PD Fellowship at Columbia University in New York City he was hired as a Professor of Chemistry at Temple University in Philadelphia for 44 years retiring in 2012. He taught organic chemistry, the "chemistry of life" to more than 20,000 undergraduates and advanced organic chemistry to more than 1500 graduate students. He directed the research of 15 PhDs, 14 MScs and 16 PDs.

He co-invented and patented a new transdermal method of administration of a drug that they invented. He co-founded and is the CEO of Reducta Biosciences LLC, to develop the drug. Based on animal studies and some human studies, it should have positive effects in treating people with: type 2 diabetes, obesity, metabolic syndrome, chronic inflammatory conditions such as osteoarthritis, and inflammation-related cancers such as breast, prostate and colorectal cancer. Furthermore, men on the island of Sardinia who have a genetic deficiency that duplicates the mechanism of action of the drug, live significantly longer and have greatly reduced incidence of heart attacks, strokes and cirrhosis of the liver.

In 1974 he married Janice Karoglan, a fellow Philadelphia chemist and lawyer, who after 31 years at GlaxoSmithKline retired as Vice President for Intellectual Property. She died in 2011. He has two daughters, and two grandsons. He enjoys gardening, dating, tennis, sailing on Chesapeake Bay, and is an usher at St. Margaret's Catholic Church.

DR. CLAUDE E. WINTNER

Perhaps two months into my sophomore year at Princeton I realized how fascinating I found my organic chemistry course with Everett S. Wallis. I went on to do a senior thesis with Paul Schleyer, and then to Harvard, where I wrote my dissertation under the inspiring tutelage of R.B. Woodward. I then spent five years as an instructor/assistant professor at Yale, a period which in retrospect I realize was an extended postdoctoral experience in the art of teaching, guided above all by William Doering.

The remainder of my career was spent at Haverford (1969-2002), interspersed with three stimulating sabbatical years at ETH Zurich under two more great masters, Albert Eschenmoser and Vladimir Prelog. During my last seven years at Haverford I spent the fall semesters at Harvard teaching the large organic course. There I worked not only with undergraduates, but with their graduate student teaching fellows, mentoring some of them toward teaching careers at liberal arts colleges. In that period I also developed the web site of video lectures and text

(https://www.haverford.edu/wintnerorganicchem) which I consider to be the summation of a life's effort to communicate the essence and the beauty of the subject I so love.

SECTION MEMBERS ALSO CELEBRATING 50 YEARS

Joseph Andose, Joshua Chong, James Davis, John Fischer, Orin Hollander, Akira Kaji, William Maslanka, Peter Mattschei, Frederick Obst, David Palmer, Sharad Parikh, K. Vasanth Prabhu, Ronald Reich, D. Sarantakis, Robert Sitrin, Larry Sternson, Harvey Tannenbaum, Irene Uzinskas, Michael Wilson, Kuck Wu, Joseph Yevich.

SECTION MEMBERS CELEBRATING 60 YEARS

H. Weldon Baker, Evelyn Baker, Wilber Baker, Jay Basch, Arthur Brownstein, John Carson, Francesco Colombo, Roger Corneliussen, Joan Goldberg, William Golton, Warren Grundner, William Hauser, James Jones, James King, James Komerska, Robert Leonetti, Robert Mininger, John Powell, Robert Przedzial, Orest Rudyj, Norman Schwartz, Charles Signorino, Edward Thornton, Ben Trombetta, Paul Venuto, Norman Vorchheimer.

SECTION MEMBERS CELEBRATING 70 YEARS

Gerard Gantert, John Hoover, Madeleine Joullié, Richard Mansfield.

Continued from Page 88

cidal effects of systemic and local antibiotics. The objective of the presentation is to describe a novel approach to controlling implant infection using an antibiotic that is linked to titanium through a self-assembled monolayer of siloxy amines. We show that the hybrid-engineered surface is stable, biocompatible and resists colonisation by bacterial species most commonly associated with implant-related infections. Studies with rodent bone infection models suggest that the engineered titanium surface prevents bone infection. Results of a recent investigation utilizing a sheep model of infection indicate that the titanium-tethered antibiotic controls infection without compromising bone formation and remodeling. From all of these perspectives, the tethered antibiotic holds promise of providing a novel and practical approach to reducing implant-associated infections.

Biography: Dr. Shapiro, received a BDS in Dental Surgery from the University of London, and a PhD in Biochemistry from the University of London in 1968. He joined the faculty of the University of Pennsylvania in 1969 and rose to the rank of Full Professor in 1976. He served as Chairperson of the Department of Biochemistry in the School of Dental Medicine for nine years. Dr. Shapiro had the honor of chairing two separate Gordon Conferences (Bones and Teeth and Biomineralization), organizing the First International Conference on the Growth Plate and the First and Second International Philadelphia Spine Research Symposia. In 2001,

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MARCH FOR SCIENCE– *Alan R. Heldon*

Marchers passing 6th and Market Streets.

Earth Day, April 22, 2017, was a pivotal day in the history of science. It marked an emerging new role for scientists - the activist scientist. Thousands – tens of thousands – of scientists marched for science in Philadelphia, Washington, DC and over five hundred cities throughout the United States and worldwide because they share a common concern for the future of science. The signs and posters of the Philadelphia marchers, stretching down Market Street from City Hall to Penn's Landing, voiced concerns for science funding, decision making based on scientific data, censorship of scientists and world class science education.

This is what a chemist looks like.

At Penn's Landing marchers endured brief showers to be asked to be advocates for science - to be vocal and to be politically, socially and publicly involved. Speakers voiced concerns for funding for basic research, funding that keeps our food supply and drugs safe and funding for climate research. Concerns were voiced that the funding necessary to maintain the United States' lead in cutting-edge science had become a pawn of political expediency and irrational ideologies.

Dr. Michelle Francl, Bryn Mawr College Dept. Chem., ACS Fellow

Speakers from many walks of science and two of the people's elected government representatives asked scientists to personally and actively engage politicians and the political process, to be advocates for science, to be advocates for science-based government policies, to run for elected office and to bring critical thinking to government.

YCC POSTER SESSION– *Christine McInnis*

On March 27, 2017 the Philadelphia Local Section Younger Chemists Committee held their annual poster session for students at the University of the Sciences. Over 75 posters were presented from high school, undergraduate, and graduate students as well as postdoctoral staff from the area's colleges and universities. In addition to local students, several visiting students from France presented posters, as well. The students were judged by over 25 judges to ensure that each poster was scored according to a pre-posted rubric a minimum of three times. The poster session was divided up into two sessions with a short break in the middle. Students were judged during one of the two sessions, allowing them time to look at other student's posters during the other session.

Concurrent with the poster session was a grad school and career fair. Visitors from Penn, Temple, Drexel, Villanova, and Dow Chemical Company were on hand to discuss options for graduate school and careers after school. Joe Martino from ACS Career Consultants was also on hand to assist with resume reviews. The grad school and career fair was available for the duration of the poster session so that students could also visit during the time they were not presenting.

At the conclusion of the evening, the judges' scores were tallied and the much anticipated awards were given. The following is a list of award winners:

High School

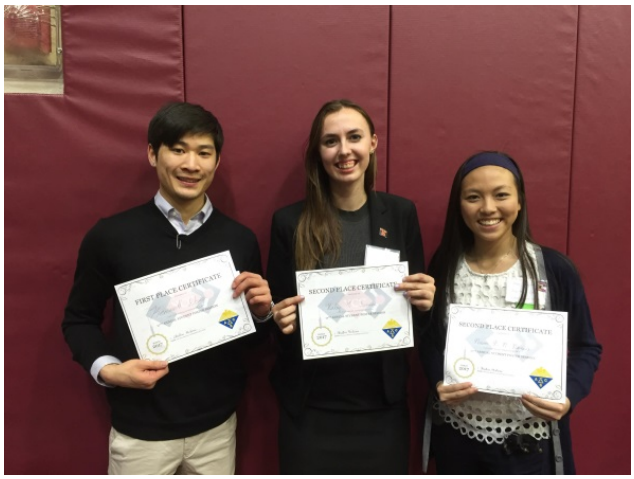
First Place—Sophia Breslin, Dock Mennonite Academy

Undergraduate

First Place—Kenneth Wong and Zhihong Wang, University of the Sciences

Second Place (tie)—Nam Nguyen, Haley Barnum, Doug Gisewhite, and Sharon Burgmayer, Bryn Mawr and Caroline McKeon, Samuel Epstein, Casey Londergan, and Louise Charkoudian, Haverford

Inorganic (sponsored by Dr. Tony Addison)—Nam Nguyen, Haley Barnum, Doug Gisewhite, and Sharon Burgmayer, Bryn Mawr



Undergraduate Award Winners: (L-R) Kenneth Wong (First Place), Haley Barnum (Second Place) and Nam Nguyen (Third Place).

Graduate/Post-Doc

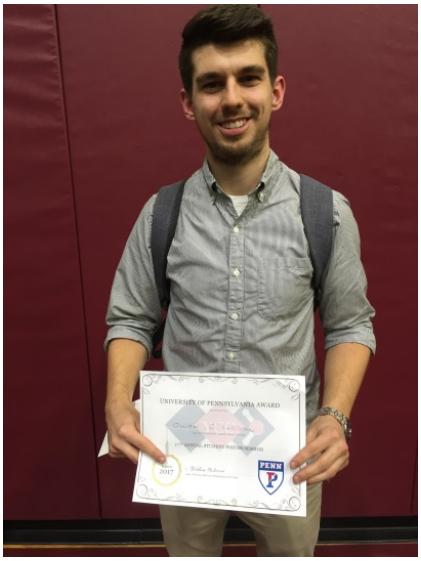
Graduate/Post-Doc Award Winners: Akila Thenuwara (First place) and Katherine Elbert (Second Place).

First Place—Akila Thenuwara, Samantha Shumlas, Nuwan Attanayake, Qing Kang, Elizabeth Cerkez, Ian McKendry, Laszlo Frazer, Richard Remsing, Eric Borguet, Michael Zdilla, Jianwei Sun, Daniel Strongin, Temple

Second Place—Katherine Elbert, Davit Jishkariani, Yaoting Wu, Jennifer D. Lee, Bertrand Donnie, Christopher Murray, University of Pennsylvania

Third Place—Giulia Mancini, John W. Tomsho, University of the Sciences

Graduate/Post-Doc Award Winner: Giulia Mancini (Third Place).



Owen C. Sullivan. Penn Prize for People's Choice for Best Poster

This poster session and grad school/career fair could not have been possible without help from a large team of people. In particular, thanks go out to the University of the Sciences for sharing their gym, setting up the poster boards, and making free parking for participants possible. Joey Harmon, an undergraduate student at University of the Sciences was instrumental in coordinating the efforts with the University. Special Thanks also go to Penn for sponsoring a prize of the best poster as chosen by the poster presenters. Dr. Tony Addison sponsored a prize for the best inorganic undergraduate poster. We also had an army of younger chemists helping to pull portions of the event together. In particular, Doug Gisewhite, a graduate student from Bryn Mawr, coordinated the grad school and career fair, Michael Brignone from Evonik coordinated the judges, Lasitha Cumaranatunge from Johnson Matthey helped obtain a significant number of judges, Tom Umile, a professor at Gwynedd Mercy University, coordinated the judging rubric and scoring. We also had significant help from Taylor Keller, Isabella Goodenough, and Sam Daher from Temple University in preparing the pamphlets and as they seek to host the 2018 poster session.

Continued from Page 96

Dr. Shapiro was recruited by the Department of Orthopaedic Surgery at Thomas Jefferson University to lead the Division of Orthopaedic Research. Currently, he is the Anthony and Gertrude DePalma Professor of Orthopaedic Surgery, Vice-Chair of Department and Director of the Tissue Engineering and Regenerative Medicine Graduate Training Program at Thomas Jefferson University.

Current research activities now being pursued by Dr. Shapiro can be summarized as follows: (a) exploring the origin, form and function of cells of the intervertebral disc. Following a bout of lower back pain, Dr. Shapiro directed his research to determining if stem cells exist in the disc, and whether they can be used to repopulate the nucleus pulposus. His more recent work is aimed at learning how oxygen and the notch signaling system regulates intervertebral disc proliferation and differentiation, and understanding how water transport is regulated in the disc. (b) Creating bioactive surfaces for repair of fractured and infected bone. The goal of this work is to develop a new generation of "smart" implants that promote osteogenesis and prevent bacterial infection. This study relies heavily on the development of new chemical techniques to generate linkages between metals and bioactive molecules and uses imaging techniques such as mass spec analysis, micro-tomography light, electron and X-ray imaging to evaluate efficacy of healing. Dr. Shapiro has been continuously funded through the NIH and has received research grants from NASA and the Department of Defense.

CHEMICAL CONSULTANTS NETWORK
JUNE 14, 2017 MEETING

ANNUAL OPEN FORUM

BBQ BUFFET

Spouses, PARTNERS & GUESTS welcome!!!

Click here to register

Date & Time: Wednesday, June 14, at The Cynwyd Club, Bala Cynwyd, PA; Networking, 5:30 PM; Buffet, 6:15 PM; Forum and Business Session, 7:30 PM

Program: As in the past, we will informally exchange questions and experiences relating to our activities as independent chemical consultants or our interests in becoming one. This gathering has been one of our most popular and enjoyable events, so don't miss it!

Location: The Cynwyd Club, 332 Trevor Lane, Bala Cynwyd, PA 19004

MAP DIRECTIONS

Reservation: **Click here to register to attend the event,** or e-mail **CCNReservations@aol.com** or call the CCN phone number at (877) 326-2959 and leave a message. Fee, including food and beverages (wine, beer & sodas), is $25 for individuals or $40 per couple by reservation/cancellation deadline: **Saturday, June 10th**.

DRESS IS CASUAL

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- **Join! Most valuable – post your consulting practice information – and have great visibility!**

2017 SCHOLASTIC ACHIEVEMENT AWARD RECIPIENTS

Alexandra Bacon	Arcadia University
Audrey Burnim	Bryn Mawr College
Allie Nagelski	Bryn Mawr College
Brenda Ho	Chestnut Hill College
Lauren Rusiloski	Delaware Valley University
Lyndsay Fitzer	Drexel University
Dmitry A. Malyshka	Drexel University
Anne M. Roskowski	Eastern University
Aurelio Mollo	Haverford College
Nasif Akanda	Immaculata University
Lauren L. Pilarz	La Salle University
Abreah Little	Lincoln University
Emily Grace Lindemuth	Philadelphia University
Adriana Pereira	Rutgers University
Caroline Stow	Saint Joseph's University
Alice Lydia Herneisen	Swarthmore College
Chey Jones	Temple University
Calva Moreno Jose Francisco	Temple University
Zachery Iton	University of Pennsylvania
Zachary Stillman	University of Pennsylvania
Courtney Vander Pyl	University of the Sciences
Edwin Carl Fluck III	University of the Sciences
Allison Arinaga	Ursinus College
Janelle Gerardi	Villanova University
Gregory Zakem	Villanova University
Kayla S. Best	West Chester University
Kerry McCord	Widener University

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Put "Volunteer" in the subject line or leave a message including contact information.

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All committees are looking for new members and several are looking for "take charge" chairs. Some, like the Teller's Committee, involve minimal work—one night per year and pizza provided. Others, like positions on Communications or Social Committees, involve one or two hours per month.

Comittee details can be found at:

www.membership.acs.org/p/philadelphia

or by calling the Philadelphia Section Office (215) 382-1589.

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PHILADELPHIA SECTION, ACS
CURRENT CALENDAR OF ACTIVITIES

Date and Time	Event	Location
June 4-June 6	2017 Mid Atlantic Regional Meeting (MARM 2017): *Elements of Transition.* Co-organized by the Lehigh Valley and Susquehanna Sections of the ACS	Hershey, PA http://marm2017.sites.acs.org/
Wednesday, June 14 5:30 – 7:30 PM	Chemical Consultants Network Annual Open Forum: BBQ Buffet	The Cynwyd Club 332 Trevor Lane Bala Cynwyd, PA 19004 **Click here to register to attend the event**
Thursday, June 15 5:30 – 7:00 PM	June Joint Meeting of the Delaware Valley Mass Spectrometry Discussion Group and Chromatography Forum of the Delaware Valley. Dr. Leslie Hicks, UNC, *Interrogation of PTMs in* Chlamydomonas reinhardtii *via MS-based Proteomics Approaches*	154 Mendel Hall Villanova University Villanova, PA. www.dvmsdg.org
Thursday, June 22 11:15 AM – 3:00 PM	**Luncheon Honoring 50-, 60- and 70-Year Members**	**The Union League 140 S. Broad Street Philadelphia, PA 19102 https://www.eventbrite.com/e/philadelphia-section-acs-june-event-tickets-33274752681?aff=es2**
Friday, July 7	Chemical Heritage Foundation First Friday: *How Beer Fueled Civilization*	Chemical Heritage Foundation 315 Chestnut Street Philadelphia, PA 19106 https://www.chemheritage.org/event/first-friday-how-beer-fueled-civilization
August 20-24	254th American Chemical Society National Meeting and Exposition: *Chemistry's Impact on the Global Economy*	Washington, DC https://www.acs.org/content/acs/en/meetings.html?cid=home_meetings
Thursday September 28 5:00-8:00 PM	**Philadelphia ACS Section Event: Tour of the PA Biotechnology Center**	**Pennsylvania Drug Discovery Institute At the Pennsylvania Biotechnology Institute 3805 Old Easton Rd Doylestown, PA 18902**