

Department of Chemistry, Gettysburg College

ALUMNI NEWSLETTER 2016

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Koren A. Lipsett

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Administrative Assistant

The Year in the Chemistry Department

This has been another successful year for the Chemistry Department. Eight chemistry and twelve BMB students graduated in May. As usual, our graduates are headed into a variety of exciting post-Gettysburg activities, some straight into the work force and some on to graduate school for further study. The details are included further on.

The College's grant from the [Howard Hughes Medical Institute](#) has run its course, but we are happy to report that many of the Cross-Disciplinary Science Institute at Gettysburg (X-SIG) initiatives developed under the grant will continue thanks to some generous new endowments. This includes several interdisciplinary courses that were developed as part of the grant and the enhanced summer research program across all of the sciences. Shelli Frey was recently named the X-SIG coordinator and hopes to continue work with folks across the disciplines to enhance the student-faculty research program and other interdisciplinary/cross-disciplinary endeavors. In addition, the College is in the first year of a grant from the NSF that has allowed us to establish a new STEM Scholars program that includes scholarship aid and a special first year seminar that will allow us to deepen the pool of students entering the sciences. Generous support from Chemistry alumni has allowed us to support summer research students and expand and renew the instrumentation in our teaching laboratories. These generous gifts are described in more detail inside.

As we mentioned last year, Joe Grzybowski has retired. We are happy to report that he pokes his head in once in a while on his way to the gym when he is not out of town traveling. He seems to be having no trouble filling the new free time in his schedule.

Finally, this year's Musselman Visiting Scientist will be [Professor Stephen Lippard](#) from MIT. He studies bioinorganic chemistry, both developing metal based therapeutics and understanding the structure and mechanism of naturally occurring metals in biology. Professor Lippard received the National Medal of Science in 2004. He will be on campus April 6 and 7. If you are in the area, we would be happy to have you attend his lectures!



2016 Musselman Visiting Scientist
with Dr. Ka Yee Lee

Would you prefer to receive the Newsletter electronically? If you would prefer to save a tree (and give the USPS less to do) we can arrange to have you receive an electronic copy of the Chemistry Department newsletter. Send your email address to vandrews@gettysburg.edu and we will send your future newsletters as email attachments. You will be able to see photos in color and also click on the active links!

Class of 2016

Eight chemistry majors and twelve biochemistry/molecular biology (BMB) majors completed their undergraduate work in the past year. Seventeen graduates received the B.S. degree. Eight seniors were awarded Honors in their major, one was elected to Phi Beta Kappa, one graduated *Summa Cum Laude*, two *Magna Cum Laude*, and five *Cum Laude*. Nine are currently pursuing graduate work and one is attending medical school.

Kristen M. Baker (Linglestown, PA) has entered the graduate program at the University of Delaware. Michael J. Counihan (Venetia, PA), a *Summa Cum Laude* and Phi Beta Kappa graduate and the Chemistry Banner Carrier at Commencement with a second major in Music, has enrolled at the University of Illinois at Urbana-Champaign in chemistry. Abby L. Flanagan-Frankl (Glenview, IL) with a second major in Psychology has taken a special education position at New Trier High School, while Kathryn P. Fodale (Bethel, PA) is working with Vanguard Retirement Funds. Clayton R. Fritsch (Airville, PA) is planning his future and Filzah Iqbal (Fairfax, VA), a 12/15 graduate, is enrolled in a biomedical graduate program at the University of Chicago. Rowan I. L. Meador (Stowe, PA) has begun the graduate program at Syracuse University while Stephanie A. Piacentino (Kings Park, NY) is looking forward to getting into public school teaching.

BMB graduate Alecia M. Achimovich (Harrisburg, PA), a *Cum Laude* graduate and the BMB Banner Carrier at Commencement, has entered the graduate program at the University of Virginia and Katherine E. Boas (Intercourse, PA), a *Cum Laude* graduate, is employed by Eurofins Lancaster Laboratories. Matthew T. Bonavita (Asbury, NJ) is planning his future while Matthew R. Dunworth (New Windsor, MD), a *Cum Laude* graduate, is working at Johns Hopkins Cancer Center. Alisa O. Girard (Freehold, NJ), a *Cum Laude* graduate, is enrolled in a biomedical science program at Robert Wood Johnson and Julie E. Laudenschlager (Bay Shore, NY), a *Cum Laude* graduate, is at the University of Virginia graduate school. Mark A. Mednikov (Belle Mead, NJ) works at NIAID at the Integrated Research Facility at Fort Detrick. Adam D. Poff (York, PA) is looking for work. Tyler M. Sadka (Edgewater, MD), is enrolled at the Virginia Tech medical school while Brianne E. Tomko (Nanticoke, PA) is attending the University of Maryland graduate school in molecular/cellular biology. David R. Van Doren (Whitehouse Station, NJ), a *Magna Cum Laude* graduate is looking for employment and Albert C. Vill (South Plainfield, NJ), a *Magna Cum Laude* graduate, is enrolled at Cornell University.

Departmental Honors in Chemistry were awarded to Michael Counihan. Alecia Achimovich, Katherine Boas, Matt Dunworth, Julie Laudenschlager, Tyler Sadka, David Van Doren, and Albert Vill received BMB Honors. Michael Counihan also earned Honors in Music.

The Southeastern Pennsylvania Section of the American Chemical Society honored Mike Counihan this past spring as the outstanding senior chemistry major. In addition Mike received the Stine Chemistry Prize, the Society for Analytical Chemists of Pittsburgh Award, the 2015 Undergraduate Award in Analytical Chemistry, and the 2014 Organic Award. Mike held the 2015 Glenn S. Weiland Summer Research Scholarship and the 2015 Judith Bond Scholarship awarded to a junior by the Southeast PA Section of the ACS. Rowan Meador was a co-recipient of the John B. Zinn Chemistry Research Award and Kristen Baker earned the 2014 ACS Polymer Division Award for Achievement in Organic Chemistry.

Matt Dunworth and David Van Doren shared the 2016 Biochemistry/Molecular Biology Award. David was a co-recipient of the John B Zinn Chemistry Research Award and was awarded the 2012 Sceptical Chymists Achievement Award. Brianna Tomko received the 2012 Chemical Rubber Company Freshman Chemistry Achievement Award.

Staff Update

We are happy to have two new faculty in the Chemistry Department this year.

[Kate Buettner](#) has joined the department as our new inorganic chemist following Joe Grzybowski's retirement. Kate does research in the area of bio-inorganic chemistry with a focus on the construction of synthetic metalloproteins that will act as catalysts and potential therapeutics. She will be teaching inorganic chemistry as well as helping out with introductory courses and biochemistry. Kate earned her undergraduate degree from Lafayette College and her Ph. D. from Yale University.

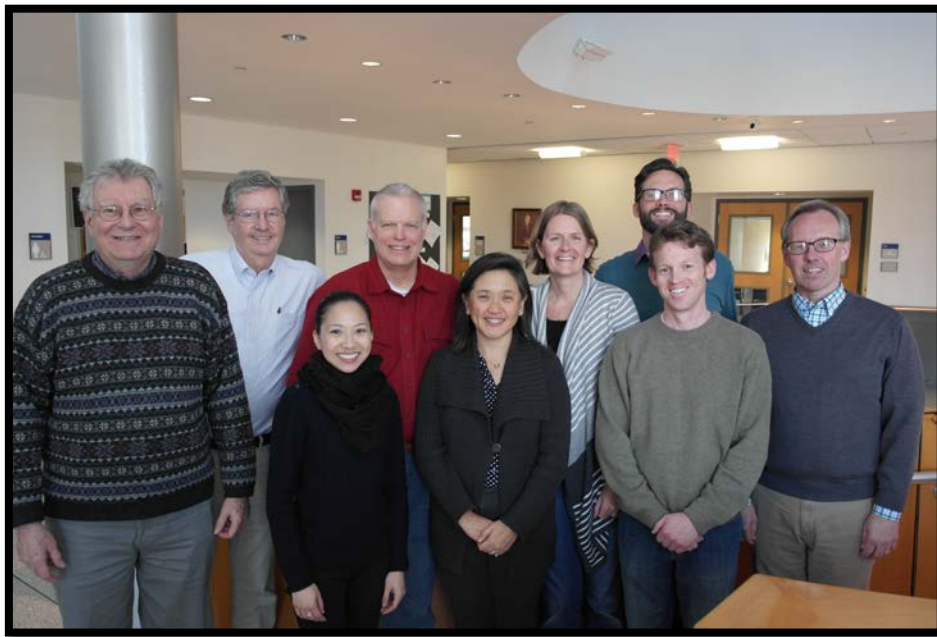
[John Seiders](#) has joined us this year while Tim Funk leads Gettysburg's program at Lancaster University in the UK and will continue next year while Don Jameson is on sabbatical. John is an experienced teacher and will be teaching organic

chemistry and spectroscopy courses this year. John earned his Bachelor's degree at McDaniel College and did his graduate work at the University of Pittsburgh.

37th Musselman Visiting Scientist

The Chemistry Department was delighted to host [Professor Ka Yee Lee](#) from the University of Chicago as our [37th Musselman Visiting Scientist](#) this past spring. Lee was the Ph.D. mentor for both Professor Shelli Frey and Visiting Professor Kathleen Cao in our department. Her research interests are in the area of biophysics, including the membrane sealing capabilities of poloxamer polymers, the targeting selectivity of anti-microbial peptides, the role of phosphatidylserine in immunoregulatory receptors, the role of cholesterol in ordering in membrane lipid rafts, the interactions of lung surfactant peptides and lipids and biomaterials. At the University of Chicago, Professor Lee holds appointments in the Chemistry Department, the Institute for Biophysical Dynamics and the James Franck Institute. She has also served as the Director of the Materials Research Science and Engineering Center at the University of Chicago. In 2007 Professor Lee won the Quantrell Award for Excellence in Undergraduate Teaching at the University of Chicago.

Professor Lee's Thursday evening general lecture, titled "*The Physics of Breathing: Wrinkle-to-fold transitions in lung surfactants and other elastic sheets*", was well attended by faculty and students. The talk was an interdisciplinary look at how lung surfactants influence the physics of breathing. Three more technical lectures, titled "*Membrane disruptive mechanisms of antimicrobial peptides*", "*Differential Phosphatidylserine Recognition by the TIM Family of Immune Regulatory Receptor*", and "*Membrane sealing effects of poloxamers*" provided a more in-depth look at the projects going on in the [Lee lab](#).



Front Row: Dr. Joe Grzybowski, Dr. Kathleen Cao, Dr. Ka Yee C. Lee, Dr. Tim Funk, Dr. Michael Wedlock
Back Row: Dr. Bill Parker, Dr. Don Jameson, Dr. Shelli Frey, Dr. Lucas Thompson

Sceptical Chymists

The Sceptical Chymists had a busy year of lectures, activities, and social events under the guidance of senior Rowan Meador.

Our first speaker of the year was Amanda Reig from Ursinus College. Prof. Reig spoke of her work on elucidating the catalytic activity of metal ions that are stabilized by protein scaffolds. Walter Kowtoniuk ('05 BMB and Philosophy) came back to talk about his career in consulting at Third Rock Ventures. Later in the fall semester Martin Brechbiel ('79 Chemistry) returned to campus to talk about his work at the NIH exploring targeted α -particle emitting radionuclides for cancer therapeutics.

In the spring semester, we continued our theme of inviting alumni back to campus to speak about their careers after Gettysburg. Hannah Loch ('12 Chemistry) came back to talk about her work in the coatings division at PPG and how her skills as a synthetic chemist helped her jump-start her career. Our next lecture was Matt Belowich ('07 Chemistry), a

graduate of recent Nobel Laureate Sir Fraser Stoddart's group at Northwestern University. He spoke about the special interactions between inorganic fillers and the organic based binders in paint and surface coatings that are used at Dow Chemical. The Scep Chym series closed out the year with a lecture from another Gettysburg grad, Russell Composto ('82 Physics) who is a professor of Materials Science and Engineering at the University of Pennsylvania. Russ spoke about his work on understanding the interfacial chemistry of polymers on rod shaped gold nanoparticles and how tailoring that chemistry allows for control of nanoparticle assembly

Outside of the lecture hall, the Sceptical Chymist executive board was busy planning social activities and hands-on demonstrations that successfully increased attendance at all of our club events. Our chymists used their chemical know how to engage students by making flubber, glowsticks, and decorating cookies. Club members participated in the College's Get Acquainted Day by offering club information, which was enhanced by demonstrations of elephant toothpaste, to potential incoming classmates as part of the annual event's Clubs Exposition. A club picnic celebrated the end of the 2015-2016 academic year. The picnic included the Sceptical Chymists' distribution of the year's student awards, initiation of more than 10 new members, and election of new officers for the upcoming 2016-2017 academic year.

If you would like to see pictures from the events or just keep up with the Sceptical Chymists' events and activities, please visit our Facebook page at www.facebook.com/scepticalchymist.

Student/Faculty Research 2015

Professor Jameson's research students worked on three projects last year. Five different students worked on exploring synthetic chemistry related to Tröger's base. For the second year, Kristen Baker ('16) continued her work on the preparation of shape-persistent Tröger's base molecules. Four students this past summer worked on appending carbohydrates to angular molecules, including Tröger's base. Ryan Moran ('17) worked on D-glucose, Alex Delenko ('17) worked on D-galactose, Cordell Boggs ('17) worked on cellobiose and Julia Harper ('17) worked on maltose. Julie Laudenschlager ('16) continued her work on appending disaccharides to tripod imidazole ligands. Kristen, Alisa Girard ('16) and Julie all presented their work at the spring 2016 Celebration at Gettysburg College.

While on sabbatical, Professor Koren Lipsett had one student completing her senior thesis research. Over the course of her research on equine deafness in a Spanish mustang pedigree, Alecia Achimovich ('16) systematically sequenced MLANA, MITF and PMEL17 and was able consolidate all sequence data and conclude that deafness might be a combination effect; perhaps both the KIT sabino mutation and the EDNRB mutation (previously identified) may play a role in equine deafness!

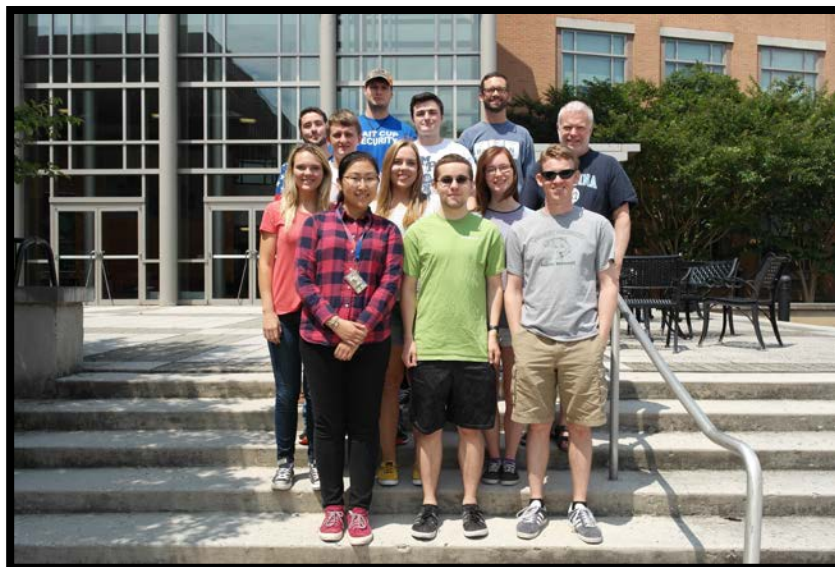
In Prof. Tim Funk's lab, research continued on two main projects: the synthesis of a chemical tool that will be used to isolate GlcNAcylated proteins, and the exploration of the reactivity of a class of (cyclopentadienone)iron carbonyl compounds. During the 2015-2016 academic year, Kathryn Fodale ('16) continued the work she and Andrew Mahoney ('17) had done the previous summer collecting kinetic data of iron-catalyzed alcohol oxidations and carbonyl/imine reductions. They presented their work at a poster session at the ACS National Meeting in San Diego, CA in March. Andrew continued working on the project during the summer of 2016. Rowan Meador ('16) spent the year exploring which iron catalysts were most active in the oxidative lactonization of diols and she too presented her work at the ACS Meeting in March. Tracy Tang ('19) worked with Rowan during the spring and took Rowan's project over this past summer. Finally, Tyler Sadka ('16) almost finished the synthesis of the chemical linker for isolating proteins with a certain type of post-translational modification. He presented his efforts at the ACS Meeting in March, and by early August Prof. Funk had finished the synthesis and sent it off to Copenhagen for use. It was a productive year!

The NanoLab started the year with Prof. Thompson on his pre-tenure research leave where he focused on writing manuscripts. In the spring semester Celina Harris ('17 Chemistry) and Savannah Miller ('17 BMB) continued their collaborative work, with Prof. Kurt Andresen in Physics, on quantifying the electrostatic driven adsorption of polyelectrolytes onto gold nanoparticles. Rich Gawel ('18 BMB) and Fontaine McFeaters ('18 Chemistry) joined the lab in the summer of 2016. Rich is working on polymer synthesis to link Prozac to gold nanoparticles for further studies on the environmental toxicology of nanoparticles in collaboration with Prof. Pete Fong in the biology department. Fontaine took on a new avenue in exploring the electrostatic driven adsorption of polyelectrolytes using the department's new isothermal titration calorimeter.

In LipidLab, Shelli Frey continued work on projects revolving around the theme of structure and dynamics of cell membranes with a particular focus on understanding biophysical interactions of neurodegenerative proteins and nanoparticles with cells and developing a model system for human skin. During the past academic year, David Van Doren ('16 BMB) explored the effects of nanoparticle exposure on membrane structure using physiologically relevant giant unilamellar vesicles

as model cell membranes. He found that the membrane disruptive effects, in the form of reduced vesicle size and tubule formation, were dependent on the charge and concentration of the nanoparticles. Mike Counihan ('16) continued work on developing a model lipid system of human skin with the goal to understand how individual skin components affect its material properties. He found that the canonical mixture of lipids typically used by researchers does not accurately replicate key behavioral features of skin and has proposed the use of a more complex, but physiologically relevant mixture. Over the summer, Shelli worked to quantify how sphingomyelin and gangliosides affect aggregation of the huntingtin protein that leads to Huntington's disease. Results show sphingomyelin enhanced the damage by the protein while gangliosides are somewhat protective, supporting a possible therapeutic route for these glycolipids.

2016 Summer Research Students



**Front Row: Tracy Tang, Andrew Mahoney, Dr. Tim Funk
Second Row: Julia Harper, Fontaine McFeaters, Celina Harris
Third Row: Rich Gawel, Ryan Moran, Dr. Donald Jameson
Fourth Row: Alex Delenko, Cordell Boggs, Dr. Lucas Thompson**

X-SIG Summer Researcher Group Hike in Michaux



Faculty/Student Publications, Presentations, Grants, and Awards 2015-16

Prof. Shelli Frey published a paper titled "Cholesterol modifies huntingtin binding to, disruption of, and aggregation on lipid membranes" (*Biochemistry* **2016**, 55, 92-102). Her co-authors included Alex Campbell ('15 BMB). She and two students attended the Biophysical Society Annual Meeting in Los Angeles, CA in March 2016 and presented two posters. David Van

Doren ('16 BMB) presented "Polystyrene nanoparticles alter the structure and stability of model cell membranes" which had Luke Cuculis ('12) as a co-author. The poster presented by Mike Counihan ('16) was titled "Lateral phase behavior of human skin lipids." Prof. Frey attended a Howard Hughes Medical Institute Constellation Studio in Chevy Chase, MD in April 2016 to work with faculty from other institutions receiving funding through their Science Education Program and presented a poster "Assessing gains in interdisciplinarity in STEM students." In September 2016, Prof. Frey traveled to a Biophysical Society Thematic Meeting: Liposomes, Exosomes, and Virosomes in Locarno, Switzerland where she presented a poster titled "Polystyrene Nanoparticles Alter the Structure and Stability of Model Cell Membranes." Prof. Frey and Prof. Thompson received a \$6000 College Equipment grant from the Spectroscopy Society of Pittsburgh to obtain a modular spectrofluorometer to be used in the general chemistry and instrumental courses.

Prof. Tim Funk took four students to the 251st American Chemical Society Meeting in San Diego, CA in March 2016 where the group presented three posters. Kathryn Fodale ('16) and Andrew Mahoney ('17 BMB) gave a poster titled "Kinetic Examination of the Impact of Cyclopentadienone Substitution for a Series of Iron Catalysts." The poster Rowan Meador ('16) presented was titled "Exploring Oxidative Cyclizations of Diols to Lactones Using Iron Catalysts" while Tyler Sadka ('16) presented "Convergent Synthesis of a Photocleavable Linker for the Purification of GlcNAcylated Proteins." Kathryn, Rowan and Tyler also gave oral presentations (with the same title as their posters) at the 80th Annual Intercollegiate Student Chemists' Convention at Ursinus College in April 2016. In addition, Prof. Funk gave a talk titled "Flipping the Organic Chemistry Classroom" on pedagogy innovation in his organic chemistry course at the 49th Annual Middle Atlantic Association of Liberal Arts Chemistry Teachers (MAALACT) at St. Vincent College in October 2015.

Prof. Don Jameson was invited to give a Chemistry department seminar at Mount St. Mary's University in Emmitsburg, Maryland in April 2016. This seminar was titled "Tröger's Base: The Chemistry of Curved, Chiral Molecules."

Prof. Koren Lipsett published a paper titled "A Mutation in *LTBP2* Causes Congenital Glaucoma in Domestic Cats (*Felis catus*)" (*PLoS ONE* **2016**, *11*(5), e0154412), which included Evan Zhao (BMB '10) as a co-author. In addition, Prof. Lipsett, along with four NIST collaborators was awarded a patent in December 2015 entitled "Isolation and Characterization of a Single Mitochondrion with Optical Tweezers" – a first for Gettysburg College!

Prof. Luke Thompson published a paper titled "Chronic, long-term exposure to gold nanoparticles accelerates larval metamorphosis without affecting mass in wood frogs (*Lithobates sylvaticus*) at environmentally relevant concentrations" (*Environmental Toxicology and Chemistry*, **2016**, *35*, 2304-2310) which included Andrea Sitton (BMB '14) as a co-author along with Gettysburg College biology department collaborators, Prof. Pete Fong and Visiting Professor Gerardo Carfagno. Prof. Thompson had a busy year disseminating his research, giving two posters at conferences and three invited lectures at peer institutions. He presented a poster titled "Investigating Polymer Mediated Depletion Stabilization of Gold Nanoparticles in Organic Solvents" with student co-author Kevin Lerner (BMB '17) at the ACS Conference in San Diego, CA in March 2016 that was chosen for the prestigious Sci-Mix evening, an event that combines a social hour with the top poster presentations from each division. In June 2016, Prof. Thompson gave a poster "Quantification of the Ionic Environment Surrounding Polymer-Coated Gold Nanoparticles" at the Noble Metal Nanoparticles Gordon Research Conference in South Hadley, MA. During the Fall semester, Prof. Thompson traveled to Wooster, OH in September to give a Chemistry Department seminar at the College of Wooster titled "Using Polymers to Control the Chemistry of Gold Surfaces" and then Ursinus College in October to present work on "Polymeric Modifications of Gold Nanoparticle Surfaces." Prof. Thompson was invited to give a Chemistry department seminar at Lebanon Valley College in Annville, PA in April 2016 that was titled "Understanding How Polymers Modulate Gold Nanoparticle Surface Chemistry." On the grants front, Prof. Frey and Prof. Thompson received a \$6000 College Equipment grant from the Spectroscopy Society of Pittsburgh to obtain a modular spectrofluorometer to be used in the general chemistry and instrumental courses. In addition, Prof. Thompson was part of the 2016-2017 Pennsylvania State University Materials Research Faculty Network Faculty Fellow Program which awarded him instrumentation time at PSU.

Gifts to the College

Many Chemistry Department alumni and friends have made gifts to the College through the **Gettysburg Fund** over the past fiscal year. Donors to the Gettysburg Fund include: Dr. Albert B. Accetola, Jr. '67, Mr. Frank F. Barr '75, Mrs. Wendy Patterson Barr '76, Ms. Jennifer J. Becker '97, Ms. Pamela J. Bennett '65, Dr. Dianna L. Berry '95, Dr. Dennis M. Bleile '72, Mr. Robert N. Britcher '68, Dr. Benjamin M. Chaloner-Gill '86, Mrs. Marsha Fegley Chappell '68, Mr. Robert E. Chappell '66, Mr. Robert M. Clontz, II '04, Mr. Michael J. Counihan '16, Dr. Luke W. Cuculis '12, Ms. Jessica L. Drake '11, Mr. John F. Glass '55, Ms. Abigail M. Golin '03, Mrs. Marilyn Bauer Hedges '46, Mrs. Joanne Hill Heller '55, Dr. Amy Dickerson Johnson '98, Mr. Craig P. Johnson '98, Dr. David W. Jones '67, Dr. Richard L. Keeports '62, Mr. Dale B. Kiddoo '85, Ms. Darby K. Kiley '97, Dr. Jack A. Kline '59, Mrs. M. Anne Heckler Kline '60, Dr. Robert J. Knopf '54, Mr. George B. Krone '59, Ms. Julie E. Laudenschlager '16, Dr. Michael D. Lawlor '92, Ms. Diane Lazarus, Mrs. Donna H. Lind '06, Mr. Steven D.

Lind '73, Ms. Stephanie J. Maiocco '10, Mr. Gregory V. Mas '83, Mrs. Janet Heiland Mas '83, Mr. Keith F. McDaniel '80, Ms. Rowan I. Meador '16, Dr. David R. Musselman '82, Dr. Inga Holl Musselman '82, Dr. M. Lynn Myers '81, Dr. Ronald E. Myers '69, Dr. Donald L. Oakley '61, Dr. Deborah E. Otis '73.

Matching gifts were received from Abbvie, IBM Corporation, Travelers Community Connections Matching Gifts Program and Pfizer Incorporated.

If you designate your gift for the **Chemistry Department – Special Gifts Fund**, it will directly support the Department and help pay student stipends for summer research. The Department received gifts to the Special Gifts Fund from Ms. Alexandria L. Craig '07, Dr. James R. Hamsher, '60, Mrs. Angela Mendel Hunter, '96, Mrs. Pauline Dale Platt '53, Mr. Robert T. Platt, Mr. Vincent J. Venditto '03, who supported a summer research student this year, and the Society for Analytical Chemists of Pittsburgh.

News from Our Graduates

70's MARTIN BRECHBIEL '79 is nearing retirement at the National Institutes of Health as the head of the Radioimmune Inorganic Chemistry section. He continued his generous support of the department, and has returned to campus a few times in recent months.

80's CYNTHIA LE COMPTE '84 and **DAVID SALISBURY '85** have recently moved back to the Gettysburg area, and have visited the department a few times since.

90's MIKE LAWLOR '92 began a new position at Temple University as the Assistant Dean for Undergraduate Affairs in the College of Science and Technology.

00's VINCE VENDITTO '03 stopped by the department during Alumni weekend, he is continuing in his position as an Assistant Professor at the University of Kentucky School of Pharmacy. **MATT BELOWICH '07** has recently transferred within Dow to work at their main campus in Midland, Michigan. He is a part of their Organics, Polymers and Organometallics (OPO) division there. **CHRIS HOFFMAN '07** is working in materials chemistry at the Johns Hopkins Applied Physics Lab. **ERIN PODLESNEY '07** is an Assistant Professor at Stockton University in New Jersey, she is teaching Organic I and has recently taken her first research student. **CHRIS KOTYK '08** has accepted a faculty position at Wheaton College (MA). **JESSICA WALLICK '09** finished her postdoc at PPG and has now started a job at Cytec-Solvay as a research scientist focused on adhesives and sealants for aerospace technology.

10's STEPHANIE MAIOCCO '10, MATT DAVIDSON '10, and JULIE KOBIE '11 all completed their PhD's from Boston University, University of Georgia, and University of Pennsylvania respectively. Stephanie has started a job at Elstar Therapeutics. Julie's degree is in biostatistics, which she is using in her new position at Merck in Early Clinical Development Statistics – Pharmacogenetics. **PAUL SMITH '10** is now a postdoc in the Takeuchi group at SUNY Stonybrook. **NICOLE MEREDYTH '11** recently completed her MD from the University of Vermont, and is now a general surgery resident at NY Presbyterian Hospital. **LUKE CUCULIS '12, TAYLOR PLANK '12, JONATHON HIBSHMAN '12, and JENNY (FRIELLE) LAY '12** all returned to campus this summer to serve on X-SIG panels on grad school and careers. Luke gave a research seminar on his PhD thesis work that he recently completed at the University of Illinois at Urbana-Champaign, he began a job with Boston Consulting this summer. Taylor and Jonathon are both in PhD programs at the University of Maryland and Duke, respectively. Jenny works at Lancaster Labs in a GMP/Pharmaceutical lab. **KATHLEEN HILLERY '12** is in the US Navy, where she is posted on the USN Porter, she will soon be promoted from Ensign to Lieutenant (j.g.). **BRIAN STOKES-CAWLEY '14** and **FILZAH IQBAL '15** have both recently started Masters programs. Brian is at Syracuse, getting his degree in Chemical engineering, while Filzah is at the University of Chicago getting her degree in biomedical informatics. **CARLEY STRELEZ '14** is in a PhD program in Biological and Biomedical Sciences at the University of Southern California, while **MANHAO (DANNY) ZENG '15** is beginning a PhD program UC Santa Barbara. **ALEX CAMPBELL '15** is in an MD/PhD program at Ohio State.

Keep those cards, letters and e-mails coming - we enjoy hearing from you! If you can provide information about your classmates, we like that, too. For those who prefer to correspond electronically, you can find our email addresses through the departmental web page: <http://www.gettysburg.edu/academics/chemistry/>
