

Department of Chemistry, Gettysburg College

ALUMNI NEWSLETTER 2018-2019 AY

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The Year in the Chemistry Department

The 2018–2019 academic year was another busy one for the Chemistry Department. In May 2019, eight Chemistry majors and nine Biochemistry and Molecular Biology (BMB) majors graduated, with three students completing their degree requirements by December of 2018. A total of 16 students did research with six faculty members in the Chemistry Department during the summer of 2019, and they all participated in the summer research program sponsored by the Cross-Disciplinary Science Institute at Gettysburg College (X-SIG). Our own **Prof. Shelli Frey** is the coordinator of X-SIG. Among other things, this program provides funding for student/faculty research and programming for summer research students across the sciences. You can find out more at the [X-SIG webpage](#), and be sure to take a look at the [blog](#), too! The Chemistry Department hosted **Prof. Sharon Hammes-Schiffer** as our 40th Musselman Visiting Scientist, and we enjoyed a series of lectures given by **Prof. Helen Blackwell**—our 41st MVS—in late November. The Sceptical Chymists hosted a series of speakers throughout the year, and we also hosted the 83rd Annual Intercollegiate Student Chemists Convention (ISCC) in April 2019; more information about these events is provided elsewhere in the Newsletter.

Student access to modern instrumentation is important for both educational and research endeavors. During the 2018-2019 academic year, a portion of the stockroom



Prof. Luke Thompson, Shelby Nicolau '20, Peter Zhang ('21 BMB) and Prof. Shelli Frey at work in the department's new Imaging Suite.

in the Science Center was turned into an imaging suite. It houses a transmission electron microscopy (TEM), a fluorescence microscope, and an atomic force microscope (AFM) that was recently acquired through funding from a George I. Alden Trust grant. Congratulations to **Prof. Shelli Frey and Prof. Luke Thompson** for getting their AFM grant funded!

Along similar lines, Gettysburg College is funding an upgrade to our 400 MHz NMR spectrometer, and we hope to have the new hardware and software installed early in 2020.

We love hearing from alumni and friends of the Chemistry Department, so please keep in touch with us as you move through your careers and your lives! You can find a link to a form to submit an update on the [Careers and Alumni page](#) of the Chemistry Department webpage.

We emailed the Chemistry Department Alumni Newsletter to *almost* everyone. You received a paper copy only if we don't have your email address or if you requested no emails from the College. If you received a paper copy but would prefer an electronic version in future years (or if you received an electronic newsletter but would prefer to receive a paper copy), please let us know by emailing **Lea Czar** at lczar@gettysburg.edu, writing to the Chemistry Department at Campus Box 393, Gettysburg College, Gettysburg, PA 17325 or calling us at 717-337-6252.

Class of 2019

Eight senior chemistry majors and nine senior biochemistry/molecular biology (BMB) majors completed their undergraduate work in the past year. All graduates received the B.S. degree. Eight seniors were awarded Honors in their major, four were elected to Phi Beta Kappa, five graduated *summa cum laude*, two *magna cum laude*, and three *cum laude*. Five are currently pursuing graduate work.

Celine Erkey (Chemistry), is working as a researcher at Tata Harper Skincare. **Kristen Karlson** (Chemistry) is working as a research tech at ICON plc. **Orange Li** (Chemistry), a *cum laude* graduate and the Chemistry Banner Carrier at Commencement, is enrolled in graduate studies at University of Maryland, Baltimore County. **Amelia Hou** (Chemistry), a *summa cum laude* and Phi Beta Kappa graduate, is pursuing graduate studies at UC Irvine. **Tracy Tang** (Chemistry), a *magna cum laude* graduate is a graduate student at Vanderbilt University. **Joshua Wagner** (Chemistry), a *summa cum laude* graduate and the class valedictorian, is a graduate student at the University of Chicago.

Morgan Brown (BMB), a *magna cum laude* graduate, is working in research & development at Janssen Pharmaceuticals. **Rachel Powers** (BMB), a *summa cum laude* and Phi Beta Kappa graduate, is working as a lab tech at Johns Hopkins. **Cameron Thompson** (BMB), a *summa cum laude* and Phi Beta Kappa graduate, is enrolled as a graduate student at the University of Pennsylvania. **Sarah DiDomenico** (BMB) was the BMB Banner Carrier at Commencement.

Departmental Honors in Chemistry were awarded to **Taylor Buckley**, **Amelia Hou**, and **Tracy Tang**. **Morgan Brown**, **Thao Phuong Hoang**, **Rachel Powers**, **Benjamin Skinner**, and **Cameron Thompson** received BMB Honors.

The Southeastern Pennsylvania Section of the American Chemical Society honored **Amelia Hou** this past spring as the outstanding senior chemistry major. In addition, **Amelia** received the John B. Zinn Chemistry Research Award, shared with **Tracy Tang**. **Tracy** also received the 2019 Organic Chemistry Laboratory Assistant Award. **Taylor Buckley** received the Society for Analytical Chemists of Pittsburgh College Chemistry Award. **Joshua Wagner** received the Muhlenberg Goodwill Prize, the Stine Chemistry Prize, the Dean Frank B. Williams Memorial prize, the ACS Southeast PA Section Award and the ACS Division of Analytical Chemistry Undergraduate Award. **Joshua** also spoke as valedictorian for the Class of 2019 at Commencement. **Cameron Parker** received the 2019 Biochemistry/Molecular Biology Award.

Staffing News

We had two big faculty accomplishments occur during the spring 2019 semester: **Prof. Shelli Frey** was promoted from Associate to Full Professor, and **Prof. Don Jameson** was awarded the College's Dr. Robert E. Dutton, Class of 1946 Memorial Mentorship Award. Congratulations to both of them for their hard work and dedication to excellence at Gettysburg College! Additionally, **Prof. Kate Buettner** had a successful pre-tenure review, and she will be taking a well-deserved research leave next fall to work on her mini-metalloenzyme projects.



We have some bittersweet staffing news—**Prof. Koren Lipsett** will be retiring at the end of the 2019–2020 academic year after 28 years of service to Gettysburg College. She was hired in 1992 when the BMB program began, and she has taught (and created) many courses, including both semesters of biochemistry, forensics, and general chemistry. She also co-developed Chemistry 105: Down on the Farm, where students analyzed samples in lab that were collected on her farm south of town. A total of 102 students worked in her research lab; they were co-authors on research articles and regularly presented their results at conferences. She will be missed, and we wish her the best of luck in the future!

Prof. Koren Lipsett

Prof. Shelli Frey was on sabbatical at Gettysburg College in the fall 2018 semester after six months of sabbatical research at the Max Plank Institute for Colloids and Interfaces in Golm, Germany. She presented her sabbatical work to students and faculty at Gettysburg in a BMB seminar in the spring 2019 semester. **Prof. Mike Wedlock** is on sabbatical during the fall 2019 semester doing computational research at the University of Pennsylvania. He will be back teaching physical chemistry in the spring.



Prof. Jameson receives Dutton Mentorship Award from Provost Chris Zappe

In additional staffing news, we have added a few new lab instructors to the department: **Jim Poppiti**, **Mark Bryson**, and **Nick Kettenhofen**. **Jim** comes to us after retiring from a career in the government and private sectors, most recently having worked for the US Department of Energy. **Mark** is an electrical engineer by training and has been working (and continues to work) in the Physics Department as a lab instructor. Both **Jim** and **Mark** are in the General Chemistry lab. **Nick** is the General Chemistry Coordinator at Hood College in Frederick, MD and is working in the Biochemistry lab at Gettysburg.

ISCC 2019

The Intercollegiate Student Chemists Convention (ISCC) is a regional event where undergraduate students give oral presentations about their research, and the 83rd meeting was held at Gettysburg College on April 6, 2019. Haverford College hosted the first ISCC in 1936, and it has occurred annually with the exception of 1942–1948 due to World War II. In addition to hosting this year, Gettysburg College held it in 1949, 1956, 1966, 1973, and 1999. This April we had 76 attendees from 21 institutions and 31 undergraduate presentations. Of the eight awarded presentations, three were given by Gettysburg College students: **Olivia Peduzzi** ('20 Chem), **Alex Paredes** ('20 BMB), and **Shelby Nicolau** ('20 Chem). **Prof. Vince Venditto** ('03 Chem) from the College of Pharmacy at the University of Kentucky was our keynote speaker. It was a successful event in part due to the assistance of many Gettysburg College Chemistry and BMB majors! We look forward to attending the 84th ISCC at Franklin and Marshall College in April 2020.

Musselman Visiting Scientist



This November, the Chemistry Department was delighted to have **Professor Helen Blackwell**, the Norman C. Craig Professor of Chemistry at the University of Wisconsin (Madison) as our 41st Musselman Visiting Scientist. **Professor Blackwell's** research is at the interface of organic chemistry and bacteriology, with a goal of understanding the role of chemical signals in bacterial interactions and infectious disease. Her research lab has developed a range of synthetic compounds and chemical methods that allow them to intercept a key cell-cell signaling pathway in bacteria called "quorum sensing." She was awarded one of the first Wisconsin Alumni Research Awards for her patent on bioactive molecules that target quorum sensing in *S. aureus*. Among numerous honors she has won the American Chemical Society Arthur C. Cope Award and is a fellow of the American Association for the Advancement of Science.

Professor Blackwell's public lecture provided an overview of how cell-cell communication works and why it is important to understand it. Her technical lectures filled in the details of how her lab has come to understand cell-cell communication. She lectured on the development of tools to study cell-cell signaling in Gram-negative bacteria and development of tools to intercept cell-cell signaling and virulence in Gram-positive bacterial pathogens and new materials and assemblies that respond to communities of bacteria.



Left: Prof. Sengupta, Prof. Buettner, Prof. Lipsett, Prof. Suryn, Prof. Frey, Musselman Visiting Scientist, Prof. Blackwell, Prof. Thomson, Prof. Jameson and Prof. Funk. **Right:** Prof. Blackwell (upper right) with Chemistry and BMB students.

News from our Graduates

We enjoy hearing from you so keep those cards, letters and e-mails coming! 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: Or you may update us through a link on the [Chemistry Department Careers & Alumni webpage](#).

Dan Kim (Chem '12), **Matt Dunworth** (BMB '17), and **Joe Fortenbaugh** (Chem '13) returned to campus to participate in an X-SIG panel on graduate school. **Dan** is currently a postdoc at Princeton, **Matt** in a PhD program at Johns Hopkins University, and **Joe** recently graduated with his PhD from Penn State University; each spoke about their research projects in a mini-talk series. **Stephen Brown** (BMB '17), **Rachel Powers** (BMB '19), and **Annamaria Capobianchi** (BMB '17) also returned to campus to participate in an X-SIG panel on careers this summer

Gabby Pros ('13 Chem) got her Ph.D from Duquesne this summer and is now working for Peraton, a federal contractor.

Carla Colicigno Gallagher ('00 BMB) received two NSF grants to start a bioinformatics program at Lincoln University, an historically black college/university. **Carla** received her Ph.D. from Wake Forest University and is now an Assistant Professor in the Department of Chemistry & Physics at Lincoln University in Pennsylvania. Her specialization is biochemistry, pharmacogenetics and pharmacokinetics of cancer risk.

Dr. Lipsett's son, Harrison, was talking about Gettysburg to a fellow traveler at BWI and lo and behold, a Gettysburg College alumnus overheard Harrison and introduced himself. It turned out, that alumnus was **Sal Russello**, ('96 BMB). **Sal** researched in **Dr. Lipsett's** lab in the mid-90's. **Sal** is currently the Director of OEM & Customized Solutions at New England Biolabs! Small world!

We are sad to report that **Charles Livingston** ('41 Chem) of Lancaster, PA, died in February 2019 at the age of 100. After graduating from Gettysburg College, **Charles** worked as a chemist first at Trojan Powder Company, then at Armstrong World Industries. He later worked at AC&S, now Irex Corporation, where he worked in various marketing executive positions. His interests included golf, tennis traveling the world, and photography. He learned to ski and sail after his retirement.

Sceptical Chymists

The Sceptical Chymists had another busy year of lectures, activities, and social events under the guidance of senior Nancy Kallimanis.

Our first speaker of the year was **Dennis Bleile** (Chem '72), who was co-hosted by BMB. He gave two seminars about his work at biotech company Abaxis on the development of diagnostics. Next we hosted **Olivia Wilkins**, a graduate student at CalTech, who told us about her work in understanding cosmochemistry. Our final speaker of the fall was **Prof. Kathryn Cole** from Christopher Newport University, who told us about her work to understand histone deacetylase proteins.

The spring semester began with a seminar from our newest faculty member **Prof. Suvrajit Sengupta** who spoke about his work on clathrate hydrates. We then hosted **Prof. Liz Young** from Lehigh University, who spoke about her lab's work in understanding the relationship of molecular structure to molecular properties in proton coupled electron transfer and charge transfer relevant to solar energy. Our final seminar of the year was from **Liz Harker Scheideman** from the National Institutes of Health, who spoke about her work in developing vaccines, rounding out an exciting year of chemistry seminars.

Outside of the lecture hall, the Sceptical Chymist executive board was busy planning social activities that successfully increased attendance at all of our club events. Our chymists used their chemical know how to engage students by making liquid nitrogen ice cream, magnetic slime, and lego spectrometers, they also hosted a rousing evening of Chemistry Feud that pitted faculty against students, where the faculty pulled off a come-from-behind win. A club picnic celebrated the end of the 2018-2019 academic year. The picnic included the Sceptical Chymists' distribution of the year's student awards, induction of more than 20 new members, and election of new officers for the upcoming 2019-2020 academic year. This year, continued the new tradition of mock seminars by some of the faculty to the event, which involved faculty giving seminars on unknown topics (non-scientific) with unknown slides. Everyone had a great time!

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 2018-19



Olivia Peduzzi '20, Katie Madore'21 and Alex Paredes '20 at work in the Buettner Lab.

The **Buettner Lab** continued their work on developing *de novo* proteins to function as hydrolases; **Alexander Paredes** ('20 BMB), **Olivia Peduzzi** ('20 Chem), and **Katie Madore** ('20 BMB) continued in the lab, while we added **Brittany Loh** ('22 Chem) during summer 2019. **Olivia** and **Alexander** gave talks at ISCC in April on their progress in developing these enzymes to function as DNA cleavage agents. Their presentations both earned them second place in their sessions. They both also presented posters on their work at the national American Chemical Society meeting in Orlando, FL, where **Alexander's** poster was selected for the SciMix session. **Olivia** had quite an exciting year, earning a Goldwater Scholarship and spending her summer at Penn State working with Squire Booker as part of an NSF Research Experience for Undergraduates. **Alexander, Katie,** and **Brittany** worked in the lab for the summer as part of the X-SIG program, and made good progress in characterizing the metal binding ability of our proteins as well as in understanding their ability to hydrolytically cleave DNA.

In **Lipid Lab**, **Prof. Frey** continued her sabbatical through the Fall 2018 semester, working at Gettysburg on the effect of charge on cell membrane material properties. **Julia Clevinger** ('21 BMB) joined the group for the academic year working on the charged membrane project and running preliminary experiments with **Ashley Gaffey** ('22 BMB) to measuring thermodynamic parameters of huntingtin peptide binding to model cell membranes. Over Summer 2019, there were four new members in the lab. **Jon Trilleras** ('20 BMB) worked on the structural and thermodynamic characterization of huntingtin peptides binding to cell membranes while **Jordyn Markle** ('22 BMB) ran parallel experiments on prion-based systems responsible for several fatal and transmissible neurodegenerative diseases such as scrapie in sheep and Creutzfeldt-Jakob disease (CJD) in humans. **Peter Zhang** ('21 BMB) started a project with our new atomic force microscope measuring the material properties of polymersomes, a project in collaboration with Hammad Faizi (in Prof. Vlahovska's lab at Northwestern), while **Paige Ashey** ('21 Chem) is using fluorescence microscopy to study how nanoparticle functionalization affects their interaction with, and subsequent stability of, cell membranes.

The **Funk** lab continued to focus on the development and applications of (cyclopentadienone)iron carbonyl catalysts. **Amelia (Xintong) Hou** (Dec '18 Chem) collected kinetic data on catalysts she and **Evan Bertonazzi** ('20 Chem) had made during the summer of 2018. The goal was to determine how cyclopentadienone electronics affected catalyst activity, and we learned that electron-rich catalysts were more active than those with electron-withdrawing groups. Evan continued with this project during the summer of 2019, and we established a collaboration with **Prof. Jason Keith**, a computational chemist at Colgate University, to understand why electron-rich catalysts were more active. **Tracy (Yidan) Tang** ('19 Chem/Computer Science) focused on using these catalysts to lactonize diols, and **Melanie Hempel** ('20 BMB) worked on developing a sustainable, alcohol oxidation process using a simple (cyclopentadienone)iron carbonyl catalyst with furfural—an inexpensive, bio-derived aldehyde—as the terminal oxidant. **Kim McCaskey** ('20 Chem/Music) worked with both Tracy and Melanie on their projects and also looked at developing a method to selectively oxidize secondary alcohols in the presence of primary alcohols. **Yumeng Cao** ('21 Chem) and **Peter Zhang** ('21 BMB) began working in the group in the spring of 2019, too. Melanie, Evan, and Kim continued with their projects during the summer of 2019.

Research in **Professor Jameson's** lab continued along two lines: synthesis and reactivity of Troger's base derivatives and synthesis of a new class of chiral cobaloximes. **Kristen Karlson** ('19 Chem) and **Nancy Kallimanis** ('19 Chem) worked on the synthesis and resolution of three electron-poor Troger's bases (possessing fluoro-, trifluoromethyl- and cyano-substituents). They also studied the kinetics and mechanism of the racemization of substituted Troger's bases. **Kristen** and **Nancy** presented the results of their research in a poster at Celebration '19. This past summer, **Emma Armstrong** ('21 Chem) prepared and characterized several chiral cobaloximes derived from the ligand camphorquinone dioxime.

During the past academic year in the **Lipsett Genomics Lab**, **Celine Erkey** ('19 Chem) and **Orange (Haoju) Li** (Dec'18 Chem) continued their studies from Summer 2017. Celine focused on deafness in horses and Orange evaluated abnormal growth in cattle. Whole genome sequence (WGS) was completed for both the affected horse and cattle. Celine and Orange became masters in bioinformatics and Linux code and were able to flesh out preliminary alignment data to determine the gene(s) responsible for each disorder.

Prof. Suvrajit Sengupta joined the department in Fall 2018. His research is focused on characterizing hydrophobic interactions which play a vital role in the structure and function of proteins and other biomacromolecules. Currently, he

is seeking to understand these interactions in model systems known as clathrate hydrates which are ice-like substances composed of a host water cage and guest molecule(s). His first year has been spent mostly on setting up his lab in Science Center 343 (shared with **Prof. Donald Jameson**). In the summer of academic year 2018 – 2019, **Sarah Kotchey** ('21 ES) and **Julia Sharapi** ('22 ES) joined his lab with funding from the Cross-Disciplinary Science Institute at Gettysburg College (X-SIG). In addition to general lab setup, they worked on forming clathrate hydrates in the lab, and testing a little understood phenomena involving them known as the memory effect.

The **Nanolab** has continued to work on understanding the interfacial dynamics of polymers on gold nanoparticles. **Claire Benstead** ('20 Chem and Anthropology) and **Shelby Nicolau** ('20 Chem) continued throughout the year and over the summer in the lab working on their projects to study pH induced assembly of gold nanorods and gold and silver nanoparticle-polymer composite materials respectively. **Paige Ashey** ('21 Chem) and **Matt Coe** ('21 Chem) both worked in the lab during the academic year learning how to synthesize nanoparticles and monomers for future polymerizations. **Paige** moved across the hall to **Prof. Frey's** lab for the summer of 2019 and **Matt** took a REU position at the University of Southern California. We also welcomed **Vivian Soullaird** ('22 Chem) into the lab for the summer of 2019 where she continued the work that **Matt** had started on making polymerizable surfactants.

2019 Summer Research Students and Faculty



2019 Chemistry Department summer research students and faculty



2019 Summer Research students and faculty representing the following Departments: Biology, Chemistry, Environmental Studies, Health Sciences, Mathematics, Physics, and Psychology

Faculty/Student Publications, Presentations, Grants and Awards 2018-19

Prof. Buettner, Alexander Paredes, and Olivia Peduzzi had two poster presentations at the American Chemical Society meeting in Orlando, FL (April 2019), titled: “Towards new vanadium enzymes,” and “Hydrolytic titanium metalloenzymes.”

Prof. Frey gave three talks last year. In November 2018, she was invited by her collaborator, Prof. Justin Legleiter, to give a lecture titled “Interactions of huntingtin with model cell membranes” at the West Virginia University Chemistry Department seminar series. Upon coming back from her sabbatical in January 2019, **Prof. Frey** gave an invited lecture with the same title as part of the Gettysburg College BMB seminar series. In March 2019, she attended the Biophysical Society Annual Meeting in Baltimore, MD and gave a talk, “Measuring the interaction of

polyglutamine peptides with lipid membranes” while co-chairing the Membrane Physical Chemistry session. A sabbatical collaboration project focused on how charge affects the material properties of the cell membrane came to early fruition with a publication (H Faizi, SL Frey, J Steinkühler, R Dimova, P Vlahovska. Bending rigidity of charged bilayer membranes. *Soft Matter*, 2019, **15**, 6006-6013).

Prof. Tim Funk gave a talk at the American Chemical Society National Meeting in Orlando, FL titled “(Cyclopentadienone)iron-catalyzed lactonizations of symmetrical and unsymmetrical diols”. Two of his students presented posters at the same meeting: **Tracy (Yidan) Tang** ('19 Chem) presented “Application of (cyclopentadienone)iron catalysts to the lactonization of diols” and **Evan Bertozzi** ('20 Chem) presented two posters (both with **Amelia (Xintong) Hou** (Dec '18 Chem) as a coauthor) titled “Synthesis and electronic studies of (3,4-diarylcyclopentadienone)iron tricarbonyl bifunctional catalysts” and “Electronic effects of (cyclopentadienone)iron tricarbonyl bifunctional catalysts on transfer hydrogenation and dehydrogenation reactions”. In an unfortunate turn of events, **Amelia's** visa application was delayed and she was unable to present her poster, which is why **Evan** presented both. Both **Tracy** and **Evan** gave oral presentations at the ISCC at Gettysburg College in April 2019; **Tracy's** presentation had the same title as her poster, and **Evan's** talk was titled “Synthesis, kinetic, and electronic studies of (3,4-diarylcyclopentadienone)iron tricarbonyl catalysts”.

In early April, **Celine Erkey** ('19 Chem) and **Orange Li** (Dec '18 Chem) joined **Prof. Lipsett** in Orlando, FL to present our research at the American Society for Biochemistry and Molecular Biology (ASBMB) conference (part of the Experimental Biology 2019 Annual Conference.) **Celine** presented a poster titled “Search for the Genetic Correlation between Coat Pigmentation, Blue Eyes and Cochleosaccular Deafness in a Pedigree of Spanish Mustangs,” while **Orange** presented a poster titled “The Association of Fibroblast Growth Factor 5 (FGF5), Fibroblast Growth Factor Receptor 1 (FGFR1) and Prolactin (PRL) with the Hair Length of Scottish Highland Cattle.”

Prof. Thompson gave an invited seminar at Elizabethtown College in September 2018 on the environmental impacts of gold nanoparticles on aquatic life. In the spring of 2019, **Shelby Nicolau** ('20 Chem) and **Prof. Thompson** traveled to Orlando to present at the ACS national meeting. **Shelby** presented a poster entitled, “Can Physical Properties of Polymers be Used to Predict Stability of Gold Nanoparticle Films?” **Prof. Thompson** presented a poster entitled, “Secondary Structure Transitions in Electrostatically Adsorbed Poly-l-lysine as an Approach for Gold Nanorod Assembly” with **Claire Benstead** ('20 Chem) as a co-author. In April of 2019, **Shelby** presented her work at the Intercollegiate Student Chemists Convention (ISCC) where she won 2nd place in the Measurement division.



Chemistry Department Students and Faculty attending the Orlando ACS Conference in April 2019.

Gifts to the College

The Chemistry Department would like to thank the generous donors who supported the Department, our students and the college with financial gifts in the last year. All gifts are welcome and much appreciated.

The following donors made gifts to the Chemistry Special Gifts Fund: Katherine Buettner, Carol & Bob Drawbaugh '69, Jane & Oak Oakley '61, Suv Sengupta, Anne Kuhlmann Taylor '66 & Jerry Taylor.

Sally Benner Uehara '61, made gifts to the Andrew L. Muns Scholarship Fund which supports a student majoring in chemistry, biochemistry and molecular biology or biology. Ellen & Bob Fallaw made a donation to the Rowland Memorial Fund in support of the Science Center Complex.

A new fund was created in 2018 to honor of recently retired Chemistry Department faculty members, **Prof. Joe Grzybowski** and **Prof. Bill Parker**. The fund supports student/faculty research in the Chemistry Department. Many of you sent donations to this fund which quickly reached endowment status so earnings from the fund will benefit the Chemistry Department for years to come. Donors to the Parker-Grzybowski Fund include Emily Hartman '16, Chris Hoffman '07, Bruce Johnson '70 & Kyonggeun Youn, Mike Lawlor '92 & Ann Lawlor, Jessie Martin '17, Doug Martz '51 & Linda Martz, Graham Sauers '11 & Kylie Sauers, Vince Venditto '03 & Kristi Venditto, Josh Wagner '19, The Schwab Fund for Charitable Giving.

The following donors made gifts to the Gettysburg Fund which helps support ongoing expenses of the college. Donors include: Frank Barr '75 & Wendy Barr, Jen Becker '97, Bob Britcher '68, Iris Brough, Gary Czulada '81 & Colene Czulada, Al Driver '74 & Iris Driver, Maureen Elliott '99 & J.R. Elliot, Celine Erkey '19, George Farley '59 & Sally Farley, John Finegan '89 & Holly Thomas, Craig Fryhle '79 & Deanna Fryhle, Jimmy Gates '07 & Kathleen McGuinn, Walter Greif '60, Dick Guise '67 & Diane Guise, Emily Harrison '18, Paul Hetrick '74 & Deborah Hetrick, Molly Hoke '95, Conrad Hummel '88 & Meg Hummel, Angie Mendel Hunter '96 & Jeffrey Hunter, Bruce Johnson '70 & Kyonggeun Youn, Richard Keeports '62 & Bonita Keeports, Jack Kline '59 & Anne Kline, Bob Knopf '54 & Mary Jane Knopf, Winnie Kost '57, Gordon Kotora '87 & Vivian Kotora, Art Kriner '65 & Jean Kriner, George Krone '59, Janet Lansinger '74, Julie Laudenschlager '16, Connie Lee '64 & Jack Lee, Edward Lis '02, Stephanie Maiocco '10, Tina Tao Maynes '05 & Jeff Maynes, Keith McDaniel '80 & Linda McDaniel, Fontaine McFeaters '18, David Musselman '82 & Inga Musselman, Ron Myers '69 & Ewha Myers, Jim O'Brien, Taylor Plank '12 & Luke Plank, Pauline Platt '53 & Robert Platt, Gabby Pros '13 & Tyler Radomsky, Steven Schram '73 & Diane Lazarus, Doris Schumacher '69, Dick Simpson '59 & Dottie Simpson, Lisa Steel '92 & Adam Steel, Brad Steffens '10 & Nancy Murray, Bryan Stokes-Cawley '14, Richard Strunk '63 Mary Lou Strunk, Vince Venditto '03 & Kristi Venditto, Alison Walsh '93 & Nathan Walsh, Red Weaver '47 & Peg Weaver, Oscar Weber, Sharon Willis '88 & David Willis, Bill Wunner '60 & Kathleen Wunner, The Schwab Fund for Charitable Giving.

We would like you to know that gifts to the **Chemistry Special Gifts Fund** or to the **Parker-Grzybowski Fund** directly benefit Chemistry Department programs and students. Gifts designated for the Chemistry Department *without a specified fund* go to the Gettysburg Fund, supporting ongoing, college-wide expenses. If you would like the Chemistry Department to have direct access to your donation to support student/faculty research, student participation in conferences, instrumentation upgrades or repairs and other specific needs of the department, please make a note on your donation indicating "**Chemistry Special Gifts**" or "**Parker-Grzybowski Fund**".

If you choose to make an on-line donation, you can do so [here](#) or by going to the Gettysburg College homepage and clicking on "Make a Gift". In the Designations portion of the on-line form, select "Other or multiple designations". Slide the bar to the right of the pop-up down to the bottom and select "Other Fund(s)" and hit the Continue button. In the box under "Please Specify", type the fund name (e.g. **Chemistry Special Gifts Fund** or **Parker-Grzybowski Fund**).