

Department of Chemistry & Biochemistry Newsletter



Elizabethtown College

From the Chair



Kristi Kneas

Welcome to the 12th annual newsletter of the Elizabethtown College Department of Chemistry and Biochemistry! It was another eventful year—and one filled with a great deal of reflection as we wrapped up an extensive Departmental Self Study (See page 9). During 2014-15, I enjoyed teaching introductory and analytical chemistry courses and working with research students Melissa Peiffer '15, Amy Wagner '15, and Ricky Castro '17 on the development of luminescence-based sensors and a collaborative project that we have initiated with Dr. Rood and his group to prepare luminescent metal-organic-frameworks. In addition, Kayla Hess '18, Meg Schopf (Middletown High '15), and I collaborated with Elizabethtown College Dining Services to develop a new laboratory exercise that was introduced last month in the introductory chemistry course. Outside of my time at the College, I enjoyed serving as a member of a Visioning Committee for the Lancaster Science Factory and trying (unsuccessfully, in most cases) to stay one step ahead of Garrison (8) and Benjamin (2).

As always, we are eager to share some of the 2014-2015 departmental highlights below and in the pages that follow:

- Nineteen departmental majors were engaged in independent research for credit during the 2014-2015 academic year, and one major studied abroad in Dunedin, New Zealand.
- Students reported results of their research at the Spring 2015 National ACS Meeting in Denver, CO, the Intercollegiate Student Chemists' Convention, a meeting of the Southeastern PA Section of the ACS, E-Town's Scholarship and Creative Arts Day, and the Disappearing Boundaries Science Summer Research Conference.
- One departmental major served as a co-author with Dr. Jeff Rood on a peer-reviewed publication in *Acta Crystallographica*, and Dr. Gary Hoffman published a paper in the *Journal of Chemical Education*. Drs. James MacKay and Kristi Kneas led a symposium at the National ACS Meeting on the topic of Capstone Experiences in the Chemistry Curriculum.
- Dr. Kristi Kneas secured funding from the Pittsburgh Conference Memorial National College Grants program to purchase a new FTIR spectrometer and ATR sample cells for the spectrometers in the organic chemistry teaching laboratory.
- Seven juniors were inducted into the Chemistry Honor Society, Gamma Sigma Epsilon, and we honored 10 students at our annual Awards banquet for their exceptional scholarship.
- The Student Affiliates Chapter of the ACS was recognized as a Commendable Chapter for its 2014-2015 activities—the 8th straight year that the Chem Club has received formal recognition by the ACS. Students will accept the award at the National ACS meeting in San Diego this Spring.
- The Department hosted both a local section meeting of Southeastern Pennsylvania Section of ACS on the topic of "Careers in Chemistry" and our 4th biennial Career Exploration Event during which 12 alumni shared insights with current students.
- Departmental faculty members led field trips to GlaxoSmithKline, Eurofins Lancaster Laboratories, Analytical Lab Services, and the Namaan Center (a drug and alcohol rehabilitation center).
- In Summer 2015, nine students conducted independent research on campus with our five faculty members, and five students took advantage of off-campus internships at Eurofins Lancaster Labs, the Federal Law Enforcement Training Center, Graybill Processing, LabLearner, and Penn State Hershey Medical Center.

Please keep the updates and visits coming; it is always a delight to reconnect with departmental alumni!

Fall 2015
Volume 12, Issue 1

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Commencement 2015

2015 Stambaugh Award Winner



Dr. Kristi Kneas, Chemistry department chair (r), presents the 2015 O. F. Stambaugh Outstanding Alumni Award to Brian J. Frost, Ph.D. '95 (l). Brian received the award during Homecoming ceremonies on Saturday, October 17, 2015, in the Masters Center.

Brian Frost was born and raised in Enfield, CT. He received a B.S. in chemistry from Elizabethtown College in 1995 and a Ph.D. in inorganic chemistry in 1999 from Texas A&M University. Following graduate school, Brian moved to Columbia University as a postdoctoral research associate. In July 2002, he started his independent career at the University of Nevada (UNR). He has taught courses in physical methods, general, organometallic, inorganic, and green chemistry. He was tenured and promoted to associate professor in July 2008. Dr. Frost has published more than 30 articles in peer

reviewed journals and holds one patent. During his time at UNR he has worked with 29 undergraduate students, 15 graduate students, and three postdoctoral research associates. His research interests are focused on synthetic and mechanistic organometallic chemistry with emphasis on the development of water soluble phosphine ligands for use in aqueous catalysis. The research combines aspects of inorganic, organometallic, and organic chemistry with green chemistry principles. In 2007, Brian received a prestigious NSF CAREER award and in 2008 was given the "Outstanding Undergraduate Faculty Mentor Research Award" at UNR for his work with undergraduate research students. Taking Elizabethtown College's motto "Educate for Service" to heart, Brian is a member of the Rotary Club of Sparks Centennial Sunrise and serves on the Board of Directors as community service chair. He has also presented a chemistry outreach demonstration, "It's Not Magic, It's Science!" to over 1,500 students.

Brian and his wife Sarah Cummings live in the beautiful Reno/Tahoe area with their two children Oliver (4) and Violet (1). Brian is an avid biker, commuting to work regularly and participating in various charity bike rides (including a recent 72-mile tour around Lake Tahoe). All four family members are passionate baseball fans playing backyard baseball, tee-ball, and attending many games of the local AAA team the Reno Aces. In addition, Brian, Sarah, Oliver, and Violet enjoy reading, traveling, biking, hiking, soccer, and swimming.

ΓΣΕ

On Thursday, March 12, 2015, seven new members were inducted by president Ashley Landis '15 into the Rho Eta chapter of Gamma Sigma Epsilon, the national chemistry honor society. Only students with a grade point average of 3.3 or higher in chemistry are invited to join. Pictured at right are the new members: front row (l-r) are Matthew Jensen '16, and Sam Brooks '16. In the back row (l-r) are Chelsea Melcher '16, Carly Henry '16, Jessica Pigga '16, Stephanie Kramer '16, and Libby Hemler '16. The faculty advisor is Dr. Jeff Rood. We congratulate these outstanding students.

ΓΣΕ 2015 Inductees





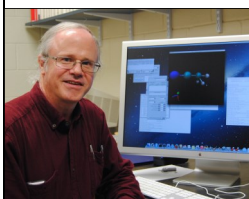
FACULTY NEWS



Tom Hagan

It's hard to believe we are at the halfway mark for the Fall 2015 semester. It is just whizzing by (sort of like deadlines to get in our materials for the departmental newsletter...). The apocalypse continues as I am still teaching Biochemistry I in Gible. I am starting to get used to teaching in such a large space and the students seemed to have acclimated, as well. The past year has been a good one. A huge shout-out to all the alums who helped make our Career Exploration Event a huge success last spring. The current students really appreciated talking with all of you and hearing about your career trajectories once you left the hallowed grounds of Etown College! Kristi, as current chair of the local ACS section, is planning on having a larger though similar career exploration event for the ACS section, so we may be contacting some of you in the near future! Spring also provided the opportunity to take some students to the ACS meeting in Denver. The weather was beautiful, though unfortunately the

chance to go skiing in the Rockies was never realized for any of us. Alas, I was forced to make due with alternative "B" when a few months later I realized a dream of camping above the north rim of the Grand Canyon. The stars were incredible, and the Milky Way was jaw-dropping awesome. Go to the north rim, way fewer visitors (actually only 10%) compared to the crowded south rim! Upon my return I was fortunate to work for the summer with a rising sophomore, Colby Schweibenz, on a lipid vesicle project in the lab. This Fall two other students are actively doing research with me, Carly Henry (cell viability studies and EGCG exploration) and Kate Glass (cysteine analysis of hair fibers). So we're definitely keeping ourselves busy here in the department. That doesn't mean we have forgotten our cherished alums; please stop by whenever the opportunity presents itself and say hello!



Gary Hoffman

My teaching routine seems to jump from introductory chemistry to physical chemistry and back again. I generally have four different courses each semester. I continue to make changes in the physical chemistry sequence. I adopted a new textbook that presents material in a different order with different emphases. The students have responded well. Labs are regularly changing. I modify some experiments, remove some, add others. I taught an off-semester introductory chemistry course. Many of the students were from majors outside of chemistry or biology (or any science), so the atmosphere in the classroom was a bit different. It went well, though, and we are planning on offering it on a regular basis. I will teach the course next spring and will get a chance to try out a new approach to general chemistry – what's called "atoms first". It will be a lot of work to change the ordering around, but I've been interested in trying it for a while.

I have continued work on the Dunham coefficients project, using the algorithm I developed (along with

additional changes), I have generated all but two of the coefficients at order 10. The calculations become increasingly difficult with order and these calculations are particularly demanding. I submitted a grant proposal to the NSF for funding to expand the 64-processor cluster computer we put together. It was not funded, but the comments led us towards alternative sources of funding. I had a paper published in the *Journal of Chemical Education*. Research student, Chad Cronic, worked with me last spring and summer. He will continue this academic year. We are learning the intricacies of coupled cluster theory and seeing just what it can do.

I play the trumpet without restrictions now. I'm principal chair with the Hershey Symphony and play with the big band. I'm even playing with the brass quintet at Commencement and Convocation. My daughter, Alyson, is working towards a Ph.D. in biochemistry at Duke. Cynthia is living in Carlisle and recently bought her own house. Susie and I are making our home together. I look forward to what the future has to offer.


James MacKay

Hi Alumni! I hope this finds you well. I'd like to update you on my challenging spring semester. In February our third child, Kendon, was born with Down syndrome and a heart defect. At three days, he went into heart failure and we were tasked with helping him grow strong enough for surgery. We lived in quarantine mode, in fear of bringing an illness into the house. In addition, we had two preschoolers to look after. Sleep came at a premium and all we could do was put our faith in God and the doctors. In early April, we traveled to CHOP in Philly for Kendon's surgery, which went amazing. He has been growing and meeting milestones beyond expectations. Though there are challenges ahead, we are grateful for where we are now. Leah and JJ really love their little brother, and we were able to enjoy lots of quality time together this past summer.


The MacKay Family

I managed to work in spite of what was going on in my life. My teaching load involved Organic I, and Advanced Organic. The students and faculty (and alumni) rallied around my family and me which helped lift me up. This Fall semester I am offering an FYS titled "Drugs that Changed the World". I am overseeing Integrated Lab where seniors are working on a project based around RNA recognition. I am also teaching Organic II lecture and lab.

Outside of the classroom, my research students have continued to make progress on projects including the development of a covalently linkable dapoxy sulfonic derivative, the halogenation of pyrazoles, and studies on the mechanism of a copper catalyzed oxazole forming reaction. This past summer I worked with two research students, Sam Brooks and Matt Jensen. Both are continuing their work this academic year. Additionally, I have been involved with writing questions for the upcoming edition of the textbook I have adopted. It is always fun to catch up with former students so if you are in the area, I hope you stop by Musser to say hi.


Dick Papez

Hi, I am starting my sixth year at E-town College. I teach the forensic science courses (lecture and lab), general chemistry lab, organic chemistry lab and occasionally help with chemical instrumentation labs.

I retired after thirty-five years of industrial and research chemistry, and the shift to college life has been nice. This transition included six years as an adjunct at Penn State Harrisburg in the chemistry department.

Of the courses I teach, the forensics courses are most new to me. I now have three summer on-line versions under my belt. I have found many similarities between analytical chemistry in my past life and forensic chemistry that I now teach. The differences are the bad guys. Much of the exploration prior to retirement was to solve technical problems related to processing, formulation, quality, plant efficiency, and analysis of research materials. With forensics, a devious plot is added, but the science is still the same.

Now that I have been through the courses several times, I have been adjusting them somewhat based on my experiences with the biggest changes taking place in the forensic courses. A major challenge there is to make the courses interesting both to the non-science majors, the majority of the attendees, as well as the science majors. I continue to tinker with the balance between the science aspect and the excitement of crime solving.

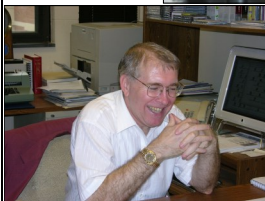
A high point for me is the Forensics Lab in the spring. Seeing the students work through the problems, run the analyses and wrestle with the myriad of conflicting results is a bit of a rush, especially when they finally succeed or solve the crime.

In the past year I have been able to rekindle my previous research regarding polymer synthesis and analyses. Many ideas from my former career that I did not have opportunity to follow to completion have resurfaced. Some of these I have recently started, others are in the planning stage. Some of these even can be related to forensics. I am currently seeking students who might want to become part of this research.

**Jeffrey Rood**

Hello everyone! I hope this year's newsletter finds you well. As the Fall semester gets underway, I find myself quite involved with our general chemistry course. In addition to teaching two lectures and two lab sections, I am also helping to coordinate the lab portion of the course. Also, for the first time, I am teaching our junior/senior seminar course. This year the students will be writing a paper and giving a talk about Nobel Prize winners in chemistry. We should see a wide range of topics and also get a good historical perspective on some really interesting points in chemistry and biochemistry.

Our research in the broad area of coordination chemistry continues and I continue to be fortunate to work with a number of great students on a variety of projects. We have recently wrapped up a major part of our project in magnesium coordination chemistry and I will be submitting a manuscript to *Polyhedron* this Fall that contains a number of undergraduate coauthors. If accepted, the work will be highlighted in a special edition of the journal that focuses on

**Charles Schaeffer**

Our research involving preparation and characterization of main group organometallic compounds of silicon, germanium, and tin compounds continues. Dr. Jeff Rood and I supervised Jessica Pigga '16 during both semesters of the 2014-2015 academic year, and during the summer of 2015, courtesy of generous support provided by E. Jane Valas, Ph.D., and Suzanne Kelley, D.O. Jessica presented an oral presentation at the conclusion of the 2015 Scholarship, Creative Arts, and Research Program (SCARP) summer program on July 29, 2015. The most recent research manuscript containing Elizabethtown student coauthors (underscored) is: C.H. Yoder, T.M. Agee, A.K. Griffith, C.D. Schaeffer, Jr., M.J. Carroll, A.S. DeToma, A.J.

inorganic research at undergraduate institutions. I have also begun a new project with Professor Kneas' group that aims to synthesize new solid-state luminescent sensor materials. We had a number of students work on this project over the summer and the research continues this Fall. I think we have made some good progress and I am excited to see where it goes.

**Kella and her friend Wrigley.**

On the home front, our daughter Kella is now three years old and has started preschool. Time surely flies and she definitely keeps me and my wife busy! We have a family trip to Disney World planned for her in the near future.

To wrap up, if you are ever around campus, please stop by and say hello!



Fleisher, C.J. Gettel, A.L. Rheingold. Use of ^{73}Ge NMR Spectroscopy and X-ray Crystallography for the Study of Electronic Interactions in Substituted Tetrakis(phenyl)-, -(phenoxy)-, and -(thiophenoxy) germanes. *Organometallics* **2010**, 29, 582-590 (DOI: 10.1021/om900905c).

Our long-time and ongoing collaboration with Professor Claude H. Yoder, Charles A. Dana Professor of Chemistry Emeritus at Franklin and Marshall College, began in Fall of 1966 (see: <http://www.fandm.edu/claude-yoder>).

I continue supervising research students in my role as A.C. Baugher Professor of Chemistry Emeritus and exploring aspects of medium-format digital photography. The chemistry student affiliate chapter distributes a calendar composed of some of these campus images, with proceeds supporting various student affiliate activities.



STUDENT NEWS



2015 Graduates

Gregory A. Berends

Melissa A. Peiffer
Eurofins Lancaster Labs

Chelsea L. Zimmerman
Eurofins Lancaster Labs

John Alexander Holbert

Medical School
Pennsylvania State Hershey

Stephanie Tretter
Eurofins Lancaster Labs

Ashley M. Landis

Edward Via College of
Osteopathic Medicine

Amy M. Wagner
Graduate School
Florida International University

Students recognized by the Department of Chemistry & Biochemistry for their educational accomplishments:



Tyler M. Butkus '17
POLYED Organic Chemistry



Ashley M. Landis '15
Biochemistry Award



Amy M. Wagner '15
ACS Outstanding Senior
Award



Bristol A. Sauer '17
ACS Student Affiliate Award



Ashley M. Landis '15
ΓΣΕ De-Lap-Holcomb
Scholarship



Stephanie N. Kramer '16
Analytical Chemistry Award



Tyler M. Butkus '17
Emergent Scholar



Holly A. Sofka '17
Emergent Scholar



Aaron M. Rathsam '18
CRC Freshman
Chemistry Award



Amanda K. Williams '18
CRC Freshman
Chemistry Award



Chad J. Cronce '16
Physical Chemistry Award



J. Alexander Holbert '15
A. C. Baugher
Chemistry Award



Summer Research & Internships

Sam Brooks, a senior chemistry major, worked with Dr. James MacKay exploring regioselective oxazole formation through a transition metal complex catalyzed [3+2] cycloaddition reaction.

Tyler Butkus, a junior chemistry/business administration major, worked as a project analyst and principle investigator with Graybill Processing, a feed mill in Elizabethtown to develop a novel system for organic waste recycling. This process Tyler helped develop is a system utilizing black soldier flies to eat forms of organic waste that cannot be processed by current methods.

Ricky Castro, a junior biochemistry major; **Kayla Hess**, a sophomore chemistry major; and **Gabi Yankelevich**, a senior biochemistry major, were involved in research of metal organic frameworks for luminescence-based sensing: preparation and photophysical characterization with Drs. Kristi Kneas and Jeffrey Rood.

Chad Cronce, a senior chemistry major, did research with Dr. Gary Hoffman focusing on first principles study of a diatomic molecule.

Kate Glass, a senior biochemistry major, interned at Eurofins Lancaster Laboratories for the Extractables and Leachables department in pharmaceutical testing. She worked directly with analytical chemists preparing samples and learning about ICP-OES, LC-MS using a TOF mass spec, Head-Space GC-MS, and Direct Inject GC-MS.

Carly Henry, a senior biochemistry major, interned with LabLearner, a science education company. It has a fully conceptualized curriculum that accompanies 100 percent hands-on science experience in a lab filled with research-grade equipment. Carly worked in marketing and sales, traveling and training new teachers on program instruction.

Matt Jensen, a senior biochemistry major, was involved in researching total synthesis of the natural product withasomnine from pyrazole with Dr. James MacKay.

Chelsea Melcher, a senior forensic chemistry major, did a 12-week internship at the Federal Law Enforcement Training Center in Brunswick, GA. This training center partners with over 90 federal agencies to provide training in criminal investigation, uniform patrol, and land management patrol as well as countless advanced courses, which included Advanced Forensic Techniques in Crime Scene investigations.

Jessica Pigga, a senior chemistry major, did research with Dr. Jeffrey Rood studying synthesis and characterization of new main group and transition metal complexes for applications in catalysis and material science projects.

Colby Schweibenz, a sophomore biochemistry major, conducted research with Dr. Tom Hagan exploring the role of lipid composition in cellular membranes through the synthesis of giant unilamellar vesicles.



Student Presentations at Local, Regional and National Meetings

Nineteen chemistry and biochemistry majors participated in research within the department. They presented the results of their work at several venues including Scholarship and Creative Arts Day, Elizabethtown College; the Intercollegiate Student Chemists' Convention; the National American Chemical Society meeting in Denver, CO; at a local section meeting of SEPSACS; and the Disappearing Boundaries Science Summer Research Conference. Student participants were: Gregory Berends '15, Sam Brooks '16, Max Buck '16, Ricky Castro '17, Chad Crouce '16, Kate Glass '16, Libby Hemler '16, Carly Henry '16, Alex Holbert '15, Stephanie Kramer '16, Ashley Landis '15, Chelsea Melcher '16, Melissa Peiffer '15, Jessica Pigga '16, Holly Sofka '17, Stephanie Tretter '15, Amy Wagner '15, Gabi Yankelevich '16, and Chelsea Zimmerman '15.

Career Exploration Event

On Tuesday, March 10, 2015, the Chemistry and Biochemistry department in conjunction with the College's Career Services office hosted our biennial Career Exploration Event. This gathering gave students an opportunity to talk with invited alumni and guests representing a wide variety of chemistry-related career paths. Those participating were: Dr. Alaina DeToma-Mitsch '09, medical writer; John E. Evans, forensic scientist; Dr. Adam J. Fleisher '07, research chemist; Dr. Cameron Gettel '11, medical doctor; Dr. Zach Landis '11, medical doctor; Tiffany Kulp Mattula '09, senior scientist; Justin Mitsch '10, process chemist; Dr. Gary L. Myers '71, vice president of science and practice affairs; Matthew Myers '11, scientist; Geoffrey Quinque '11, senior scientist; Dr. Christopher Strulson '09, research chemist; Dr. Matthew Strulson '04, associate of risk information; and Maureen Hastie-Cherichella '98, physician assistant.





The Year of Review

Over the course of the past two years the department underwent a Self Study during which time faculty and staff members poured over information related to our curriculum and instruction, student and graduate profile, enrollment trends, and equipment and facilities, in order to identify opportunities for improvement and strengths to retain. As part of the process, we also secured external reviews from two different entities, and we thought you might be curious to know what they had to say about us:

The American Chemical Society Committee on Professional Training recertified our Chemistry and Biochemistry degrees (a process that occurs every six years) and offered the following critique after having reviewed our materials:

This is a very rigorous and comprehensive program, especially for its size. The recruiting efforts to increase the number of majors are also noteworthy. The quality of the student research reports was characterized as excellent. Overall, this department is delivering a high-quality curriculum to the chemistry majors.

External reviewers from the Council on Undergraduate Research (CUR) also were highly complementary of the department and our programs, indicating that they were “quite impressed,” and that they agree with members of the College

administration who “referred to the department as a ‘hidden gem’ and ‘small but mighty.’” In particular, the reviewers highlighted a “clear sense of mission and a real *esprit d’corps* among the faculty and the majors.” They lauded the quality and customizability of our curricular offerings as well as the level of preparedness and confidence of our students, largely resulting from the degree of rigor in the department. They commended our fiscal responsibility in managing a tight budget, cited the current facilities as a strength, and made note of our well-qualified and highly productive support staff.

Coming out of the Self Study we are executing an action plan which includes a number of items about which we are very excited. Two opportunities that may be of interest: We plan to work toward increased collaboration and communication with other departments, including Biology, Mathematics and Computer Science, and Engineering and Physics. This is something that we have heard frequently during our Exit Interviews with graduating seniors, so please know that we are listening. Also, we intend to become more effective in promoting and marketing the department and its favorable outcomes so that we may continue to attract strong students. The latter necessitates our continued communication with alumni, so please keep us posted!





STUDENT AFFILIATES

In the past year, the Chemistry Club has been involved in several outreach programs. First, students actively engaged in working with younger students at the Lancaster Science Factory, using demonstrations to pique the students' interest in chemistry. The Club was also active on campus. On October 25th, 2014, club members participated as a group in "Into the Streets", a day of volunteering on and around campus. The local elementary school was open to having their students experience chemistry, as well through Chem Club demonstrations in which the students could participate. Finally, other events included participating in the Relay for Life fund raising event, Homecoming fun and fundraising, and regular meetings on campus. We hope to continue a fun Chemistry Club tradition by gathering students, faculty, and staff at Shady Maple restaurant the weekend before Thanksgiving break.

This academic year, the Chemistry Club is hoping to expand on past successes. This Fall semester at our first event to take place, the Chemistry Club participated in a Southeastern Pennsylvania Section of the American Chemical Society (SEPSACS) Baseball Night. Students from the local SEPSACS division were invited for a night of Lancaster Barnstormers baseball and fireworks to kick off the year. Outreach programs including the Lancaster

Science Factory will be continued, along with participation in Homecoming, Into the Streets, and Relay for Life. The Club will also visit Mount Calvary Preschool and Elementary school, located next door to the College, to show very young children the magic of chemistry.

Activities on campus will continue with regular meetings and demonstrations at those meetings. Each demonstration will include an explanation for the chemistry occurring. The ACS "Chemistry in a Box" program was popular last year with the theme of "The Chemistry of Movies." This year, the program will be held again with "Lab Safety" as the theme. Students will be engaged with schools from across the nation during an online seminar provided by the ACS. The biggest and most anticipated program of the year held by the ACS is the National Meeting to be held in March of 2016. Those presenting research and demonstrations will be traveling to San Diego, CA, with the help of funds raised by the Club.

This year's Club cabinet is made up of the following officers: Ricky Castro '17, president; Holly Sofka '17, vice president; Bristol Sauer '17, secretary; Gabi Yankelevich '16, treasurer; and Kate Glass '16, outreach and marketing.

By Ricky Castro, president





From the E-Mailbag



I was at the College for my 50th reunion in June and had a great exchange with Dr. Ranck for whom I owe much given that I went on to do my doctoral work in physical chemistry. After 40 years at Baylor College of Medicine, I moved to the Houston Methodist Research Institute where I am Professor of Biochemistry in Medicine with our affiliate Weill Cornell Medical College.

Henry J. Pavnall, Ph.D. '65

Weill Cornell Medical College
Houston Methodist Research Institute

The Outstanding Lifetime Achievement Award in Clinical Chemistry and Laboratory Medicine is considered the premier award of the American Association for Clinical Chemistry and is granted as a "lifetime achievement" award for contributions to the field of clinical chemistry. Individuals selected for this award have made significant contributions in all aspects of clinical chemistry, particularly service, education and research; have achieved international stature and reputation by virtue of their efforts; and have demonstrated long standing service to the AACC, either at the grass roots, national and/or international levels. For 2015 the recipient of this award is alumni **Gary L. Myers, Ph.D. '71**.

American Association for Clinical Chemistry

My company's drug, Afrezza (an inhaled insulin to treat adults with diabetes), was made available to patients starting in February 2015. If there are classes that discuss drugs, an Etown graduate had a hand in the development, regulatory approval, and commercialization of this drug.

Kelly Sullivan Kraft, Ph.D. '94

MannKind Biopharmaceuticals

Life is busy for me at NIST, as I continue to build a new lab with some colleagues. We have two out of three optical tables now full with a few experiments. Our main project involves building a moderately low-cost spectrometer to measure radio-carbon dioxide ($^{14}\text{C}-\text{CO}_2$) in neat samples of CO_2 .

Adam J. Fleisher, Ph.D. '07

National Institute of Standards and Technology

2015 has been a very busy year. At Eurofins Lancaster Labs I moved from the volatile testing lab to the environmental inside business development area. I interact with clients and all the environmental technical departments. I'm able to utilize both my degrees. In June I got married. We bought our first house and in July we became parents to a black lab puppy named Roxie.

Laura Krieger Caufield '10

Eurofins Lancaster Labs

I defended my Ph.D. in January 2014, and accepted a position in Merck research laboratories in April. I'm working in the analytical chemistry department in Rahway, NJ, supporting the early pipeline. I support both small and large molecule projects.

Chris Strulson, Ph.D. '09

We're going to Brown University. I graduated from Penn State College of Medicine in mid-May. I'm an emergency medicine resident physician.

Cameron Gettel, M.D. '11

Currently I am studying at East Carolina University for a degree of Doctor of Audiology. I'm thinking of pursuing a Ph.D. in audiology further down the road. I look forward to what this field can provide and what I can contribute to this profession.

Minqi Hang '13

I have accepted a position at Integrated Forensic Laboratories (IFL) as a Forensic Scientist-Drug ID. I am a forensic chemist. IFL is a private forensic lab that has locations in multiple states. It is a division of NMS Labs. I will be training in Willow Grove, PA, and then they can send me to any of their labs.

I graduated from Arcadia University with distinction with a MSFS degree in May 2015.

Mollie Mares, MSFS '13

Integrated Forensic Laboratories



Elizabethtown College

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY
ONE ALPHA DRIVE
ELIZABETHTOWN, PA 17022-2298

Caring for the College Garden



Pictured above are students of the Laboratory Methods class. They are partnering with Elizabethtown College Dining Services to study the soil chemistry and pollination of the College garden in an effort to improve garden production. This, in turn, will lead to more locally grown, organic produce for meals served on Campus.

A Special Thank You

*To the faculty, students and alumni
who contributed to this newsletter.*

Chemistry and Biochemistry

Faculty and Staff:

Dr. Kristi A. Kneas, Chair

Mr. W. Michael Bierbower

Dr. Thomas Hagan

Dr. Gary Hoffman

Dr. James MacKay

Mr. Richard Papez

Dr. Ray Reeder

Dr. Jeffrey Rood

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