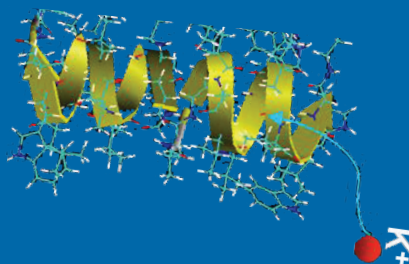


BLUE HEN CHEMIST



University of Delaware, Department of Chemistry and Biochemistry Annual Alumni Newsletter

NUMBER 40

AUGUST 2013

JOHN L. BURMEISTER, EDITOR

ON THE COVER

*"The New Interdisciplinary
Science & Engineering
Laboratories"*

"Where Are They Now"

***What are the winners of the Elizabeth Dyer
Excellence in Chemistry & Biochemistry
Undergraduate Award up to today?***





ON THE COVER

Deep within the halls of the new \$132 million, 197,000 square foot Interdisciplinary Science and Engineering Laboratories (ISEL), amidst the fervor of the final phases of construction, we have designed an innovative model of undergraduate science education that integrates foundational concepts and hands-on skills from general chemistry and general biology. Our dedicated team of instructors, preceptors, and graduate teaching assistants have been working towards the vision of interdisciplinary learning that should also enable an environment in which students will be developing team, research and analytical skills a reality. Through a strategic architectural design of this one-of-a-kind learning center, funded by the Howard Hughes Medical Institute (HHMI) and generous donors, including a \$10 million grant from Bob and Jane Gore, and a \$5 million grant from the DuPont Company, students from a multitude of disciplines will be engaged in the learning process together. This building will allow students to learn about concepts across disciplines and make connections between them, develop team work, research, and analytical skills.

In collaboration with faculty from the University of Delaware Department of Biology, including Drs. Ken L. Van Golen, Alenka Hlousek-Radojcic, Seung M. Hong, Jennifer Nauen, and Oyenike Olabisi, and under the direction of Dr. John Jungck, we are designing and implementing an integrated course that melds general chemistry (CHEM103) and introductory biology (BISC207), two courses that cover many similar topics. For example, students will be guided to see the fundamental role that acids, bases, pH, and chemical equilibria have on the buffering capacity of blood and cellular metabolism. Similarly, reduction and oxidation (redox) processes are not only pertinent in the context of battery operation, as is traditionally taught, but are vital to the dance of electrons that enable gradual transfer of energy. It is these chemical reactions that are responsible for the conversion of energy in respiration or photosynthesis into the form that sustains living processes in individual cells and complex organisms. In addition, the ISEL building also provides us with the breeding grounds to continuously explore ideas and innovations on curriculum development and integration through cooperative and collaborative interaction among scientists and teachers with expertise in biology, chemistry, and physics.

Integrated sections of BISC207/CHEM103 this fall, enrolling ca. 480 students, and BISC208/CHEM104 in the spring, which will also involve Dr. Jacqueline Fajardo, will have their Chemistry labs, along with Biology labs and lectures in the problem-based learning studios of the ISEL facility. These studios replace traditional classrooms and labs, providing a dynamic, active student centered learning environment through the guidance from preceptors, teaching assistants, and instructors. A typical laboratory learning space in the ISEL consists of a central room with mobile seating amenable for easy group formation. The walls of this central room have flat panel monitors, smart boards, and projectors. Students will be encouraged to use these presentation and communication tools to share and discuss research results and project-based materials with their peers. The central room is flanked by wet labs, equipped with digital dissecting microscopes and hand-held, wifi-enabled sensors and probes. Data are streamed into an electronic notebook within iPads where they could be either shared or analyzed further.

Nature does not separate chemistry and biology, and our unique classrooms will mirror this reality. As a part of this interdisciplinary team, I plan to integrate events and phenomena from our students' own active lives to highlight the relevance of underlying scientific principles. Over the next few years, I will increasingly implement a more student-centered curriculum that will draw from current events, primary scientific literature, and topics of interest to the students through direct feedback by applying techniques currently used in the medical and biotech fields.

~ Mark Baillie





Photo by Carrie G. Bonnett



Honor Roll
OF GIFTS TO THE DEPARTMENT

The Blue Hen Chemist is an annual magazine distributed by the Department of Chemistry and Biochemistry at the University of Delaware. Its purpose is to reach out to our extended CHEM/BIOC family members: current residents, alumni, friends, retirees and benefactors, both individual and corporate; to keep them abreast of the goings on in the Department, to put old family members and new ones in touch with one another, and to give credit and thanks to the contributions of all.

The individual contributions of all, past and present, is the foundation that has built and continues to grow the Department and advance the mission that maintains our tradition of excellence in teaching and research. The financial support of the benefactors of the Department, whose generous contributions make it possible to recognize excellence among our students and faculty, gives the Department the opportunity to bring in world renowned speakers who further advance the knowledge base and skills of our faculty and students, and allow us to continue the mission of recruiting the best and brightest students and faculty to join our ever growing family.

Please, on behalf of the Department, accept these sincere thanks for the generosity of all. So, without further ado, we would like to express our sincere appreciation to the following companies and foundations for their unrestricted financial support of the Department during 2012-2013:





Honor Roll
OF GIFTS TO THE DEPARTMENT

The Department would like to acknowledge, with extreme gratitude, financial support from the following alumni, parents, faculty members, staff members, and friends during 2012-2013. Your support has always been important to us; however, in these stressed financial times, it is like manna from heaven!

Douglas E. Albertson (MS80)	Elaine B. Butterfoss (FRIEND)	Allen A. Denio, PhD (FAC 78-79, 98-99)
Derrick L. Allen (STAFF)	William J. Calhoun, MD (BS75)	Mr. and Mrs. Taylor M. Dickerson (PAR)
Wayne M. Anderson (BS49)	Natalie M. Carter (STUDENT)	Scott W. Dodds (BS05)
Christina H. Antonopoulos (BS09)	Susan G. Cheadle (STAFF)	Leon J. Doneski (PhD00)
Ioanna H. Antonopoulos (BS09)	Wenfang D. Chen, Esq. (MS95)	William J. Donovan, PhD (BS96)
David P. Arnott, PhD (BS89)	Jonathan E. Child (FRIEND)	Jacqueline A. Erickson (BS88)
Eric L. Astle (BS98)	Arthur J. Christenson, PhD (BS67)	Steven Evans (PhD77)
Petras V. Avizonas (MS59, PhD62)	Peter A. Christie (PhD67)	John R. Ferron (FRIEND)
Donna Ayers-Alexander (STAFF)	Glen D. Christman (BS06)	Judi A. Fitzpatrick (BS84)
Robert D. Bach, PhD (BA62, MA64)	Wanda K. Cibroski (STAFF)	Perry M. Forman (MS55)
David L. Bailey (BA84)	Alice H. Claggett (BS65)	Christine M. Foster (BA92)
Qi-Bin Bao (PhD87)	Roger F. Clark (BS96)	Katherine L. Fox (BS06)
William E. Barnette, Jr., PhD (BS75, MS77)	Arthur D. Coates (MS61)	Mary J. Francis (PAR)
James D. Beck (PhD69)	Marshall H. Cohen (PhD68)	Royal B. Freas III (PhD84)
Thomas P. Beebe, PhD (FAC)	Diane A. Coleman (PhD94)	Beverly R. Garrett (PhD59)
Elyssa S. Bernfeld (BS13)	Margaret A. Conte, MD (BS77)	Carolyn S. Gaul (BS85)
Jacqueline Betz (BA87)	Garland G. Corey (MS60)	Michael D. Gaul, PhD (BS85)
W. Brooks Bigelow, PhD (BS65)	Arthur J. Coury, PhD (BS62)	Carlton R. Gebauer (PhD82)
Walter G. Blenderman, PhD (BS71)	Harold J. Coyne III (BS92)	Joanne Gehas (PhD90)
John R. Boon (BS85)	Richard O. Crossland (BS88)	Charles A. Geoly (BS83)
Mary E. Brimm (STAFF)	Dale M. Crouse (PhD70)	Norman J. Gerri (MS56)
Dr. and Mrs. Neil W. Brister (PAR)	Federico G. Cruz (STAFF)	Thomas M. Gilmore, PhD (MS70)
Christopher A. Brown (BS84)	David L. Dalrymple, PhD (FAC 68-74)	Timothy H. Gilpatrick (BS12)
Randy A. Bull (PhD81)	Mary R. Davis (BS74)	Nicole C. Goodwin, PhD (BS01)
John L. Burmeister, PhD (FAC)	Dianne L. Decamp (PhD88)	
Eileen L. Burns (Staff)	Judith A. Dellose (STAFF)	

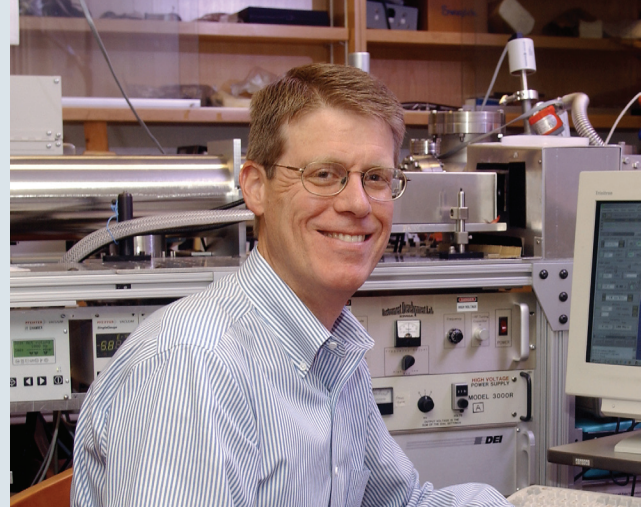
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FROM THE CHAIR



Greetings to all of our Chemistry and Biochemistry community. 2013 marks the end of my first year as Department Chair. Writing this column has caused me to reflect on what I have learned so far. In one sense, I can look at it as one year down and only four more of the 5-year term to survive. (This is a different spin on the slogan "[only] four more years".) On the other hand, I can look at it as one year to learn the ropes, followed by the privilege of four additional years to make a difference. In last year's **Blue Hen Chemist**, I stated that the only constant in a university is change. Change is a fact of life for us and what is important is how we approach it. When we see rising water, we can build a storm wall to help hold it back. However, if this is the only thing we do, there is a good chance we will eventually find ourselves overtaken. Alternatively, if we see a wave coming and learn how to ride it, then we can travel to new places. More than anything else, being Chair is developing a sense of when to build a storm wall and when to surf. (Sorry – I enjoy the beach so much, that I had to insert an ocean metaphor somehow!)

By far, the most difficult change we had to deal with was the sudden passing of **Mary Beth Kramer** in October 2012. As most of you know, Mary Beth was a longtime, popular and effective instructor in our general chemistry program, whose smile and positive spirit were infectious. Thanks to the extraordinary efforts of **Jim Wingrave**, **Klaus Theopold** and **Dana Chatellier**, it took only a couple of days to implement a plan to service the 800+ students she was teaching at the time. **Geoff Sametz** filled the CHEM-104 breach in the 2013 spring term, and **Mike Dao** followed suit in CHEM-103 during the 2013 summer session.

At the other end of this change, two new faculty have joined us to take over for Mary Beth and also meet the demand of sharply rising enrollments. **Mark Baillie** will teach the new, integrated biology-chemistry curriculum in

the Interdisciplinary Science and Engineering (ISE) Laboratory, whose construction was made possible in part by a 10 million dollar gift from Gore and a 5 million dollar

gift from DuPont. This new curriculum is tailored to meet the general chemistry needs of students in biology, biomedical engineering, and related majors. Mark received his Ph.D. from Emory University in the areas of organic and medicinal chemistry. He came to UD after a postdoctoral fellowship in chemical biology at Ecole Polytechnique Fédérale de Lausanne.

Jacqueline Fajardo will also teach general chemistry to science and engineering majors, working with **Jim Wingrave** and

others in our Department to transform instruction through a more traditional format. Jackie received her Ph.D. from the University of Northern Colorado in the area of chemical education, and comes to UD after several years of teaching in their general chemistry program. (Can you see elements of both building the wall and riding the surf in our general chemistry instruction?)



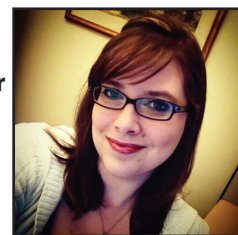
Mark Baillie



Jacqueline Fajardo

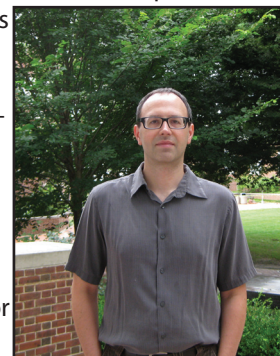
We have had the privilege of welcoming two new staff members this past year. **Brenda Carboni** manages our procard expenditures. Largely through her efforts, we are able to keep new supplies flowing into our department to meet research and instruction needs.

Carrie Bonnett assists **Assistant Chair Svilen Bobev** in our graduate recruiting effort and manages outreach activities such as the Departmental web site, Facebook page, and the issue of the **Blue Hen Chemist** you are reading right now. By the way, check out our new website if you haven't already (www.udel.edu/chem). It has a completely new look thanks to the Herculean effort of **Pat McMahon**, our IT specialist who I fondly refer to as "Mister Wizard".



Carrie Bonnett

This summer, **Geoffrey Sametz** joins us as Organic Teaching Laboratory Coordinator. Some of you may know Geoff, who has served us admirably as a part-time instructor for several years. Geoff received his Ph.D. in organic chemistry from the University of Wisconsin, Madison and has taught both general and organic chemistry at several institutions before coming to UD. The Organic Coordinator position is new for our Department and represents an influx of resources from the College and University to update and transform sophomore organic instruction. Concurrent with establishment of this position is a major renovation of organic chemistry



Geoffrey Sametz

teaching laboratories in Drake Hall, which should be completed in spring 2014.

Our faculty continues to garner accolades and awards for their work. Some highlights: **Zhihao Zhuang** was promoted to Associate Professor with tenure. **Mary Watson** was named a "2013 Rising Star" by the ACS Women Chemists Committee. **Don Watson** received a Cottrell Research Award, one of only two bestowed on the entire University of Delaware faculty over the past decade. Don also was the recipient of a prestigious NSF-CAREER award. **Joe Fox** was honored by the University of Delaware with the Outstanding Doctoral Graduate Student Advising and Mentoring Award. **Charlie Riordan** was appointed Vice Provost for Research. **Hal White** will receive the American Society for Biochemistry and Molecular Biology's 2014 Award for Exemplary Contributions to Education at the ASBMB Annual Meeting in San Diego next April. **George Luther**, who holds a joint appointment between our Department and the College of Earth, Ocean and Environment, received the 2013 Geochemistry Division Medal of the American Chemical Society. In addition to these high profile activities, our faculty continues to serve in a wide range of behind-the-scenes activities from the local to international level, addressing such issues as K-12 education and mentoring, instruction and professional development of scientists

with special needs, and developing new instructional approaches.

All of us are painfully aware of the skyrocketing cost of a college education. There are many reasons for this, and it is not my intent to give a full discourse here. However, I will tell you that our Department (and the University) takes this problem seriously. As Department Chair, I have spent many hours pouring through budgets, identifying areas where efficiency can be gained and other areas where new resources are sorely needed. Departmental funding comes from three main sources: tuition revenue, contracts and grants, and donations. Tuition, contracts and grants provide the baseline funding needed to pursue the instructional and research missions of the Department. Donations are somewhat different because of their disproportional impact. Just as a tax refund or other "unexpected" source of revenue gives us the wherewithal in our personal finances to do something new and/or significant that we couldn't do before, donations provide the extra amount that allows us to transform and enrich instruction and to support new research initiatives in ways that are otherwise impossible. Because of the crucial role that donations play in the vitality our Department, I wholeheartedly thank all of you who have supported us over the years and encourage you to support us this coming year.

In closing, I would like to return to the concept that "the only constant in a university is change". Dealing with change is easier when one is surrounded by a dedicated group of individuals. I would like to thank **John Burmeister** and **Svilen Bobev** for their guidance of our undergraduate and graduate programs, respectively. I would like to congratulate **Doug Taber** on the occasion of his retirement and thank him for his sustained effort over the years in organic chemistry instruction (particularly in the honors laboratory) and research. In the day-to-day cadence of lectures, exams and laboratories, our Departmental staff provide the "glue" that keeps everything running so well. I would like to thank everyone – faculty, staff, alumni and friends – for making this an exceptional Department!



~ Murray Johnston, Ph.D.
Dept. Chair

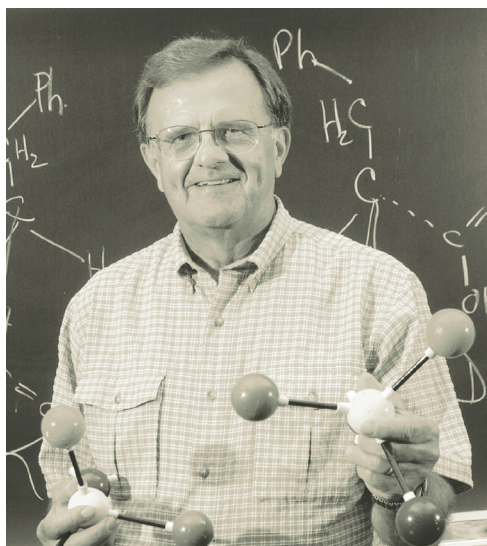
The Blue Hen Chemist

Past & Present

Older alumni will recall the first **Blue Hen Chemist**, which appeared in 1974 as a simple newsletter, written by (the late) **Prof. Betty Dyer**. **Prof. Wally McCurdy** took over the editorship for a brief period in the early 90's; I assumed the reins in 1996. **Marian MacMillan** handled the word processing until 2006, when **Linda Staib** took over. The original humble newsletter evolved into a magazine, thanks to the computer graphics talents of **Jennifer Durkin**. This year, that baton has been passed to the able hands of **Carrie Bonnett**. My sincere thanks to Linda and Carrie for processing and formatting my words, as well as those of the other contributors noted herein. Thanks, too, to **Susan Cheadle** for collecting most of the photographs which appear in BHC #40.

~ John Burmeister

From the Associate Chair *Where are they now?*



As I was casting about for a theme for my letter in **BHC #40**, **Sports Illustrated's** annual "Where Are They Now?" issue (the one with Dennis Rodman on the cover) crossed my desk. It brought back memories of two similar retrospectives that I've produced for previous **BHC** issues (Junior Class ACS Awardees, #31; "The Divine Drake Sisterhood," #34), and has stimulated a third attempt on my part.

The **Elizabeth Dyer** (FAC 33-71) **Excellence in Chemistry and Biochemistry Undergraduate Award** was initiated in 1989, utilizing strong initial financial support from two faithful friends of our Department – **Jack and (the late) Peg Weikart**. Subsequent donations from many students, alumni, faculty, staff and friends propelled it to its present endowed status. It honors one of the true pioneers in our Department, Prof. Elizabeth Dyer, who bridged the eras between the separate but (un)equal Chemistry Departments in the University of Delaware's Men's and Women's Colleges and the yoked Department created

in 1944. It is intended to recognize the very best baccalaureate graduates that we produce each year, as measured by their academic and scholarly achievements, as well as their service to the Department.

What follows is the result of extensive detective work on my part, utilizing my own records, our alumni database and, of course, Google. As you will see, there are gaps and inaccuracies in the record. The former is largely due to name changes resulting from marriage, while the latter reflects the simple fact that not all of our alumni keep us abreast of their current status.

Not surprisingly, the majority (60%) of the 42 Awardees opted to pursue doctorates in graduate school. Sixteen per cent went to medical school, with the remaining 24% divided between immediate employment and masters degrees. Of the 16 graduates who we know, with certainty, have received their Ph.D. degrees, 56% are employed in industry, 38% entered the professoriate, and one is pursuing an M.D.

1989

Kristi L. Kiick; M.S., University of Georgia; Ph.D., University of Massachusetts, Amherst; Professor of Materials Science & Engineering and Biomedical Engineering, Deputy Dean of the College of Engineering, University of Delaware

1990

Richard H. Carter, Jr.; Ph.D., University of Chicago; Senior Scientist, Siemens Healthcare Diagnostics

1991

Holly C. Gaede; Ph.D., University of California, Berkeley; Senior Lecturer, Texas A&M University

1992

Michael J. Bower; Ph.D., University of California, San Francisco; Associate Director of Computational Chemistry, Incyte Genomics

1993

Karl B. Hansen; Ph.D., Harvard University; Scientific Director for Chemical Process R&D, Amgen, Inc. (Karl will be the featured speaker at our 19th CHEM/BIOC Graduation Convocation on 5/31/14.)

1994

Megan (McDermott) Wagaman; Librarian, Delaware Technical and Community College



Prof. Kristi Kiick (BS/Chem/89)

1995

Raymond C. Trievel; Ph.D., University of Pennsylvania; Associate Professor, University of Michigan Medical School

1996

Roger F. Clark; M.B.A., University of Delaware; Chief Operating Officer, IdealCast

At this point, the income from the Dyer Undergraduate Award Endowment became sufficient to underwrite two annual Dyer Awards – one to a BIOC major and one to a CHEM major.

1997

BIOC: Lori A. (Hamby) Erby; Genetics Counselor, Bloomberg School of Public Health, Johns Hopkins University

CHEM: Keith R. Hornberger; Ph.D., Columbia University; Principal Scientist, Boehringer Ingelheim

1998

BIOC: Joseph A. Lesley, went to Columbia University to pursue a degree in Microbiology; current whereabouts unknown

CHEM: B. Jill (Trafton) Venton; Ph.D., University of North Carolina, Chapel Hill; Associate Professor, University of Virginia

1999

BIOC: Stacey (Sheasley) O'Neill; M.D., Ph.D., University of Virginia; Medical Director, Gentris

CHEM: Jennifer L. Paulson; PhD, University of California, San Francisco; current whereabouts unknown

2000

BIOC: Daniel R. Dries; Ph.D., University of California, San Diego; Assistant Professor, Juniata College

CHEM: James B. Witkoskie; Ph.D., Massachusetts Institute of Technology; Load Signal Processing Engineer at MITRE

2001

BIOC: Jacob R. LaPorte; Ph.D., Harvard University; Engagement Manager, McKinsey & Co

CHEM: Kathryn E. O'Reilly; M.D., Ph.D., Cornell/Rockefeller/Sloan-Kettering Joint Program; Dermatologist, Lewes, DE

2002

BIOC: Catherine M. Visintainer; M.D., Eastern Virginia Medical School; Emergency Medicine, Portsmouth, VA

CHEM: Valerie (Dzubeck) Bradford; Ph.D., University of Texas, Austin; Principal Scientist, Global Grooming R&D, Gillette Division of Procter & Gamble

2003

BIOC: Christopher J. Eller; M.D., University of Virginia School of Medicine; Eye Physician, Harrisonburg, VA

CHEM: Michael R. DeMartino; Ph.D., Scripps Research Institute; Principal Scientist, GlaxoSmithKline

2004

BIOC: Stephen G. Brohawn; Ph.D., Massachusetts Institute of Technology; Post-doctoral Associate, Rockefeller University

CHEM: Susan A. Ricketts; Research Chemist, Pfizer, Inc.

2005

BIOC: Amanda L. (Peters) Kauffman; went to Princeton University to pursue a degree in Molecular Biology; now living in Morrisville, PA

CHEM: Heather S. Egolf-Fox; M.S., University of North Carolina, Chapel Hill; Chemistry Teacher, Norristown (PA) High School

2006

BIOC: James J. Parris; Ph.D., University of Newcastle-upon-Tyne (England); M.D. candidate, University of Pittsburgh Medical School

CHEM: Charlotte A. (Mason) Whited; went to California Institute of Technology to pursue a degree in Bioinorganic Chemistry; now living in Northfield, MN

2007

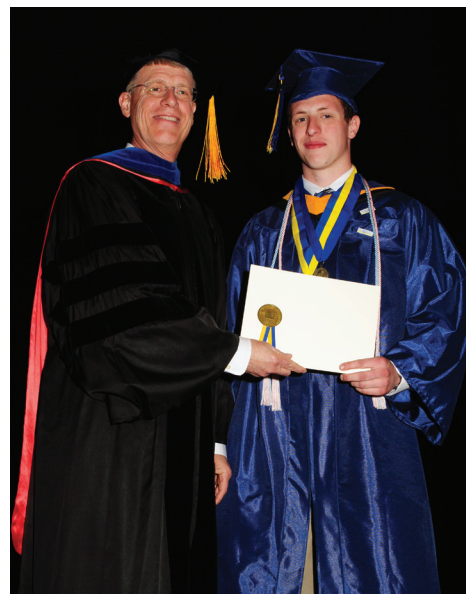
BIOC: Tapan P. Patel; Ph.D. candidate in Computational Neuroscience, University of Pennsylvania

CHEM: Katherine M. Fryinger; Chemistry Teacher, Seaford (DE) High School; now in Newtown Square, PA

2008

BIOC: Patrick J. Knerr; Ph.D., University of Illinois, Urbana-Champaign; Research Investigator, DuPont Crop Protection

CHEM: Alyssa R. Nawrocki; Associate, W.L. Gore



Chair Murray Johnston & Matthew White (BS/CHEM/13)

2009

BIOC: **Stephanie L. Myrick**; M.D., Thomas Jefferson University; Resident Physician, Duke University Medical Center

CHEM: **Michael T. Pirnot**; Ph.D. Candidate, Princeton University

2010

BIOC: **Kyle F. Davis**; Ph.D. Candidate, University of Virginia (NSF Graduate Research Fellowship)

CHEM: **Heather A. Hartman**; M.D. Candidate, Thomas Jefferson University

2011

BIOC: **Donald A. Allen**; M.D. Candidate, University of Connecticut

CHEM: **Valerie W. Shurtleff**, Ph.D. Candidate, Princeton University

2012

BIOC: **Timothy E. Gilpatrick**; Research Fellow, NIH

CHEM: **Derek T. Ahneman**; Ph.D. Candidate, Princeton University

2013

BIOC: **Matthew C. White**; Ph.D. Candidate, University of California, Berkeley; (NSF Graduate Research Fellowship)

CHEM: **Justin Teesdale**; Ph.D. Candidate, University of Chicago

Heartiest congratulations and best wishes to all! Please contact me to correct any inaccuracies and/or to update your status.

Cordially,

Alumni Distinguished Professor & Associate Chair



Chair Murray Johnston & Justin Teesdale (BS/CHEM/13)

From the Archives:

Dr. Munson's New Millennium Rooftop Tour of Brown Laboratory



Dr. Munson provides the culminating event of the 2000 new student orientation for Chemistry and Biochemistry students, a rooftop tour of the Chemistry and Biochemistry Department buildings a la Mary Poppins. This year, after a harrowing and unsuccessful attempt to commandeer the Lamot DuPont Laboratory elevator to the roof and lacking technical support for a full scale assault up the pillars on the mall, a slip past security agents through a mechanical room gained access to the summit. The 360 degree view of the campus was spectacular with access via ladders and scrambling to the roof of Drake Laboratory.

~ Hal White

Dr. Munson surveys the summit of Brown Laboratory and contemplates access to the roof of Drake Hall. John Heiss (Jr. Biochem) wonders why this part of the building never gets painted.

From the Director of Graduate Studies:

Welcome to the Director of Graduate Studies rubric of BHC#40!

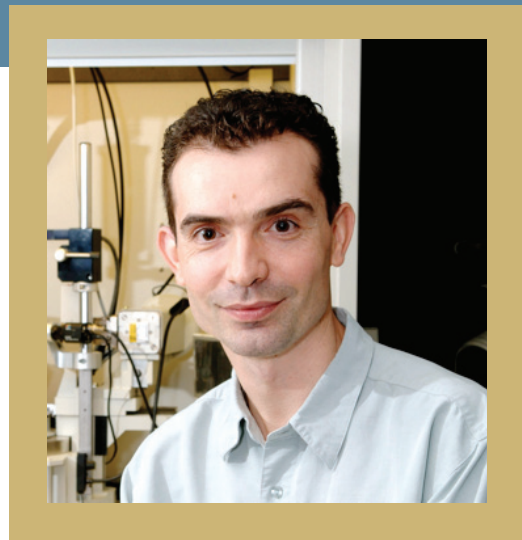
The graduate program in our Department had yet another strong year—we awarded 29 Masters and Doctoral degrees. In addition, we also had a tremendous year in terms of awards and recognitions gathered by our students. They are too many to keep track of, and I hope I did not miss any.

I would like to begin with a Ph.D. student, who worked under my supervision and who won the **Theodore Wolf Prize** for best Ph.D. dissertation in Physical and Life Sciences at the University of Delaware. This singular award, which was bestowed upon **Mrs. Hua 'Nancy' He**, has a cash value of \$1000 and was presented to Nancy at the doctoral hooding ceremony on May 24, 2013. The award is named in honor of **Dr. Theodore R. Wolf**, Professor of Chemistry from 1871 to 1901 and the first UD faculty member to earn a Ph.D.

Nancy also received another important recognition—the **Bill N. Baron Fellowship Award** for exceptional research in the renewable energy field. The \$2000 award (one of only

two University-wide) honors Dr. Baron, who was a respected member of the photovoltaic community and served the University of Delaware from 1975 to 1992 as a scientist, manager and deputy director of the Institute for Energy Conversion. Well done Nancy! Following her very successful graduate career at the University of Delaware with 11 publications, 10 of which had her as a lead-author, and numerous awards—prior recipient of a University Graduate Fellowship, Trofimenko Memorial Prize, Glenn S. Skinner Award, and Brennie E. Hackley, Jr. Award for Excellence in Research—Nancy moved to the Brookhaven National Laboratory/Stony Brook University as a post-doctoral fellow.

I would note two other high University honors for members of the Departmental graduate student body. First, an incoming graduate student, **Mr. Jason Cargill**, was awarded the highly competitive **University Scholars Fellowship** for his first year of studies. Second, **Mr. Shuching Ou**, who is a 4th year graduate student in the laboratory of **Prof. Sandeep Patel** was awarded a **University Graduate Fellowship**. The fellowship will fund, in part, his studies in the upcoming academic year.

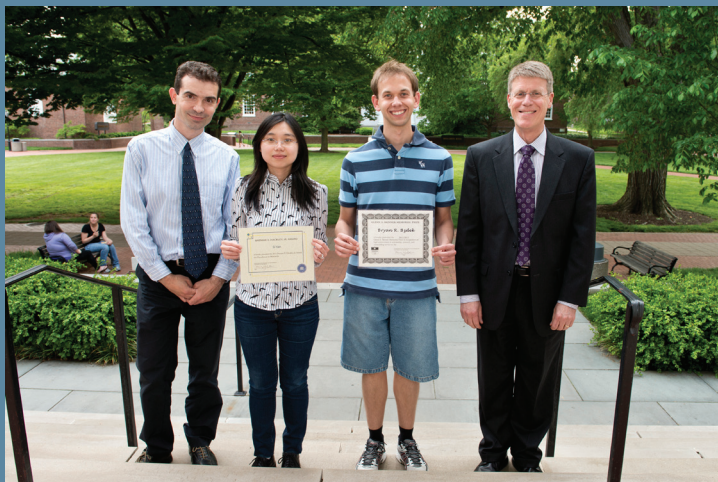


At the Departmental level, it is my distinct pleasure to announce the winner of the **47th Glenn S. Skinner Award, Mr. Bryan Bzdek**. The most coveted honor for graduate students in our Department has a cash value of \$2500 and is presented every year to the “best” student in the Department, who is deemed by a committee of faculty from each Division to have contributed the most in all three areas—scholarship, teaching, and service. The award is named in honor of **Prof. Glenn S. Skinner**, an active faculty member in the Chemistry Department from 1928 to 1958.

Mr. Bzdek received his undergraduate degree (honors) in Chemistry from Bucknell University in 2008 and began his pursuit of a Ph.D. in the research group of **Prof. Murray Johnston** in the fall of 2008. He is involved in studies of amine-ammonia exchange in



Dr. Hua (Nancy) He (PhD/Chem/13)



Prof. Svilen Bobev, Director of Graduate Studies; Ms. Si Yan, Hackley Awardee; Mr. Bryan Bzdek, Skinner Awardee; Chair Murray Johnston

molecular clusters relevant to new particle formation in the atmosphere. His research has been supported by a fellowship from the UD Center for Critical Zone Research and by a STAR graduate fellowship from the US EPA.

Ms. Si Yan, a 5th year graduate student mentored by **Prof. Tatyana Polenova**, was awarded the **2013 Brennie E. Hackley, Jr. Award for Excellence in Research**. She is the fifth winner of this high Departmental honor. The award commemorates the career of Dr. Hackley, who, in 1957, became UD's first African American doctoral graduate in chemistry. His 57-year career at the U.S. Army Medical Research Institute for Chemical Defense in the Edgewood Laboratories at the Aberdeen (Md.) Proving Ground culminated in his becoming chief scientist there and earned him the federal government's Exceptional Civilian Service Medal. Mrs. Yan received her bachelor's degree from the University of Science and Technology of China. Her graduate work at the University of Delaware has been extremely productive with numerous publications in prestigious journals and accolades. Both Bryan and Si received their awards at the 2013 Organic Colloquium given by **Prof. Douglass Taber** on May 10, 2013.

The competition for the 31st annual **Elizabeth Dyer Excellence-in-Teaching Award** was incredibly tough. At the end, the committee decided on a four-way

tie—**Sara Martin, Andy Horan, Julia Eichhorn**, and **Jenna Yehl** were the winners this year. The Dyer Award honors the memory of the late **Prof. Elizabeth Dyer**, a member of the chemistry and biochemistry faculty from 1933-1971. The award has been given since 1981, and recognizes graduate students who have been exemplary teaching assistants during the past academic year. The awards, which constitute a certificate and a cash prize were presented to the winners at the Mary Elizabeth Kramer Colloquium on Chemical Education on November 12, 2012, presented by **Mr. Dana Chatellier** and **Prof Meredith Wesolowski**.

A few words about each awardee:

- **Julia Eichhorn** received her bachelor's degree from the University of Scranton and recently finished her M.A. work with **Prof. Murray Johnston**. Julia served as a TA in CHEM-115H, Honors Introduction to Chemical Science and CHEM-101, General Chemistry, during the fall of 2011 and CHEM-102, General Chemistry, during the spring of 2012.
- **Andrew Horan** received his bachelor's degree from the University of Pittsburgh and is currently pursuing a Ph.D., also with **Prof. Murray Johnston**. Andrew served as a TA in CHEM-103H, Honors General Chemistry, during the fall of 2011.

- **Sara Martin** received her bachelor's degree from Lebanon Valley College and is currently pursuing a Ph.D. with **Prof. Donald Watson**. Sara served as a TA in CHEM-641, Biochemistry, during the fall of 2011.
- **Jenna Yehl** received her bachelor's degree from Ithaca College and her master's degree from Bucknell University. She is currently pursuing a Ph.D. with **Prof. Tatyana Polenova**. Jenna served as a TA in CHEM-101, General Chemistry, during the fall of 2011.

Another student who needs to be congratulated this year is **Mr. Eric Sirianni**, who is the recipient of the 6th annual **Trofimenko Memorial Prize**. Eric is a graduate student in the laboratory of **Prof. Klaus Theopold**. The prize recognizes Eric's creative synthetic inorganic work. The award was established in 2007 in honor of **Dr. Swiatoslav 'Jerry' Trofimenko**, a renowned chemist from DuPont, who is also known for the creation of the polypyrazolyl ("scorpionate") family of ligands. Following his retirement from industry, Dr. Trofimenko spent the final decade of his productive research career as a visiting scholar in the group of **Prof. Klaus Theopold**. Eric received the \$500 check and the certificate at the Inorganic Seminar on February 13, given by **Prof. Christopher (Kit) Cummins** (MIT).



Dyer Excellence-in-Teaching Awardees: Ms. Julia Eichhorn, Mr. Andrew Horan, Ms. Jenna Yehl, Ms. Sara Martin



Prof. Christopher (Kit) Cummins (MIT), Trofimenko Awardee Mr. Eric Sirianni, Associate Chair John Burmeister, Director of Graduate Studies Svilen Bobev

From the Director of Graduate Studies: cont...

The 40th edition of the **Joel L. Silver Award Symposium** took place on May 15, 2013. The namesake of the Silver Award, the late Joel L. Silver was a doctoral student in the laboratory of **Prof. John Burmeister**, who was tragically killed in a car accident in 1971, just a few months before earning his Ph.D. A fixture in the Department of Chemistry and Biochemistry since 1973, the Award Symposium commemorates Dr. Silver, and honors the hard work of all involved in graduate education in Chemistry and Biochemistry.

Twelve students participated in the event and gave short research talks based on their graduate work. The presentations were evaluated by an external jury composed of academic and industry representatives of each major research area. Analytical: **Dr. William A. Welsh**, Global Vice-President, R&D and Technical Service, W. R. Grace & Co (retired) who is an alumnus of the Department (PhD74) and also the recipient of the 1st Silver Prize; biochemistry: **Dr. Andrew D. Napper**, Alfred I. DuPont Hospital for Children; inorganic: **Dr. Benny Chan**, The College of New Jersey; organic: **Dr. Lee Silverberg**, Penn State University, Schuylkill (also an alumnus of the Department(PhD91)); physical: **Dr. Ismail Kul**, Widener University.

We extend our sincere appreciation to

the jurors, which had a very difficult task of selecting the winners— **Bryan Bzdek (Prof. Johnston)** won the 1st place award for his presentation titled “Determining the Mechanism of Atmospheric New Particle Formation by Mass Spectrometry”; **Yue Liu (Prof. Teplyakov)** won the 2nd place award for her presentation titled “Chemical Passivation Process for Biofunctionalization Scheme on Semiconductor Surfaces”; and **Allen Pistner (Prof. Rosenthal)** won the 3rd place award for his presentation titled “Novel Porphyrinoids Displaying a Tunable Multielectron Chemistry for Light Harvesting Applications”. The other nine presenters, who also gave very interesting and informative talks, were: **Ramajeyam Selvaraj (Prof. Fox)**, **Si Yan (Prof. Polenova)**, **Laurel Kegel (Prof. Booksh)**, **Eric Sirianni (Prof. Theopold)**, **Sha Bai (Prof. Taber)**, **Jia Gao (Prof. Teplyakov)**, **Han Zhang (Prof. Fox)**, **William Green (Prof. Riordan)** and **Devon Boyne (Prof. Booksh)**.

Lastly, I would like to acknowledge the hard work and dedication of the members of the Teaching Assistantship and Fellowship (TAF) committee—**Prof. Sharon Rozovsky**, **Prof. Lars Gundlach**, **Prof. Karl Booksh**, and **Prof. Neal Zondlo**—who dedicated much time and energy selecting the incoming class of graduate students. Along the way, we were assisted by our new graduate coordinator **Ms. Carrie Bonnett**. She came

in almost in the middle of the recruiting season, but quickly stepped up to the challenge. Because of her hard work, aided by the energy of the participating faculty and current graduate students, we had a very successful graduate recruiting weekend.

I am looking forward to another spectacular year with our graduate students and to sharing their amazing accomplishments with you in BHC#41!

With best regards,



Svilen Bobev

Associate Professor of Chemistry
Director of Graduate Studies and Assistant Chair

Front row: Silver Symposium Awardees Mr Bryan Bzdek, Ms. Yue Liu, and Mr. Allen Pistner

Back row: Silver Symposium Judges Prof. Ismail Kul, Prof. Benny Chan, Dr. William Welsh, Prof. Lee Silverberg, Dr. Andrew Napper



PROFESSOR DOUG TABER RETIRES

This year marks the retirement of **Professor Douglass F. Taber** from the Department.

Doug joined our Department in 1982, after seven years on the faculty of the Vanderbilt University School of Medicine. His research has focused on the development of new organic reactivity, and the stereocontrolled total synthesis of complex polycarbocyclic natural products. His group was the first to report substituent-induced diastereocontrol in the intramolecular Diels-Alder reaction, an observation that since that time has become part of the vocabulary of organic synthesis. His group used this strategy to prepare torreyol, fichtelite, α -eudesmol, and trans-dihydroconfertifolin.

More recently, his group has concentrated on devising computational approaches that enable the manipulation, at the organometallic center, of the factors that govern selectivity in several metal-mediated C-C ring-forming processes. In 1982, his group reported selective cyclopentane construction by Rh-mediated C-H insertion. This transformation has also become part of the vocabulary of synthetic organic chemistry, laying the intellectual foundation for much of the recent exciting work on C-H functionalization. In his group, this cyclization opened the way to syntheses of pentalenolactone, the Dendrobatid alkaloid 251F, (-)-sulcatine G, (-)-hamigeran B, and cameroonanol.

Doug extended his work on intramolecular C-H insertion by developing convenient protocols for the generation and cyclization of alkylidene carbenes. In the simplest manifestation of this transformation, halogenation of an alkene followed by exposure of the dihalide to excess base led to efficient cyclization. His group used this cyclization in syntheses of fumagillin, isonitrin B, (-)-morphine and (+)-majusculone.

Doug also pioneered the low-pressure modification (100 atmospheres of H₂ overpressure) of the Noyori Ru-mediated enantioselective hydrogenation of β -keto esters. His low-pressure modified procedure and its descendants are now widely used all over the world. In his group, this transformation enabled syntheses of brefeldin A, haliclonadamine and astrogorgiadiol.

Doug found that the inexpensive Fe(CO)₅ could be used to cyclocarbonylate even very congested alkenyl cyclopropanes, to give the product cyclohexenones with high regioselectivity. He has now linked this transformation to the predictably diastereoselective intramolecular dipolar cycloaddition of the transient diazo alkanes derived from ω -dienyl ketones, which he uncovered, creating a powerful method for the stereocontrolled construction of complex polycarbocycles. His group has



used this method to prepare (-)-delobanone and (+)-coronafacic acid.

Doug showed that reductive cyclization of dienes can be effected with the inexpensive zirconocene dichloride. The intermediate zirconacycles so produced stoichiometrically are then readily equilibrated, and the relative stability of the diastereomeric zirconacycles can be predicted computationally. They can then be oxygenated, or carbonylated. This intramolecular diene cyclozirconation was the key transformation in total syntheses of 3,16-androstenedione and of (-)-calicoferol B.

Over his 40-year career, Doug has published 212 research papers. Over just the past three years, 151 of those papers were cited by other research groups, 112 more than once. His accomplishments were recognized recently by the prestigious Allan R. Day Award from the Philadelphia Organic Chemists Club.

In further service to the chemistry community, Doug has, for the past ten years, authored a free weekly web column on "Organic Synthesis Highlights", that now records more than 300,000 pageviews/year. These columns have been published in biennial volumes, with cumulative indices. The fifth volume, *Organic Synthesis: State of the Art 2011-2013*, will be out early next year.

Doug's service to the American Chemical Society has been extensive. From 1989-2010, he served on the Wallace Carothers Awards Committee of the local (Wilmington) section. In that role, he was active in soliciting and documenting nominations, and in the extensive evaluation process leading to the annual award.

Doug served as one of the seven-member committee that drafted the Local Section Plan in 1997 and 1998. He then assisted the committee Chair, H.N. Cheng, through a series of updates through January of 2001.

Since 2002, Doug has organized the annual local ACS section poster meeting. Undergraduate, graduate, postdoc and industrial posters are welcomed. This meeting, held in late April, is particularly valuable as a venue for students from our several local colleges and universities to meet each other and to share research results.

Doug's service to the American Chemical Society has extended beyond the local section. He has served for more than thirty years as a reviewer for American Chemical Society

publications, and has served on national ACS award committees. Since 2008, he has regularly taught two short courses for the ACS, *Recent Developments in Organic Synthesis*, and *Organic Spectroscopy*.

Doug has been an outstanding teacher in our Department. He has also put significant intellectual effort into the educational process. Both our undergraduate and graduate organic curricula are based on his design. He has regularly created new experiments for our undergraduate labs, and published them in the *Journal of Chemical Education* for all to use.

We will miss Doug, and wish him well in his retirement.



Prof. Cecil Dybowski, (the late) Ms. Mary Beth Kramer, and Associate Chair John Burmeister at the J. Willard Gibbs Birthday Party, 02/11/2012



Remembering Mary Beth Kramer

It is with a heavy, heavy heart that I regret to inform you that **Mary Beth Kramer** died of a sudden heart attack at her home in West Chester during the early morning hours of 10/14/12. Her death came with little or no warning. Indeed, she had enjoyed - thoroughly - Villanova's (her 1973 alma mater) upset win over ODU in football the previous afternoon. She left behind her husband Geoff, three grown children (Kirsten, Jennifer and Kurt) and ca. 800 CHEM-103 and 104 students.

Faced with an unprecedented emergency, the Department's faculty closed ranks quickly. **Prof. Jim Wingrave** assumed Mary Beth's two CHEM-103 lecturing responsibilities, giving him a gargantuan load of 1200 students for the remainder of the term. **Prof. Klaus Theopold** took over her ca. 200-person CHEM-104 lecture. **Mr. Dana Chatellier**, in turn, replaced Jim Wingrave as the CHEM-102 lecturer, and life went on.

However, filling the huge personal void created by her abrupt departure proved to be an impossible task. Her students were devastated by her loss. Those of you who knew Mary Beth will, I'm sure, agree with my assessment of her as being one of the most upbeat persons I've ever known. She never seemed to be discouraged, and was never daunted by any problem that she faced. In her mind, "things will always work out" and, thanks to her untiring efforts, they usually did.

Jim Wingrave, who co-taught CHEM-103/104 with Mary Beth for the past 13 years, commented "She always seemed to have more energy than any two people did. She was possibly the best multitasker I have ever known." In the words of **Chair Murray Johnston**, "This wasn't just a job to

her, it was a passion. In many respects, it was her life. She really cared about her students."

Born in Darby, PA on January 27, 1952, Mary Beth received her M.S. degree from the University of Delaware in 1976, working in my research laboratory [**Syn. React. Inorg. Metal-org. Chem.**, 7, 69-79 (1977)]. After working for a decade in industry with the MetPro Corp. in West Chester, she joined our faculty as an Instructor in 1986. She had been an integral part of our CHEM-103/104 instructional program ever since, having taught over 25,000 students during the past 26 years, first with (the late) **Prof. Carl von Frankenberg** (1986-1997), then with **Prof. George Reilly** (1997-2000), before joining forces with Jim Wingrave.

A well-attended celebration of her life and impact on the University community was held in BRL 101 on October 24, 2012. Subsequently, the Mary Elizabeth Kramer Memorial Lectureship in Chemistry Education was established, through the generous support of her family, colleagues, friends, and students (**vide infra**).

Mary Beth's and Geoff's passion for hiking (especially in the Rockies, ESPECIALLY in the Grand Tetons!) rekindled my own love affair with hiking trails. She presented me with a Grand Teton calendar every year. The current incarnation occupies a place of honor on my office wall. While we were at odds and evens, as far as college football was concerned, for obvious reasons, we shared the agony and the ecstasy of being lifelong Phillies fans. In many ways, she was more daughter than colleague. To say that she is missed is a classic understatement.

Michele Hackley Johnson Receives College of Arts & Sciences Alumni Achievement Award

Our cup runneth over! For the second year in a row, one of your Editor's former students has received the subject Award for her excellence, dedication and support. **Dr. Michele Hackley Johnson**, along with three other outstanding A&S alumni, was recognized at the College's annual year-end ceremony on 5/15/13 in the Center for the Performing Arts.

Michele received her B.A. in Chemistry from the University of Delaware in 1975 and her M.D. from the Temple University School of Medicine in 1979.

She began her medical career in 1985, and has since held posts at Temple University, The Medical College of Virginia and the Yale University School of Medicine, where she currently serves as Director of Interventional Neuroradiology and Associate Professor of Diagnostic Radiology, Surgical Otolaryngology and Neurosurgery.

Her ties to the U of D have remained strong. Michele and her mother, Ethel, endowed the **Brennie E. Hackley, Jr.** Award for Excellence in Graduate Research in our Department. Created in honor and in memory of Michele's father, UD's first African American doctoral graduate in chemistry (PhD57), this award is given annually to a highly accomplished and talented graduate student in CHEM/BIOC.

Earlier, she returned to campus on 5/29/10 as the featured speaker at our 15th CHEM/BIOC Graduation Convocation.



College of Arts and Sciences
Outstanding Alumni Awardee
Dr. Michele Hackley Johnson
(in blue) with (l. to r.) son Miles,
brother Brennie (IIIrd), daughter
Erin, Prof. John Burmeister,
mother Ethel, brother Michael,
son Brandon

Additional Faculty/Staff Activities

Henry N. Blount III, Ph.D. (FAC 70-84) has retired from his position as Director of NSF's EPSCOR Program. Henry served as our Department's first Director of Graduate Studies in 1983-84.

Allen A. (Alchemist) Denio, Ph.D. (FAC 78-79, 98-99), chemistry's answer to Dave Barry, burnished his reputation for wry humor by penning "Older Than Dirt" in the 4/5/11 issue of the **American Chemical Society Newsletter**. Al writes a monthly column for the **Del-Chem Bulletin**, and also authored a column in the June, 2013 **ACS Newsletter for Senior Chemists**. Recently, he unearthed a fascinating historical footnote: **Dr. Wallace Carothers**, leader of the DuPont team that discovered nylon, married **Helen Sweetman** (BS/CHEM/33), now deceased. alvaldenio@verizon.net

Lila M. Gierasch, Ph.D. (FAC 79-87), Distinguished Professor of Biochemistry at UMass-Amherst, has been selected to receive the American Society for Biochemistry and Molecular Biology's 2014 **Mildred Cohn Award** in Biological Chemistry. She and **Prof. Hal White** will present their Award addresses at the ASBMB's Annual Meeting in San Diego next April.

Prof. Catherine Grimes and her husband, **Dan**, are the proud parents of **Henry Daniel**, born on 9/21/12. Henry weighed in at 7 lbs., 12 oz.



Henry Daniel Grimes

Bruce N. Hietbrink, Ph.D. will serve as a part-time CHEM-321/322 lecturer in 2013-14, replacing **Dr. Geoffrey Sametz**, who will assume the full-time position of Organic Teaching Laboratory Coordinator. Bruce received his Ph.D. in Organic Chemistry from UCLA, working in the laboratory of **Prof. Kendall Houk**. He has taught at several colleges and universities, most recently (2009-2013) at the Richard Stockton College of New Jersey.

Marvin L. Illingsworth, Ph.D. (FAC 81-82), Professor of Chemistry at the Rochester Institute of Technology, succumbed to cancer on 9/22/11. Marv worked in your Editor's laboratory during his year-long stint in our Department as a Teaching Post-doc. Thus, he was the first of four of my former students to die within 22 months (vide infra). When it rains, it pours! Marv received his B.S. in Chemistry from Lafayette College and his doctorate from UMass-Amherst. He joined RIT's faculty as an assistant professor in 1986, following four years as a CNTT faculty member at Hartwick College. He was promoted to full professor in 1994.

Prof. Murray V. Johnston III was interviewed by the **Chemical Heritage Foundation** for its **Sensing Change** exhibit. To see the four ensuing videos on how art describes the world around us, the reasons why his lab's instrumentation can easily fit through a doorway, why numbers and data sets aren't always the best way to tell a story, and why conversation is necessary to climate change science, visit:

<http://sensingchange.chemheritage.org/sensing-change/science/murray-v-johnston-iii>

J. Victoria (Orner) Johnston has moved to Simmons College's Office of Admissions, in Boston, where she will oversee international recruitment and alumnae volunteer efforts. Victoria served, with distinction, as the first Director of our NUCLEUS Program.

Prof. Charlie Riordan, the U of D's Vice-Provost for Research, represented the University on the State of Delaware's trade mission to Israel, 7/7 -11/13. The delegation met with Israel's Chief Scientist and with research administrators at the Ben-Gurion National Solar Energy Center. In addition, Charlie also met with chemistry colleagues at Hebrew University, Technion University, Tel Aviv University, and the Weizmann Institute of Science.

Recent work by **Prof. Joel Rosenthal** and his graduate student **John L. DiMeglio** on the study of bismuth-based catalysts for CO₂ reduction was highlighted in "The Hidden Value of Carbon Dioxide" in **C&E News**, 7/1/13, pp.21-22.

Prof. Sharon Rozovsky and her husband, **Martin Forstner**, greeted the birth of their second son, **Ilan Adi** on 5/23/13. Ilan means "tree" in Hebrew.



Ilan Adi Rozovsky-Forstner

Mel D. Schiavelli, Ph.D. (PROVOST 94-01) is now the Executive Vice-President of Northern Virginia Community College. NOVA is the largest institution of higher education in the Commonwealth of Virginia. With more than 70,000 students at its six campuses in Alexandria, Annandale, Loudoun, Manassas, Springfield, and Woodbridge, it is one of America's largest community colleges. mschiavelli@nvcc.edu

Donald L. Sparks, Ph.D., S. Hallock DuPont Chair in Soil and Environmental Chemistry, has been appointed to a 3-year term as Chair of the U.S. National Committee for Soil Science.



Mara Catherine Wesolowski

Laird G. L. Ward, Ph.D. died, at age 80, of bone cancer in Windermere, FL, on 12/19/11. Laird taught, on a part-time basis, for us for several years. His most notable assignment was **Prof. Conrad Trumbore's** (FAC 60-97) successor as instructor for CHEM-100 Chemistry and the Human Environment, following Conrad's retirement. [**C&E News**, 5/6/13, p. 48]



Adeline Margaret & Molly Reed Watson

Profs. Mary and Don Watson were blessed with the births of twin girls, **Adeline Margaret** and **Molly Reed**, on 3/2/13.

Prof. Meredith Wesolowski was one of the featured speakers at the ACS Delaware Section's annual Education Awards Banquet on 9/27/12. She and her husband, **Steve**, welcomed the arrival of their first child, **Mara Catherine** (all 8 lbs. 10 oz. of her) on 5/10/13.

Robert H. Wood, Ph.D. (FAC57-02) will have a symposium held in honor of his seminal contributions to the field at this year's Calorimetry Conference (CALCON 2013) in Atlantic City. One of Bob's former students, **Gregory Zimmerman** (PhD93), Professor of Chemistry at Bloomsburg University, will give the plenary lecture.

2012-2013 Named Lectures, Colloquia, & Symposia

Our annual slate of visiting seminar and colloquium speakers is now highlighted by three named lectureships:

The inaugural **Mary Elizabeth Kramer** (FAC 86-12) Memorial Lecture was presented on 11/12/12. Fittingly, it involved two of our colleagues, **Mr. Dana Chatellier** (MS84) and **Prof. Meredith Wesolowski**, who described their experiences with on-line teaching: "Teaching Chemistry On-line: Changing Paradigms."

The tenth annual **Richard F. Heck** (FAC 71-89) Lecture was presented on 4/3/13 by **Prof Gregory Fu**, Altair Professor of Chemistry at Cal Tech. Prof. Fu, who received a plaque honoring Prof. Heck's 2010 Nobel Prize in Chemistry, described "Metal-Catalyzed Cross Coupling Reactions of Alkyl Electrophiles."

The continuing generous support of the Heck Lectureship by Amgen, Inc. is gratefully acknowledged, as are the efforts of **Karl B. Hansen, Ph.D.** (BS93), Amgen's Scientific Director for Chemical Process R&D, who again made this possible.

The seventh annual **John C. Wriston, Jr.** (FAC 55-85) Memorial Lecture was not presented this year.

The remaining colloquium speakers, their affiliations, and their topics were as follows:

Date	Speaker/Affiliation	Topic
8/31/12	Prof. Zhihao Zhuang University of Delaware	"Chemical Biology of Translesion Synthesis & Reversible Ubiquitylation"
3/8/13	Prof. Colin Thorpe University of Delaware	"'New' Enzymes and 'Old' Biomaterials from the Home of the Blue Hen"
4/1/13	Prof. Jeffrey Reimer University of California, Berkeley	"NMR: From Analytical Chemistry to Nuclear Spintronics"
4/17/13	Prof. Joseph Hupp Northwestern University	"Metal-Organic Framework Materials for Energy Applications"
4/19/13	Prof. Amir Hoveyda Boston College (Inaugural Student-Invited Organic Colloquium)	"Sustainable Catalysts Fueled by a Proton: Simple Organic Molecules as Catalysts for Enantioselective Synthesis of Amines and Alcohols"
5/10/13	Prof. Douglass Taber University of Delaware	"Computational Organometallic Chemistry: Synthesis of (-)- Morphine"

The 34th East Coast Ion Chemistry Conference was canceled, due to Hurricane Sandy. In contrast, good weather greeted the attendees at the Delaware Membrane Protein Symposium on 4/29/13. Organized by **Prof. Edward Lyman** and **Sharon Rozovsky**, the meeting, which attracted ca. 200 participants, was supported by the NIH-COBRE Program on Membrane Protein Production and Characterization.

Visiting Faculty, 2012-2013

Mr. Huy (Mike) Dao (MS11), CHEM-103 General Chemistry

Dr. Geoffrey Sametz CHEM-321/322 Organic Chemistry, CHEM-104 General Chemistry

Dr. Karen L. Hooper (PhD99), CHEM-106 Elementary Bioorganic Chemistry, CHEM-214/216 Elementary Biochemistry

Dr. Paul Silver (PhD73), CHEM-101 General Chemistry

Dr. Albert Matlack (Hercules Research Center – retired), CHEM-680 Introductory Polymer Science, CHEM-681 Green Chemistry

Dr. Michael Stemniski (McKean High School-retired), CHEM-102 General Chemistry, CHEM-103/104 General Chemistry, CHEM-213 Elementary Organic Chemistry

Postdoctoral Researchers & Fellows 2012-2013

Vidyadhar Daithankar (University of Delaware) [Rozovsky]

Ampofo Darko (University of Florida) [Fox]

Lushanti De Zoysa Ariyananda (University of Delaware) [Grimes]

Jiasheng Diao (Chinese Academy of Sciences, China) [Zhuang]

Peter Eldridge (University of Southampton, England) [Gundlach]

Rupal Gupta (Carnegie Mellon University) [Polenova]

Guorui Li (Wuhan University, China) [Zhuang]

Yu Liu (University of Maryland, College Park) [Fox/Grimes]

Prantik Maity (University of Regensburg, Germany) [M. Watson]

Julien Makongo Mangan (Technical University of Dresden, Germany) [Bobev]

Jonnathan Medina Ramos (Virginia Commonwealth University) [Rosenthal]

Mark Mero (University of New Mexico) [Gundlach]

Luis Mori Quiroz (Michigan State University) [D. Watson]

Marion Schäfer (Universität Stuttgart, Germany) [Bobev]

Sudipta Sinha (Indian Institute of Technology, India) [Patel]

Stanislav Stoyko (Ivan Franko Lviv State University, Ukraine) [Bobev]

Jiliang Zhang (City University of Hong Kong, China) [Bobev]

Ping Zhang (New York University) [Zhuang]

Visiting Scholars 2012-2013

Mohammad Bayat (Imam Khomeini International University, Iran) [Fox]

Rasha Ahmed Mahmoud Hassan (Cairo University, Egypt) [Taber]

Xiaoxia Wang (Zhejiang Normal University, China) [Fox]

John Young (Gelest, Inc.) [Theopold]

ACS/SA Chapter Officers for 2013-2014

President: **Douglas Kenny** (BS/CHEM/14)

Vice-President: **Alyssa Hull** (BS/CHEM/14)

Secretary: **Nickolas Martin** (BS/CHEG/16)

Treasurer: **Lauren Genova** (BS/CHEM//BA/XCE/15)

Public Relations: **Leena Doolabh** (BA/CHEM/15)

Webmaster: **Andrew Blemings** (BS/CHEM/14)

ASBMB/UAN Chapter Officers for 2013-2014

President: **Alex Squitti** (BS/BIOC/14)

Vice-President: **Zachary March** (BS/CHEM/14)

Secretary: **Leena Doolabh** (BA/CHEM/15)

Treasurer: **Kyle Finnegan** (BS/BIOC//BS/CHEM/15)

Public Relations: **Eleonora Vapheas** (BA/BISC/15)

2012-2013 Undergraduate Awards

NATIONAL AWARDS	RECIPIENTS
ACS/Hach Scientific Foundation Scholarship Awards	Gregory M. Darone (BA/XCE/14) Megan E. Millman (BA/XCE/13)
ASBMB Undergraduate Poster Competition, 2013 Experimental Biology Conference, Boston, MA	Zachary M. March (BS/CHEM/14) Honorable Mention
Goldwater Scholar	Douglas J. Kenny (BS/CHEM/14)
NSF Graduate Research Fellowship	Matthew C. White (BS/BIOC/13)

REGIONAL AWARDS	RECIPIENTS
77 th Intercollegiate Student Chemists Convention, Lebanon Valley College, Annville, PA, April 13, 2013	Justin Teesdale (BS/CHEM/13) 2 nd place, Inorganic Division
15 th Undergraduate Research Symposium in the Chemical and Biochemical Sciences, University of Maryland-Baltimore County, October 20, 2012	Zachary M. March (BS/CHEM/14) 1 st place, Biochemistry & Molecular Biology Helen F. Schmidt (BS/BIOC/13) 2 nd place, Biological Sciences Justin Teesdale (BS/CHEM/13) 1 st place, Chemical Science

UNIVERSITY AWARDS	RECIPIENTS
Highest Grade Point Index, Class of 2013	James T. McParland (BS/BIOC/13) [4.000]
Student-Industry Poster Session, April 24, 2012	Justin Teesdale (BS/CHEM/13) 2 nd place, Undergraduate Division
3 rd Undergraduate Research & Service Celebratory Symposium, August 9, 2012	Justin Teesdale (BS/CHEM/13) 2 nd place, Interdisciplinary Undergraduate Research in Sustainability Prize
Women of Promise	Alyssa M. Hull (BS/CHEM/14)



Plastino Alumni Undergraduate Research Fellows:

Mr. Benjamin Lefler,
Mr. Yuexing Cui,
Ms. Melissa Morris,
Mr. David Plastino (BS/CHEM/78),
Ms. Katie Owings,
Mr. Thomas Rivas,
Ms. Anna Walter

DEPARTMENT AWARDS	RECIPIENTS
American Chemical Society Award in Chemistry	Douglas J. Kenny (BS/CHEM/14)
American Chemical Society Undergraduate Award in Inorganic Chemistry	Justin Teesdale (BS/CHEM/13)
American Institute of Chemists Award in Biochemistry	Helen F. Schmidt (BS/BIOC/13)
Kevin Scott Beall Memorial Awards	Thomas P. Keane (BS/BIOC/16) Alexander M. Northrup (BS/CHEM/16)
Wallace H. Carothers Scholarships	Lukas Campolo (BS/CHEM/15) Kyle J. Finnegan (BS/BIOC/15)
Frank W. Collins Undergraduate Awards in Biochemistry	Helen F. Schmidt (BS/BIOC/13) Matthew C. White (BS/BIOC/13)
Quaesita Drake Scholarships	Kaitlyn F. Barkley (BS/BIOC/13) Alyssa M. Hull (BS/CHEM/14) Jullian A. Jastrzembski (BS/CHEM/13) Kathleen M. Seip (BS/BIOC/14)
Elizabeth Dyer Awards for Excellence in Chemistry & Biochemistry	Justin Teesdale (BS/CHEM/13) Matthew C. White (BS/BIOC/13)
Hypercube Scholar Award	Justine M. Tucciarone (BS/BIOC/13)
Wallace H. McCurdy Jr. Undergraduate Award in Analytical Chemistry	Zhenyu Zhou (BS/CHEM/13)
James A. Moore Undergraduate Awards in Organic Chemistry	Hilary A. Kerchner (BS/CHEM/13) Monica G. Perigyi (BS/BIOC/13)
Joseph H. Noggle Undergraduate Award in Physical Chemistry	Yuexing Cui (BS/CHEM/13)
Gene J. & Frances E. Schiavelli Undergraduate Research Fellowship	Hilary A. Kerchner (BS/CHEM/13)
C. Frank Shaw III Undergraduate Award in Inorganic Chemistry	Justin Teesdale (BS/CHEM/13)
C. Frank Shaw III Undergraduate Inorganic Research Fellowship	Alex R. Squitti (BS/BIOC/14)
Carl A. von Frankenberg Undergraduate Award in Chemistry Education	Megan E. Millman (BA/XCE/13)

SUMMER RESEARCH AWARDS

Recipient		Source of Support	Mentor
Yuexing Cui	(BS/CHEM/14)	David Plastino Fellowship	Prof. Andrew Teplyakov
Rebekah E. Dumm	(BS/BIOC/15)	INBRE	(MSEG)
Lauren A. Genova	(BS/CHEM/15)	HHMI	Prof. Catherine Grimes
Thomas P. Keane	(BS/CHEM/16)	HHMI	Prof. Joel Rosenthal
Douglas J. Kenny	(BS/CHEM/14)	HHMI	Prof. Catherine Grimes
Benjamin M. Lefler	(BS/CHEM/15)	David Plastino Fellowship	Prof. Joel Rosenthal
Zachary M. March	(BS/CHEM/14)	HHMI	Prof. David Colby (CHEG)
Joseph E. Massaglia	(BS/BIOC/14)	HHMI	Prof. Erica Selva (BISC)
Jennifer P. McCord	(BS/CHEM/14)	UGRP	Prof. Sandeep Patel
Melissa G. Morris	(BS/CHEM/14)	David Plastino Fellowship	Prof. Mary Watson
Katie G. Owings	(BS/CHEM/15)	David Plastino Fellowship	Prof. Joseph Fox
Brittney E. Petel	(BS/CHEM/15)	CHEM/BIOC Dept.	Prof. Klaus Theopold
Thomas E. Rivas	(BS/BIOC/15)	David Plastino Fellowship	Prof. Mary Watson
Jessica R. Shearer	(BS/CHEM/15)	HHMI	Prof. David Edwards (MATH)
Matthew J. Urban	(BS/BIOC/14)	HHMI	Prof. Zhihao Zhuang
Anna V. Walter	(BS/CHEM/14)	David Plastino Fellowship	Prof. Klaus Theopold
Xuanzhao Wang	(BS/BIOC/14)	EPSCOR	Prof. Murray Johnston
Allison M. Wing	(BS/BIOC/14)	HHMI	Prof. Kelvin Lee (CHEG)
Sarah M. Yannarell	(BS/BIOC/15)	EPSCOR	Prof. Julia Maresca

That's Gold in Them That Waters!

The **Barry M. Goldwater Scholarship and Excellence in Education Program** was established by the U.S. Congress in 1986 in honor of former U.S. Senator (30 years) and 1964 presidential candidate Barry M. Goldwater, a Republican from Arizona. Its goal is to provide a continuing source of highly qualified scientists, mathematicians, and engineers by awarding scholarships to college students who intend to pursue careers in these fields.

The Scholarship – considered to be the premier undergraduate award of its type – is awarded annually to about 300 college sophomores and juniors nationwide. It is awarded based on merit, and the actual amount given is based on financial need. Competition for the Scholarship is exceptionally intense. Universities are allowed to nominate only four undergraduate students per year. As a result, the Scholarship is the most prestigious award in the U.S. conferred upon undergraduates studying the sciences. Viewed in this context our Department's record of producing successful Goldwater nominees is truly remarkable.

Douglas Kenny, a rising senior chemistry major from Sayville, NY is the ninth UD CHEM/BIOC major to be named a Goldwater Scholar during the 18 years that I have edited the **Blue Hen Chemist**. (All but two of the following recipients have been profiled elsewhere in this edition of the BHC.)

2011: **Timothy E. Gilpatrick**

2010: **Michael G. Napolitano** (BS/CHEM/11); Ph.D. candidate in Microbiology, Harvard Medical School

2007: **Patrick J. Knerr**

2006: **Tapan P. Patel**

2005: **Agata A. Bielska** (BS/BIOC/06), M.D./Ph.D. candidate, Washington University (St. Louis)
James J. Parris

1998: **Sujata K. Bhatia**

Jennifer L. Paulson



Goldwater Scholars: Mr. Peter Attia (BS/CHEG/14) & Mr. Douglas Kenny

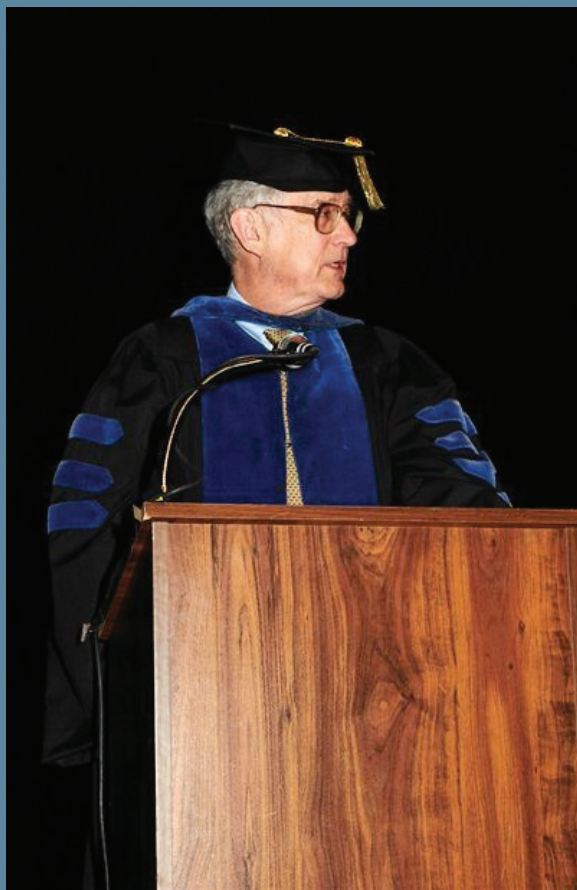
Hopefully, we will continue to find Gold(water) nuggets in BRL/QDH/LDL/ISE in the years to come!

UD Commencement and 18th CHEM/BIOC Graduation Convocation, May 25, 2013

Unlike many graduation days in late May, which have either been unbearably hot and humid or rainy, this year the weather was spectacular, with clear, deep blue skies, temperatures in the low 60's, and a brisk north wind that threatened to blow President Harker and his platform entourage from the stage at Delaware Stadium. In fact, several of the group and many graduates on the field did lose their caps in the 30 mph gusts. Commencement speaker, Paul Farmer, a medical anthropologist and physician who has dedicated his life to improving health care for the world's poorest people, addressed the graduates and their families with a plea to make a difference in the world. His serious message laced with occasional humor captured the audience's attention. Imagine dead silence among over 20,000 people at one point!



CHEM/BIOC Commencement Art



Prof. Hal White

Following graduation, chemistry and biochemistry graduates, friends, and relatives reconvened in the Pearson Hall Auditorium for the Departmental Convocation ceremonies led by **Prof. Hal White**, substituting for **Prof. John Burmeister** for whom a granddaughter's graduation in Massachusetts kept him off the stage for only the second time in 18 years. As has been the tradition, our convocation speaker was a distinguished graduate of our program. This year, **Dr. Anne Gaffney**, PhD 82 in Physical Organic Chemistry with the late **Prof. Harold Kwart**, addressed the graduates. After graduating from UD, Dr. Gaffney has worked in the chemical industry for more than three decades, accumulated more than 200 patents, and received numerous awards, including the 2013 ACS Award in Industrial Chemistry. She is currently Invista's R&D Director for Specialty Materials, in Wilmington. She offered the following advice to graduates based on her life and experiences.

1. *Be true to yourself, family, friends, and co-workers. Stay the course, contribute to your fullest extent, collaborate and knowledge share at every opportunity.*
2. *Work diligently on the most relevant problems. The solutions must make an impactful difference whether it is translated into energy and resource savings, environmental improvements, "greener" and more selective chemical transformations, development of new technologies, and the like.*
3. *Give back, i.e., pay forward, to your profession, and society in general. Volunteer in your community, your favorite professional societies. Mentor a student or newcomer in your group. Share your knowledge and learnings with team members.*
4. *Take on new challenges and be a leader. Make a difference, challenge the status quo.*



Dr. Anne Gaffney

Dr Gaffney offered a personal example of how she, as vice president of Lummus Technology, working with a research and development team for over a decade, replaced the dangerous and environmentally hazardous hydrofluoric acid with a benign catalyst in the production of an octane enhancer. It was for that work that she received the 2009 Green Chemistry Award from the American Chemical Society.

A large number of graduates attended the convocation and were individually acknowledged. Among these students was **Jimmy McParland** - one of 14 UD 2013 graduates who completed his undergraduate studies with a perfect 4.0 grade point average, six students who completed research theses for degrees with distinction, and recipients of a variety of Departmental awards for outstanding accomplishments.

Following the ceremony, all returned to the Brown Lab lobby for refreshments, photographs, and goodbyes to faculty and friends.

A handwritten signature in black ink that reads "Harold B. White III". The signature is written in a cursive style.

Harold B. White III



Prof. Svilen Bobev, Dr. Anne Gaffney, Chair Murray Johnston, Prof. Hal White

Ed. Note: Unpredictability and uncertainty continued as the hallmarks of our 2013 graduating class, as they have for the past 4 years:

	2013	2012	2011	2010	2009
Graduate School	18	10	12	7	20
Medical School	4	1	7	3	4
Dental School	1	-	2	2	2
Pharmacy School	-	-	1	1	4
Law School	-	1	1	2	2
Nursing School	2	1	-	-	2
Industry	6	7	3	8	2
Government	-	1	1	1	2
Teaching	-	1	1	1	4
Other	2	2	1	3	3
Undetermined	18	29	26	22	9
TOTAL	51	53	55	50	54

Interest in graduate study spiraled upwards, although those seeking doctorates in the five traditional areas of chemistry were in a minority (8).

In like manner, the mix of baccalaureate degrees keeps changing:

	2013	2012	2011	2010	2009
BA/CHEM	5	12	18	11	11
BA/XCE	2	1	1	-	-
BS/CHEM	21	17	21	18	13
BS/BIOC	23	23	15	21	30



Let the celebration begin!



Prof. Munson instructs Ms. Monica Pirigyi in the fine art of Segway-ing



2013 CHEM/BIOC Graduates

2013 B.A. Chemistry Graduates

Deniz A. Dindi
Megan E. Millman (XCE)
Joshua Orozco
Min K. Song
Benjamin J. Spiegel
Thomas H. Steen
Alexis K. Walsh (XCE)

2013 B.S. Chemistry Graduates

William K. Barden
Xi Chen
Amanda B. Halstrom
Chengyi Han
Jillian A. Jastrzembski^a
Keywan A. Johnson
Hilary A. Kerchner^{a,b}
Kara L. Martin^a
William L. Miles
Shannon M. Owings^b (ENCH)
Neil V. Patel
Jack Qui^a
Carissa M. Smoot
Kathleen A. Starrs^a
Naijing Su
Justin Teesdale^b
Luke R. Thomas
Jennifer L. Thompson
Lei Wang
Steven J. Zboray^a
Zhenyu Zhou

^a Honors Degree ^b Degree with Distinction

2013 B.S. Biochemistry Graduates

Kaitlyn F. Barkley^a
Jared B. Bass
Elyssa S. Bernfeld
Stephen W. Dotts
Chika V. Egbe
John C. Feick^a
Veronica A Fones
Erica L. Hartman^a
Kathryn R. Hopkins
Kristin A. Hutkin
Sintia Krizman^a
Andrea LaBella
James T. McParland^a
Ryan D. Minzloff
Monica G. Pirigyj^{a,b}
Joseph A Rattenni
Helen F. Schmidt^a
Matthew P. Sciscione
Min K. Song
Justin M. Tucciarone
Matthew C. White^{a,b}
Michael R. Wyatt
Jocelyn ZajaC^{a,b}

^a Honors Degree ^b Degree with Distinction

Graduate or Professional School Bound

Kaitlyn Barkley, Thomas Jefferson University, (M.D. Program)
Jared Bass, City University of New York (Ph.D. in Biology)
Elyssa Bernfeld, City University of New York (Ph.D. in Biochemistry)
Chika Egbe, University of Texas, Galveston (M.D. Program)
John Feick, Yale University (Ph.D. in Chemistry)
Chengyi Han, University of Delaware (Ph.D. in Materials Science)
Erica Hartman, University of Delaware (M.S. in Kinesiology)
Kathryn Hopkins, Drexel University (Accelerated Nursing Program), hopkinsk73@gmail.com
Kristin Hutkin, Temple University (D.D.S. Program)
Jillian Jastrzembki, Cornell University (Ph.D. in Food Science and Technology), jillianj710@gmail.com
Keywan Johnson, University of Rochester (Ph.D. in Chemistry)
Hilary Kerchner, University of Michigan (Ph.D. in Organic Chemistry)
Sintia Krizman, Rutgers University (Master of Business and Science in Biotechnology and Genomics)
Kara Martin, University of Massachusetts, Amherst (Ph.D. in Polymer Science and Engineering)
Shannon Owings, Georgia Institute of Technology (Ph.D. in Geochemistry), smowings@gmail.com
Helen Schmidt, Johns Hopkins University (Ph.D. in Human Genetics)
Kathleen Starrs, South University (Master of Medical Science in Anesthesia Science)
Naijing Su, University of Illinois, Chicago (Ph.D. in Chemistry)
Justin Teesdale, University of Chicago (Ph.D. in Inorganic Chemistry)
Matthew White, University of California, Berkeley (Ph.D. in Biochemistry)
Steven Zboray, North Carolina State University (Ph.D. in Chemical Engineering)
Zhenyu Zhou, Georgia Institute of Technology (Ph.D. in Chemistry)

Graduate School Placements, 1994-2013

Adelphi	1	Emory	1	Montclair State	1	Southern Mississippi	1
Alaska-Fairbanks	1	Florida International	1	New Castle (England)	1	Stevenson	1
Arcadia	1	Florida State	2	New Hampshire	2	SUNY-Buffalo	2
Boston College	3	George Mason	1	NYU	1	SUNY-Stony Brook	1
Boston University	2	Georgetown	2	North Carolina-Chapel Hill	10	Syracuse	1
Brigham Young	1	George Washington	2	North Carolina-Greensboro	1	Temple	3
Brandeis	1	Georgia	1	North Carolina State	1	Tennessee	1
Cabrini	1	Georgia Tech	2	Northeastern	1	Texas	4
California-Berkeley	2	Gordon Conwell	1	Northwestern	1	Texas A&M	3
California-Irvine	5	Harvard	4	Notre Dame	1	Thomas Jefferson	5
California-Los Angeles	1	Hawaii	2	Ohio State	4	Toledo	1
California-San Diego	3	Illinois-Chicago	2	Oregon	1	Toronto	1
California-San Francisco	3	Illinois-Urbana	7	Pace	4	Towson	1
California-Santa Barbara	1	Imperial College, London	1	Penn	11	Tufts	2
Cal Tech	5	Indiana	4	Penn State	9	Vanderbilt	1
Carnegie Mellon	1	Johns Hopkins	5	Pittsburgh	3	Villanova	1
Case Western	4	Kansas	1	Princeton	8	Virginia	3
Chicago	1	Lehigh	2	Purdue	2	VPI & SU	1
Clemson	1	Maryland-Baltimore	1	Rhode Island	1	Wake Forest	2
Colorado State	1	Maryland-Baltimore Co.	4	Rochester	3	Washington (St Louis)	1
Columbia	5	Maryland-College Park	6	Rutgers	7	West Chester	1
Connecticut	3	Massachusetts	3	St. John's	1	Wisconsin	1
Cornell	9	Michigan	5	Scripps	2	Yale	3
CUNY	2	Michigan State	1	Selznick School for Film Preservation	1	Yeshiva	1
Delaware	21	Minnesota-Twin Cities	2	Shenandoah	1		
Drexel	1	MIT	7	South	1		
Duke	2	Montana State	1				

Headed for Industry, Etc.

Natalie Carter, Agilent Technologies
(Technical Sales)

Ryan Minzloff, W.H. Gore
(Associate)

Bree Howard, Direct Energy
(Office Manager)

Joseph Rattenni, Drexel University College of Medicine
(Pre-med Post-baccalaureate Program)

Anna Jurusik, Health Opportunities for People Everywhere (HOPE)
(Medical Volunteer Internship), akjurusik@gmail.com

Carissa Smoot, Laboratory Testing, Hatfield, PA
(Chemistry Technician), csmoot1020@gmail.com

James McParland, University of Pennsylvania Medical School
(Research Assistant), jmcpar@gmail.com

Jocelyn Zajac, Gene Dx, Gaithersburg, MD
(Array Technician)

Megan Millman, University of Delaware
(Second Baccalaureate Degree in Art Conservation)

2013 M.A./M.S. Graduates

NAME	MENTOR	BACCALAUREATE DEGREE, SCHOOL
David W. Chu (MA)	George Luther (MAST)	B.S., University of California - Irvine
Anthony J. Doellman (MS)	Klaus Theopold	B.S., Illinois Institute of Technology
Julia Eichhorn (MA)	Murray Johnston	B.S., University of Scranton
Scott R. Farrell (MS)	Colin Thorpe	B.S., University of the Sciences, Philadelphia
Eric T. Guardino (MS)	Joel Rosenthal	B.S., University of Notre Dame
Daniel R. Hess (MS)	Thomas Hanson (MAST)	B.S., University of Missouri - Columbia
Stephen R. Kaster (MS)	Steven Brown	B.S., Moravian College
Timothy R. Lucas (MS)	Sandeep Patel	B.S., University of the Sciences, Philadelphia
Jialiang Wang (MA)	Zhihao Zhuang	B.S., M.S., Lanzhou University
Zihui Zhang (MA)	Karl Booksh	B.S., Nanjing University

2013 Graduate Student Placements

David Boruta, Naval Surface Warfare Center, Indian Head
(ASEE Post-doctoral Associate with Dr. Alfred Stern,
Chief Scientist), davidtboruta@gmail.com

Stephen Kaster, QS Pharma, Boothwyn, PA
(Analytical Chemist), srkaster@comcast.net

William Bozza, U.S. Food and Drug Administration
(Post-doctoral Associate), wbozza1@gmail.com

Mark Pennington, U.S. Army Medical Research Institute of
Chemical Defense, Aberdeen Proving Ground, MD
(Post-doctoral Associate)

David Chu, Lockheed Martin (Research Scientist)

James Plampin, University of Kansas
(Post-doctoral Associate with Dr. Jeff Aube)

Jennifer Coddling, Columbia Medical School
(Post-doctoral Associate with Dr. Carol Troy)

Jingmei Shen, Northwestern University
(Post-doctoral Associate with Dr. Harold Kung)

Ming Dong, University of Delaware
(Post-doctoral Associate with Dr. David Colby, Chemi-
cal & Biomolecular Engineering)

Chomdao Sinthuvanich, Kasesart University, Thailand
(Lecturer)

Yun Han, University of Pittsburgh (Post-doctoral Associate)

Michael Taylor, Cambridge University, U.K.
(Post-doctoral Associate with Dr. Matthew Gaunt)

Hua He, Brookhaven National Laboratory
(Post-doctoral Associate), huanancyhe@gmail.com

Shawn Thatcher, DuPont (Post-doctoral Associate)

Daniel Hess, DuPont (Fermentation Technician)

Zihui Zhang, University of Delaware
(Doctoral Program in Statistics)

Yingxin Huang, Monash University, Melbourne, Australia
(Post-doctoral Associate with Dr. Tony Li, School of
Physics), huangyx.c@gmail.com

2013 Ph.D. Graduates

NAME	PREVIOUS DEGREE(S), COLLEGE(S)	DISSERTATION CHAIR	DISSERTATION TITLE
David T. Boruta	B.S., Bucknell University	Joseph Fox	Design of Catalysts for the Transformations of α -Alkyl- α -diazoesters
William P. Bozza	B.A., SUNY, Binghamton	Zhihao Zhuang	Kinetic Analyses of Deubiquitinating Enzymes and Development of a High-Throughput Screening Assay for PCNA Inhibitors
Holt P. Bui	B.S., Lebanon Valley College	Thomas Beebe	Design and Characterization of Complex Protein Films
Jennifer A. Coddling	B.S., McMurry University	Colin Thorpe	Probing the Substrate Specificities of Two Enzymes of Oxidative Protein Folding
Abby L. Grabitz	B.S., Alma College	Melinda Duncan (BISC)	The Role of SIP1 in Lens Cell Development and Posterior Capsular Opacification After Cataract Surgery
Yun Han	M.E. Chinese Academy of Science; B.S., University of Science & Technology, Beijing	Tatyana Polenova	Solid-State NMR Studies of Structure and Dynamics of HIV-1-CAPSID (CA) Protein Assemblies
Hua N. He	B.S., University of Science & Technology, China	Svilen Bobev	Crystal Chemistry and Properties of New Ternary Pnictides
Kaitlin M. Papon	B.S., College of New Jersey	Douglas Ridge	Determination of Gas Phase Structures of Ions Important in Aqueous Solutions
Mark R. Pennington	B.A., Drexel University	Murray Johnston	An Improved NANO Aerosol Mass Spectrometer for Ambient and Laboratory Measurements
James N. Plampin	B.S., University of S. Carolina	Joseph Fox	Examining the Role of Helicity in Asymmetric Induction in Salen Catalysis
Hui Ren	B.S., Nanjing University	Jingguang C. Chen (CHEG)	Small Oxygenates on Carbides Catalysts as Probe Reaction for Biomass Conversion
Jingmei Shen	B.S., Beijing Institute of Technology	Klaus Theopold	Activation of Small Molecules by the Quintuply Bonded "ax"-Dimine Chromium Dimer
Chomdao Sinthuvanich	B.S., Chulalongkorn University	Joel Schneider	Designing Injectable "Beta-Hairpin" Peptide Hydrogels for Cartilage Tissue Engineering Application
Michael T. Taylor	B.S., Salisbury University	Joseph Fox	Applications of Highly Reactive Carbenoids and Chiral Olefins in Stereoselective Synthesis and Bioorthogonal Labeling Chemistry
Shawn R. Thatcher	B.S., Mansfield University	Pamela Green (DBI)	Roles of Mirnas in Arabidopsis Stress Response and Senescence
Qiongjing Zou	B.S., Huazhong University of Science & Technology	Karl Booksh	Development of Surface Plasmon Resonance Biosensors for Resistance of Matrix Effects

Alumni News

Fifty- and Sixty-Year ACS Members

The seeds planted so long ago produced a bountiful crop in 2013.

Fifty-year Honorees: **Robert D. Athey, Jr.** (PhD74), **Donald P. Hoster** (MS65, PhD68), **Joseph J. Piascinski** (BS57), **Barbara O. Rowley** (PhD69), **J. Richard Ward, Ph.D.** (BS64). (see **C&E News**, 4/8/13, pp.44-51 for a complete listing.)

Sixty-year Honorees: **Anthony Anton** (MS68), **George D. Null** (MA56, PhD58), **Richard A. Rowe, Ph.D.** (BS50, MS51), **William V. Snyder** (BS52).

50's

George C. Gatos (MS56, PhD59) passed away on 4/6/13, just days shy of his 90th birthday. A native of Greece, George earned his B.S. in Chemistry and an M.S. in Agriculture from the University of Athens. Upon completion of his doctorate, he began working with the Atlas Powder Company, which became ICI Americas, where he spent the majority of his career in pharmaceutical research in the division that eventually became Astra-Zeneca. He was one of the three lead scientists who developed the drug Seroquel, which represented a major advancement in the treatment of schizophrenia and bipolar disorder.

Norman B. Rainer (PhD56) is the President of Dynaphore, Inc., in Richmond, VA. A registered U.S. Patent Agent, Norm has received 65 U.S. Patents, mostly in the field of water purification. He reports that he and (the late) **Brennie Hackley** (PhD57) carpooled between Aberdeen and Newark. lcpatent@aol.com, info@dynaphore.com

60's

Robert C. Griggs, M.D. (BA60) is a Professor of Neurology, Medicine, Pathology, Laboratory Medicine and Pediatrics at the University of Rochester's School of Medicine and Dentistry. Since 2010, he has also been a Professor in UR's Center for Human Experimental Therapeutics. Coincidentally, he serves as a Neurologist, Internist, Pathologist and Pediatrician in Rochester's Strong Memorial Hospital.

Ned D. Heindel (MS61, PhD63), Professor of Chemistry at Lehigh University, was the co-organizer of a Division of the History of Chemistry symposium honoring (the late) UPenn electro-

chemist Edgar Fahs Smith held at the 2012 Philadelphia ACS Meeting. [**C&E News**, 9/3/12, pp.72-73]

J. Richard Ward, Ph.D. (BS64) has worked at the Aberdeen (MD) Proving Grounds for the past 40 years, currently as Chief Scientist of the Chemical Demilitarization Program. joseph.r.ward20.civ@mail.mil

Carl J. Berninger (PhD65) is living in retirement in Bethesda, MD. Carl served as an interdisciplinary and review chemist with the U.S. Food and Drug Administration for the last 15 years of his professional career. cberninger@mindspring.com

Roy C. Timmer (MS66) died suddenly on 9/11/12 – the first of two deep emotional losses suffered last fall (**vide infra**) by your Editor. Roy was a member of the Search Committee that interviewed me during my first visit to the U of D in 12/63. [(then) President John A. Perkins insisted that I return to campus in 2/64 to meet him before he would approve my appointment as Assistant Professor!] He became a charter member of my first UD master's graduating class, along with **Carolyn (Cochrane) Kent** (MS66) and (the late) **Lloyd E. Williams** (MS66). His professional career was spent at DuPont and the Uponor Aldyl Company. Roy was among the most ardent of Blue Hen football and basketball fans. He served on the board of the Blue Hen Basketball Club. The Roy Timmer Award is given annually to the Unsung Hero of the women's basketball team, and a seat in the Bob Carpenter Center is dedicated to his memory.

Just as the **BHC #40** was going to press (7/24/13), I was paid a visit by the Fourth Horseman of the Apocalypse, i.e., I learned of the death of a fourth former graduate student or post-doc in my research group in the past 22 months: **S. Dale Patterson** (MS67). Dale had been living, in retirement, in Chattanooga, TN.

Carol (van Dyke) Freer, M.D. (BS68) is now the Chief Medical Officer at the Penn State Hershey Medical Center. cfreer@hmc.psu.edu

Robert A. Pribush, PhD (BS68), Professor of Chemistry at Butler University, Indianapolis, has been selected as the recipient of the 2014 Award for Volunteer Service to the ACS, by the Society's Board of Directors. Among his many activities involving the ACS, Bob has been heavily involved with the ACS Division of Chemical Education Examinations Institute, serving as Chair of the Diagnostic of Undergraduate Chemistry Knowledge (DUCK) Committee, the Inorganic Chemistry Exam Committee, and the General Chemistry Exam Committee. [**C&E News**, 6/17/13, p.42]

Thomas P. O'Sullivan (PhD69) has embarked on a second learning career in computer science, with a focus on mobile, cloud and parallel computing. Having received his B.S. in Com-

puter Science from Kennesaw (GA) State University last December, he is now working on his M.S. osullivan8@aol.com

Robert M. Johnson, M.D. (BS69) has retired to a "farm in New Hampshire," following a 32-year career in Internal Medicine. johns440@hughes.net

70's

One of the most fascinating aspects of editing the **BHC** involves the great variety of post-retirement paths followed by our alumni. Case in point: **Noreen C. Campbell** (BS70, MS73). Since retiring from DuPont 7 years ago, Noreen has become deeply involved in two disparate activities. She works with a non-profit organization in New Jersey called Let Me Learn, which is dedicated to improving educational outcomes for children in school systems across the U.S. Farther off the beaten track is her development as a "horse whisperer." You can read about her adventures in "Fear of Flying," **Savvy Times**, 5/12, pp. 54-55. noreenccampbell@verizon.net

Muriel Doleman (MS70), retired in Florida, just returned from a 16,000 mile, 5-month jaunt that she and her husband took across the U.S. mdoleman@earthlink.net

John C. (Josh) vanHouten, Ph.D. (BS70) is using his retirement to check items off his "bucket list," including seeing his beloved Red Sox play in every American League park, and viewing a total solar eclipse in Australia. jvanhouten@smcvt.edu

Nicholas J. DeStefano (PhD71), although formally retired from DuPont since 2001, has continued to do consulting work with their Intellectual Assets and Licensing Group. destefnj@hotmail.com

Richard T. Taylor Ph.D. (BS72) is now the Interim Chair of Miami (OH) University's Department of Chemistry and Biochemistry. taylorrt@muohio.edu

John D. Barry (BS74) returned to campus to present a seminar (including freshly made samples!) on the making of ice cream on 10/2/12.

Robert D. Walkup, Ph.D., M.D. (BS74) followed up his 1982 Ph.D. from Stanford University with a 2000 M.D. from Texas Tech. He is now an ER Physician at Covenant Hospital, Plainview, TX. He notes that he is "proud to have been Dick Heck's first undergraduate research student." rdwalkup@yahoo.com

Keith E. Senecal, M.D. (BS75) has retired from his position as an ER Physician in Chambersburg, PA. Keith reports that he loves his new status. senecalk@gmail.com

Thomas D. Macphee, M.B.A. (BS76) is a Vice-President, Mergers and Acquisitions, for Dow Chemical, in Midland, MI. mahtdm@yahoo.com, tmacphee@dow.com

Sally A. Camper, Ph.D. (BS77) is the James V. Neel Collegiate Professor and the Chair of the Department of Human Genetics at the University of Michigan, Ann Arbor. scamper@med.umich.edu

Stephen E. Cyran, M.D. (BS77) has returned to serving patients and directing a fellowship program, following 17 years as Chief of the Division of Pediatric Cardiology at the Penn State Children's Hospital, Hershey Medical Center. scyran@hmc.psu.edu

I have long since noted that chemists tend to live to ripe old ages or die relatively young. **Carl Ziegler, Ph.D.** (MS77) unfortunately fell into the latter category, having died of cancer on 8/14/12, at age 60. Carl worked with **Dick Heck** on the development of the Heck Reaction prior to earning his Ph.D. at Duke in 1981. Following a post-doc at Oxford, he served as a group leader at Lederle Laboratories' Medical Research Division. He joined Pfizer in Groton, CT in 1995. He was a project leader in Pfizer's Veterinary Medicine Department, supervising the development of Draxxin, an antibacterial for the treatment of bovine respiratory disease. He then became an associate research fellow, serving as a technical expert in patent law. [**C&E News**, 12/10/12, p. 59]

Clearly, **Mark J. Nelson** (BS78) is a man for all seasons. During an average workday, he speaks 3 or 4 languages with the electronics suppliers he manages at Cisco Systems. On top of that, he is an accomplished opera singer. redmark55@hotmail.com

James S. Andersen, M.D., F.A.C.S. (BS79) is a Clinical Associate Professor of Surgery at the University of Southern California's Keck School of Medicine. Jim also serves as a Professor and Director of Plastic and Reconstructive Surgery at the City of Hope Medical Center, Duarte, CA. jandersen@coh.org

Karen D. Riding, Ph.D. (BS79) is now a Master Black Belt for Lean Six Sigma deployment at Global Foundries' Operations Quality Center, in Malta, NY.

80's

Mark A. Wayland (BS81) has recently celebrated 30 years with Quaker Chemicals, where he is a Product Manager, primarily for aerospace customers. waylandm@quakerchem.com

Edward W. Rutter, Jr., Ph.D. (BS82) is a Senior Principal Process Engineer with the Finisar Corporation in Fremont, CA. erutter@comcast.net, edward.rutter@finisar.com

Debra L. Camper, Ph.D. (BS83) is the Discovery Leader for Agronomic Traits, focused on crop improvements, with Dow Agro Sciences. dcamper@dow.com

As yet another example of the dichotomous trend noted earlier, **Karen J. (Schnoes) Kranz** (BS83) died in New Brunswick, NJ on 7/25/12, at age 51. Karen was a chemistry teacher at Hunterdon Central Regional High School in Flemington, NJ for 6 years. She also taught at Immaculata High School in Somerville. Prior to embarking on her teaching career, she was a Research Chemist for Alcatel-Lucent.

John A. Teagle (BS83, MS86) is an EMD Performance Manager for Erachem Comilog, Inc., in Baltimore. john.teagle@erametgroup.com

Bryan J. Gallagher, M.D., C.D.E. (BS84) died on 6/11/13 in American Canyon, CA at age 55. Bryan earned his M.D. from Georgetown University School of Medicine, followed by postdoctoral training at Penn State's Milton S. Hershey Medical Center. He was a Senior Medical Scientific Director and a member of the Medical Circle of Excellence for the Novo Nordisk Pharmaceutical Co.

Marlene A. Jacobson (PhD 84) is an Associate Professor of Pharmacology and the Associate Director of the Molder Center for Drug Discovery Research in Temple University's School of Pharmacy, Philadelphia. marlene.jacobson@temple.edu

Supercritical Fluid Technologies, with **Kenneth J. James** (BS84, PhD98) [President and Director of Technology] and **Kenneth R. Krewson** (BA84) [Vice-President of Sales and Marketing] at the helm, was spotlighted in an article in the **Wilmington News-Journal** on 3/4/13. Begun in 1994 in the Delaware Technology Park, the startup became profitable in 2005, and has been blossoming ever since. As KJ puts it, SFT was "green before it was subsidized." The company has parlayed the special properties of liquid CO₂ into an impressive variety of applications for chemistry-based companies, including Astra Zeneca. More importantly, KJ is the husband of **Susan James**, our Department's HR Liaison.

Christine Arenson, M.D. (BS86) is an Associate Professor and Vice-Chair for Academic Affairs in Thomas Jefferson University's Department of Family and Community Medicine, in Philadelphia. She is also the Co-Director of the Jefferson Center for Interprofessional Education. christine.arenson@verizon.net, christine.arenson@jefferson.edu

Paul Mercado, Ph.D. (BS88) is a Research Manager for the Dow Chemical Co. pmercando@dow.com

Vincent M. Stumpo (MA88, PhD91) is now the Headmaster of Forsyth Country Day, in Winston-Salem, NC, following 7 years of service as Headmaster of Linden Hall, in Lititz, PA.

Darryl S. Williams, Ph.D. (BS89) is an R&D Formulation Scientist with the Afton Chemical Corporation, in Richmond, VA. Darryl.williams@aftonchemical.com

90's

Christopher W. Grote (PhD91) is a Chemistry Fellow and certified Six Sigma Black Belt with Covidien Pharmaceuticals, in St. Louis, MO. christopher.grote@covidien.com

Scott C. Berta, M.D. (BS92) is a Neurosurgeon and CEO of the Berta Spine Institute, in Redding, CA. His path to his current call-

ing took him through an M.S. in Chemistry (Princeton), an M.S. in Biomedical Engineering (UPenn) and an M.D. from Jefferson Medical College. He is also the CTO and co-founder of Spring Back, Inc., in Palo Alto, CA – a spine medical device start-up company focused on designing an alternative solution to conventional lumbar fusion. frankenspyne@gmail.com

Steven J. Alexander (MA94) is a Senior Compliance/Regulatory Specialist with Catalent Pharma Solutions, in Somerset, NJ. steven.alexander@catalent.com

Raymond C. Trievel, Ph.D. (BS95) is an Associate Professor of Biological Chemistry at the University of Michigan Medical School, Ann Arbor. rtrievel@umich.edu

Jennifer (Detrich) Jewson (PhD96) has been promoted to the position of Director, Chemical Sales at LyondellBasell.

Yaminah A. Leggett-Wells, M.B.A. (BS96) is a Senior Project Manager for MedImmune, the biologics division of AstraZeneca, in Silver Spring, MD legett-wellsy@medimmune.com

Bashir A. Mansoori (PhD96) is the Director of Bioanalytical Chemistry for Transtech Pharma, in High Point, NC. Bmansoori5@aol.com, bmansoori@ttpharma.com

Joseph D. Jean (BS97) is a Chemist in NOAA's National Seafood Inspection Laboratory, in Pascagoula, MS. joseph.jean@noaa.gov

Thomas M. Razler, Ph.D. (BS98) is a Research Scientist in the Pharmaceuticals Division of Bristol-Myers Squibb. Thomas.razler@bms.com

Sujata K. Bhatia, M.D., Ph.D., P.E., (BS99) now has half as many positions as she has degrees! (She also earned a B.S. in Biotechnology, as well as a B.S. and M.S. in Chemical Engineering from U of D) She is currently an Assistant Dean of Harvard University's Summer School, the Assistant Director of Undergraduate Studies in Harvard's Biomedical Engineering Department, and is an Associate in Harvard's Kennedy School of Government. An enlargement of her trophy case is probably in order, given her recent award acquisitions: The Capers W. and Marion K. McDonald Award for Excellence in Mentoring and Advising at the Harvard School of Engineering and Applied Sciences, Harvard's 2013 Star Family Prize for Excellence in Advising, Harvard's Certificate of Teaching Excellence, and last, but by no means least, selection as a White House Champion of Change. The last-named honor included her attendance at a ceremony in the White House on 5/29/13. sbhatia@seas.harvard.edu

00's

Not to be outdone in the category of presidential honors, **Joshua S. Figueroa, Ph.D.** (BS00), Assistant Professor of Chemistry and Biochemistry at the University of California, San Diego was named by President Obama as one of the 96 recipients of

the Presidential Early Career Awards for Scientists and Engineers (PECASE) – the highest honor bestowed by the U.S. Government on science and engineering professionals in the early stages of their independent research careers. Josh, one of 20 PECASE recipients nominated by the National Science Foundation, was recognized for his innovative use of bulky organic isocyanides to stabilize and isolate transition metal complexes, offering potential applications in alternate energy and sustainable science and technology, and for exemplary teaching, mentoring, and outreach activities. jsfig@ucsd.edu

'Tis the season! **Suzanne (Bart) Doucette, Ph.D.** (BS01), and her husband, **Jarrold**, are also the proud parents of twins: **Finley Brian** and **Austin Henry**, born 9/2/12.

Whelton A. Miller, III, Ph.D. (BS01) completed his doctoral work in chemistry this past September at the University of the Sciences, Philadelphia, and is now a post-doc in UPenn's Bioengineering Department. wheltonm@seas.upenn.edu

Fedele J. (Fred) DePalma, M.D. (BS02) completed an Internal Medicine residency and Gastroenterology Fellowship at UMD-NJ-RWJ Cooper University Hospital, and is now engaged in a sub-fellowship in Therapeutic Endoscopy (advanced endoscopic procedures beyond colonoscopy and upper endoscopy) at the University of Maryland Medical Center, Baltimore. He and his Double Del wife, Kristen, whom he met on the UD track team, are now the parents of a daughter, Cecilia. fedele15@hotmail.com

Steven G. Brohawn, Ph.D. (BS04), now at the Rockefeller University, returned to the U of D on 9/21/12 to present a seminar on "How Do We Feel? Structural and Functional Studies of Mechano- and Lipid-Sensitive Ion Channels."

Christopher W. amEnde (BS05) has worked for Pfizer in Connecticut for the past 5 years, while simultaneously working on his Ph.D. with Dr. Kathy Parker at SUNY-Stony Brook. Their work on the total synthesis of bisabosqual A, a mold metabolite which blocks an early step in cholesterol production in mammals, was recently highlighted in **C&E News** [1/14/13, p.34]. amendecw@yahoo.com

James W. (Jamie) Hansen, D.O. (BS05) is the Chief Resident and an Instructor in Medicine at the Penn State Milton S. Hershey Medical Center. jhansen2@hmc.psu.edu

Veronica C. Casina, Ph.D. (BS06) is a Post-doctoral Fellow in Pathology and Laboratory Medicine at the Children's Hospital of Philadelphia. She has received a T32 NIH Training Grant for hemostasis and thrombosis research from UPenn, and will be married this coming October. casinav@email.chop.edu

Patrick J. Knerr, Ph.D. (BS08) is returning to his roots, so to speak. Having completed his doctoral work at the University of Illinois – Urbana/Champaign, he has accepted a Research Investigator position with DuPont in their Crop Protection business at the Stein Haskell Laboratory, in Newark. pjknerr@gmail.com

10's

Kyle F. Davis (BS10), a doctoral candidate in environmental sciences at the University of Virginia, has been awarded an NSF Graduate Research Fellowship – one of only 2,000 awardees selected from over 13,000 applicants. kfdavis15@gmail.com

Sarah W. Meadows (BA10) is the Chemistry Department Administrator at Barnard College, in New York City. sarahwmeadows@gmail.com, smeadows@barnard.edu

David Meninger (BS10) is a Youth Minister with Young Life Baltimore County. dave.meninger@gmail.com

Andrew J. Meyer, J.D. (BS10) has completed his law studies at Penn State's Dickinson School of Law, and is a candidate for membership in the Delaware Bar. ajm5173@dsl.psu.edu

Dung T. Nguyen (BS10) has completed her first year of study in Boston University's Masters in Healthcare Emergency Management Program.

Anastasia (Fuzaylova) Thevinin (PhD10) is a Post-doctoral Research Associate in Lehigh University's Department of Biological Sciences, Bethlehem, PA. Anastasia.thevinin@lehigh.edu

Eric Borer (BS11) is a member of Agilent Technologies' Instrument Online Sales Team for Life Science and Chemical Analysis, in Wilmington. eric_borer@agilent.com

Devan L. Turner (BS11) is now a Mass Spec Technologist with Health Diagnostic Laboratories.

Lara M. Dubuc (BS12) is a Consumables Training Specialist for Agilent Technologies' AFO Sales and Services Centers. She, too, is in the Life Sciences and Chemical Analysis Group, in Wilmington. lara_dubuc@agilent.com

Jeffrey E. Lopez (BS12) is a Rackham Science Fellow, working on his doctorate in the laboratory of metalloenzymologist Dr. Carol Fiege, at the University of Michigan.

Richard L. Surmaitis (BS12) will begin his doctoral studies in chemistry this fall at Florida State University.

Matthew D. Thum (BS12) is a Quality Assurance Manager with Riverside Specialty Chemicals, in Bear, DE.

Alumnus-to-be **Clarke' A Snell** (BS16) was a member of the U of D's Club Figure Skating Team, which took first place at this year's Intercollegiate Nationals. csnell@udel.edu

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Giving to the Department

Sincere thanks to all the friends and alumni who have made generous contributions over the past year. Your gifts are used for many worthwhile purposes – to create professional development opportunities for our students, to support programs that enrich our curriculum, to fund special events that deepen our understanding of modern chemistry and to reward exemplary performances.

To make a gift to the Department of Chemistry and Biochemistry, please visit our online form at www.udel.edu/makeagift. This form allows you to give via check or credit card. When you visit the form, please earmark your gift to the Department of Chemistry and Biochemistry or any of the funds listed below in the “Other Designation” box. To mail in a check, please indicate “Chemistry and Biochemistry” in the check’s memo section, and mail it to: University of Delaware, Office of Annual Giving, 83 E. Main St., Newark, DE 19711. For additional information and how to make a gift, please call the Development Office’s toll free number at 866.535.4504 during normal business hours, or email annualgiving@udel.edu.

Kevin Scott Beall Memorial Awards [1994]: These awards of \$500 are presented to the most outstanding freshman chemistry and biochemistry majors. They are given in the memory of a graduate of the Department who was killed in an automobile accident in 1993.

Wallace H. Carothers Scholarships [1980]: These awards, presented by an anonymous donor to students in chemistry or biochemistry, are to commemorate the achievements of this pioneer in polymer chemistry. The \$500 awards, based on academic merit, have traditionally been given to the students deemed to be our most outstanding sophomore chemistry and biochemistry majors.

Frank W. Collins Undergraduate Award in Biochemistry [2002]: An endowed award given to the graduating senior who best exemplifies scholarship in biochemistry. The award consists of an honorarium of \$500, provided by the Frank W. Collins Endowment.

Elizabeth Dyer Excellence in Chemistry and Biochemistry Undergraduate Award Fund [1989]: supports awards (currently two \$2.5K awards/year - one to a CHEM major, one to a BIOC major) given to senior majors in recognition of excellent performance in one or more of the following areas: scholarship, research and service to the Department. The awards honor **Prof. Elizabeth Dyer**, faculty member 1933-1971.

Elizabeth Dyer Excellence in Teaching Award Fund [1982]: supports awards (currently \$300-\$600, depending upon the number of awardees) given to graduate teaching assistants in the Department for excellent achievement in the teaching of chemistry.

Quaesita Drake Scholarship Fund [1969]: supports scholarships (currently four \$1.5K scholarships/year) given to outstanding junior or senior women who are chemistry or biochemistry majors, on the basis of academic accomplishment and potential and excellence of character. The funds for these awards are obtained from gifts of alumni and alumnae to honor **Prof. Quaesita Drake**, chairperson of the Women’s College Chemistry Department for over 25 years.

Alberta E. Edge Fund: This fund, created from the estate of **Alberta E. Edge** (BA35), underwrites the financial component of the awards given to outstanding senior (American Institute of Chemists Award, currently \$1000) and junior (American Chemical Society Award, currently \$1000) CHEM or BIOC majors.

Brennie E. Hackley, Jr. Award for Excellence in Research [2009]: Given annually [currently \$2,000] to a graduate student who has demonstrated excellence in research. It honors the memory of **Dr. Brennie E. Hackley, Jr.** (UD Ph.D. '57), who devoted his remarkable 57-year career at the Edgewood Chemical and Biological Center, Aberdeen, MD Proving Grounds to the development of medical antidotes to chemical warfare agents.

Wallace H. McCurdy, Jr. Undergraduate Award in Analytical Chemistry [2000, reconstituted 2007]: An award given to the graduating senior in the Department of Chemistry and Biochemistry who best exemplifies scholarship in analytical chemistry. The award consists of an honorarium of \$500. The award honors **Wallace H. McCurdy, Jr.**, faculty member 1959-1992.

William A. Mosher Fund: supports fellowships for CHEM/BIOC graduate students. The fellowships honor **Prof. William A. Mosher**, who chaired the Department from 1945 to 1969.

James A. Moore Undergraduate Award in Organic Chemistry [2000]: An award given to the graduating senior in the Department of Chemistry and Biochemistry who best exemplifies scholarship in organic chemistry. The award consists of an honorarium of \$500. The award honors **Prof. James A. Moore**, faculty member 1955-1988.

Joseph H. Noggle Undergraduate Award in Physical Chemistry [1999]: supports an annual award (currently \$500) given to the graduating senior who best exemplifies scholarship in physical chemistry. The award honors **Prof. Joseph Noggle**, faculty member 1971-1998.

Gene J. and Frances E. Schiavelli Undergraduate Research Fellowship [2005]: An award (currently \$500) given to an undergraduate chemistry or biochemistry major who shows special promise as a research scientist, as demonstrated by work accomplished during his or her academic career. The award is supported by an endowment provided by **Dr. Mel Schiavelli**, University Provost (1994-2001).

C. Frank Shaw III Undergraduate Award in Inorganic Chemistry [1992]: The award, presented by **Dr. C. Frank Shaw III '66**, Professor of Chemistry at Illinois State University, is given for outstanding classroom and laboratory performance in inorganic chemistry by an undergraduate chemistry or biochemistry major. The stipend is \$500.

C. Frank Shaw III Undergraduate Inorganic Research Fellowship [2010]: This \$500 award, endowed by Dr. C. Frank Shaw III '66, Professor of Chemistry at Illinois State University, is given to an undergraduate CHEM/BIOC major who demonstrates exceptional aptitude and promise for research in the area of inorganic chemistry. The primary intent of the Fellowship is directed at providing financial support for a junior CHEM/BIOC major engaged in full-time research in inorganic chemistry during the winter (usually) or summer session. Awards to senior, sophomore, or freshmen students are not precluded, should the situation warrant them. Selection of the recipients will be made by the members of the INOR Division.

Joel Silver Award Fund [1973]: supports an award (currently \$300) given in memory of **Joel L. Silver**, a graduate student killed in a traffic accident in his last doctoral year (1971), that recognizes excellent achievement in research, as well as a highly professional presentation of results at an annual symposium.

Glenn S. Skinner Award Fund [1968]: supports an annual award (currently \$3K) to a graduate student in recognition of distinction in scholarship, research and service to the Department. The award honors **Prof. Glenn S. Skinner**, who was a chemistry faculty member from 1928 to 1958.

Trofimenko Memorial Prize [2007]: This \$500 award, in memory of **Dr. Swiatoslaw 'Jerry' Trofimenko**, creator of the polypyrazolylborate ligand system and visiting scholar in the Department from 1996 until his death in 2007, is given annually to a graduate student in the Department who has distinguished him/herself in the area of 'creative inorganic synthesis.'

Carl A. von Frankenberg Undergraduate Award in Chemistry Education [2005]: supports an annual award (currently \$500) given to the graduating senior who best exemplifies scholarship in, and the practice of, chemistry education. The award honors **Prof. Carl von Frankenberg**, faculty member 1961-1997.

NAMED CHEM/BIOC LECTURESHIPS

Our Department has established three named lectureships that are held annually to honor former distinguished members of our faculty. Gifts from alumni and friends to the endowments that support these lectureships are most welcome and appreciated:

Richard F. Heck Award and Lectureship

The Heck Award and Lectureship was established in 2004 to honor Emeritus Professor Richard F. Heck's seminal contributions in palladium-catalyzed cross couplings and other transition metal-catalyzed transformations. The former was recognized by Prof. Heck's being awarded the 2010 Nobel Prize in Chemistry (shared with Profs. Ei-ichi Negishi (Purdue University) and Akio Suzuki (Hokkaido University)). Prof. Heck was a University of Delaware faculty member from 1971 to 1989.

John C. Wriston, Jr. Memorial Lectureship

This memorial lectureship was created in 2007 in honor of John C. Wriston, who taught at UD from 1955-85. Dr. Wriston was the first biochemist in what was then the Department of Chemistry. He played a major role in the formation and growth of the Biochemistry Division within the Chemistry Department, which eventually renamed itself as the Department of Chemistry and Biochemistry.

Mary Elizabeth Kramer Memorial Lectureship

Our newest Lectureship (initiated in 2012) recognizes the devoted service provided by (the late) Ms. Kramer, as she taught thousands of CHEM-103/104 General Chemistry students from 1986-2012. It will support an annual lecture presented by a leading authority in the field of chemistry education.



College of Arts & Sciences

DEPARTMENT OF CHEMISTRY
& BIOCHEMISTRY

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Dept. of Chemistry & Biochemistry
University of Delaware
Newark, DE 19716-2522

Telephone: (302) 831-1130

FAX: (302) 831-6335

E-mail: jlburm@udel.edu

Last Name	First Name or Initial	Middle Name or Initial	Previous Name
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Your Position _____ Company Phone (_____) _____

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The Departmental Seminars and Colloquia schedules are located on the UD Departmental web page (www.udel.edu/chem).

Please use the remaining space to give information about yourself and your family. Do you have any questions or requests? Please let us know! _____

Professor John L. Burmeister

Department of Chemistry & Biochemistry

University of Delaware

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