April 2014 Issue

Publications


New Faces
Brianna Hatfield joined the business office (replacing Courtney Kawlewski) on April 7. Brianna grew up in the Lafayette area, graduating from McCutcheon High School in 2007. She attended Ivy Tech State College studying nursing and business. She comes with a background as a customer service associate with Lafayette Savings Bank and as a licensed customer service representative with Farmers Insurance. In March 2011, Brianna married her high school sweetheart, Jake. In their free time, they enjoy riding motorcycles, target shooting, spending time with family and friends, and being involved in Christian fellowship activities among other things. Brianna’s mom, Joni Herman, works for the Office of Indiana State Chemist here in BCHM. In addition to Brianna’s parents, she has a brother, two sisters-in-law, two brothers-in-law, and one niece.

Awards & Recognition
Freshman Andjela Djokovic received a Big Ten women’s tennis Sportsmanship Award. The student-athletes chosen as Sportsmanship Award winners are individuals who have distinguished themselves through sportsmanship and ethical behavior. These student-athletes must also be in good academic standing and have demonstrated good citizenship outside of the sports-competition setting.

Junior Peter Mercado-Reyes received a 2014 LSAMP (Louis Stokes Alliance for Minority Participation) Research Scholar of the Year award, which recognizes students who have not only excelled in their academics, but have sought leadership roles to increase the number of students actively engaged in STEM learning experiences.
Junior Emily Erickson received a 2014 Barry Goldwater Scholarship. The scholarship was authorized by the United States Congress in 1986 to honor Senator Barry Goldwater, who served his country for 56 years as a soldier and statesman, including 30 years of service in the U.S. Senate. The creation of this scholarship pays tribute to the leadership, courage, and vision of Senator Goldwater and establishes in his name an endowed recognition program to foster and encourage excellence in science and mathematics. Up to 300 students in mathematics, the natural sciences, and engineering who are juniors and seniors in the 2013-2014 academic year were selected for scholarships nationwide.

Natalia Dudareva received the 2014 Sigma Xi Research Award and was honored at a banquet on April 2. The award, which honors a faculty member for outstanding research, is presented by the Purdue chapter of Sigma Xi, a nonprofit membership society of scientists and engineers.

Mark Hall and his lab members were featured in Purdue Today for identifying enzymes that help fix cancer-causing DNA defects.

Andy Tao was promoted to Professor of Biochemistry. Dean Jay Akridge surprised him with his letter of promotion on April 4.

Andy Tao received a 2014-2015 PRF International Travel Grant in the amount of $1,000. The award will help fund his travel to Geneva, Switzerland, in August to attend the 20th International Mass Spectrometry Conference.

Spring Awards Convocation
This year we were honored to have alumni and guests attend the convocation. Brad Sheares (Ph.D. 1982, Carlson) along with Haile Mehansho (former postdoc of Carlson) and spouse Azieb Mehreteab attended the convocation to honor the Henry A. Moses and Don Carlson Awards; J. Yun Tso (Ph.D. 1981, Zalik) honored the inaugural Kwok Yip Tso Scholarship in Biochemistry; and Dr. Esther Weiner to honor the Henry Weiner Travel Award.

Sara Cloutier (Tran lab) is the 2014 recipient of the Don Carlson Award. This award is given annually to recognize a postdoctoral fellow, research associate or staff scientist for outstanding research accomplishments in the lab. Sara is a research assistant and is being recognized for her contributions to the early NIH funding received, multiple publications and recognition for high impact discoveries, mentoring of students, and departmental service.
Brett Bishop (Ogas lab) and Michael Melesse (Hall lab) received the Beach and Weiner Travel Awards. Each award provides $1,000 to help defray the costs to attend a scientific meeting. Brett (Beach award) will present a poster or talk at the Cell Symposia: Transcriptional Regulation in Development in Chicago in July. Michael (Weiner award) is planning to present a poster or talk at the FASEB Yeast Chromosome Structure, Replication and Segregation meeting in Steamboat Springs, CO in July.

Jesse Murphy (Kappock lab) was recognized as the recipient of the 2014 Outstanding TA in Biochemistry (formerly the Hickory Stick Award), announced in the March newsletter.

Brendan Powers (Hall lab) is the 2014 recipient of a one-year Purdue Research Foundation (PRF) Research Grant. These grants are provided by the College of Agriculture in conjunction with the Office of the Vice President for Research. The award recognizes Brendan’s research and teaching accomplishments and will allow him to focus his efforts on the research projects that will form the basis of his doctoral dissertation, which involves characterizing Cdc14 specificity \emph{in vivo} by SWATH-MS on the AB SCIEX TripleTOF® 5600+ System (pictured). This study will hopefully provide insight into the regulatory role Cdc14 plays in governing mitotic exit and promoting genome stability.

Kelly Sullivan is the 2014 recipient of the Arnold K. Balls Award for outstanding graduate student. This award is given annually to one of our graduate students who has demonstrated outstanding research potential, scholarliness and intellectual curiosity. Kelly was also awarded a Bilsland Dissertation Fellowship for 2014-15. The College of Agriculture in conjunction with the Graduate School makes available these fellowships to provide a semester of salary support to graduate students who are within the final year of completing their Ph.D. degree. These fellowships are awarded on a competitive basis to students whose research has resulted in scholarly contributions to their respective fields, usually in the form of one or more publications or manuscripts in press. Kelly plans to graduate in May 2015.
Kristi Trimble received the 2014 Linda Siersema Staff Excellence Award. This award was established in 2013 and is given annually to a staff member who has demonstrated outstanding performance and service to the department. Kristi has been the administrative assistant for the department for eleven years.

Siwen Wang (Tran lab) is the 2014 recipient of the Henry A. Moses Award, established in 2008 by Biochemistry alumnus Dr. Bradley Sheares to honor fellow alumnus Dr. Henry Moses for his contributions to research, education and service. The goal of this award is to recognize a graduate student for an early publication. Siwen is recognized for her 1st author paper, “Long Noncoding RNAs Promote Transcriptional Poising of Inducible Genes” (2013) *PLoS Biology*.

**Biochemistry Undergraduate Scholarships:**
We are fortunate to have many generous alumni who donate funds to make our departmental scholarships possible. We are especially pleased to be awarding scholarships from two new accounts this year.

Dr. J. Yun Tso established the **Kwok Yip Tso Scholarships in Biochemistry** in honor of his father. Dr. J. Yun Tso received his Ph.D. degree in biochemistry from Purdue (1981, Zalkin), and was a post-doctoral fellow at Cornell and Stanford Universities. Dr. Tso is a cofounder and managing partner of JN Biosciences and has twenty-six years of antibody drug development experience.

The 2014-2015 recipients are: Steve Dilk and Cody Schnur

Our other new scholarship is the **David and Mary Scheible Scholarship in Biochemistry**. David Scheible received his bachelor’s degree in biochemistry and master’s in industrial administration from Purdue. He is President and CEO of Graphic Packaging Corporation in Marietta, Georgia.

The 2014-2015 recipient is: Kyle Robinson

**The Ray W. Fuller Memorial Scholarship** was established in 2007 by Biochemistry alumnus David Schroeder (B.S. 1962, M.S. 1966, Ph.D. 1968) in honor of graduate alumnus Ray Fuller (Ph.D. 1961) for his many contributions to science and education.

The 2014-2015 recipient is: Peyton Spreacker
The Patrick C. Matchette Scholarship was established in 2000 by Dr. Matchette, who received a bachelor’s degree in biochemistry from Purdue in 1958 and a DVM in 1966. He is a retired manager of Abbott Laboratories Agricultural Research and Development.

The 2014-2015 recipient is: Emma Lendy

The Edwin T. Mertz Memorial Scholarship was established in 2001, thanks to a substantial gift from Ronald (B.S. 1956, Ph.D. 1962) and Carolyn Chance Dr. Mertz was a professor in the Department of Biochemistry at Purdue from 1946-1976.

The 2014-2015 recipients are: (L-R) Mitch D’Aloia, Ryan Louer, Cole Wunderlich, Iris Archer, Emory York and Michael Busche
Not present: Yi Wen

The Zygmunt Family Scholarship in Biochemistry was endowed by Dr. Deb Zygmunt and her mother, Mrs. Loretta Zygmunt in memory of Deb’s father, Walter A. Zygmunt. Deb Zygmunt received her B.S. in biochemistry from Purdue in 1977 and her M.D. from Indiana University.

The 2014-2015 recipients are: (L-R) Kaelan Brennan, Madeline Powell, Kirsten Westerhouse and Ashley Ochs
Not present: Emily Erickson, Adam Fessenden, Quinton Nannet, Sam Schaffter and Mackenzie Schultz

Outstanding Students in Biochemistry
Each year, the department selects one student as the outstanding student from each class on the basis of excellence in academics, research and service. These students are then nominated for the college-level awards.

Freshman: Peyton Spreacker from Indianapolis got off to a strong start last fall, doing well academically and joining Vikki Weake’s lab. Peyton is a Presidential Scholar and member of the Honors College as well as the Alpha Lambda Delta Phi Eta Sigma Freshman Honor Society. She is a member of the Biochemistry Club and Purdue Catholic Students. This spring, she has been serving as a mentor to BCHM 100 Honors students for their honors assignment in the course.
Sophomore: Quinton Nannet from New Richmond, Indiana, started undergraduate research this year in the Ogas lab. He is an Ag Ambassador and served as a Boiler Gold Rush Team Leaders last year and will be a Team Supervisor this year. He is a founding member of MEDLIFE Purdue, and serves on the Executive Board as a Mobile Clinic Officer. This summer he will study abroad in the Dominican Republic in a program specializing in Spanish and healthcare. We are pleased to announce that Quinton was selected as the Outstanding Sophomore in the College of Agriculture.

Junior: Emily Erickson from Clarks Hill, Indiana, was involved in research while still in high school, working in a nuclear engineering lab as a junior and a botany and plant pathology lab as a senior. She has been working in Karen Plaut’s lab since 2011. Emily is a member of the Biochemistry Club, the Dairy Club, and a co-founder of the Purdue Goat Club. She is a member of the Purdue Philharmonic Orchestra as principal viola player. This spring, she was selected as a Goldwater Scholar and as a member of Mortar Board. This summer, Emily will intern at the Mayo Clinic in Rochester, Minnesota. She is currently studying abroad in Ireland.

Senior: Erin Nicklow from Medina, Minnesota, has held several leadership positions in Alpha Xi Delta Sorority, most recently serving as Alumnae Relations Chair. Erin served as the Biochemistry Club’s outreach coordinator for three semesters. She did undergraduate research in the Ogas lab. Erin graduated a semester early, and was selected as the student commencement responder in December 2013. Erin will begin her doctoral studies at Cornell University in the fall.

Graduate Student News
Dr. Bhaskarjyoti Sarmah held an information session for the graduate students and postdocs on April 8 and later that evening with the Biochemistry Club. He shared with the groups his career path after his Ph.D. and talked about opportunities at Lilly Research Laboratories. Bhaskarjyoti did his postdoctoral research at Vanderbilt University with Beth Tran.

Heejin Yoo (Dudareva lab) passed her Ph.D. defense on April 18.
The following students passed their preliminary exams:

Chris Petell (Gowher lab) on March 24.

Siwen Wang (Tran lab) on April 1.

Anwesha Sanyal (Seema Mattoo lab) on April 15.

Funmilayo Adebisin (Dudareva lab) on April 29.

Aamir Mir (Golden lab) will take over for Amjad Nasir as the Purdue Graduate Student Government (PGSG) Senator representing the Department of Biochemistry for the 2014-2015 academic year. For more information about the PGSG, you may visit their website, http://web.ics.purdue.edu/~pgsg/.

Two students participated in the 2014 Office of Interdisciplinary Graduate Programs (OIGP) spring poster session on April 2. Jingqun Ma (Weake lab) presented a poster, “Affinity-based Isolation of Tagged Nuclei from Drosophila Tissues for Gene Expression Analysis” and Linna Wang (Tao lab) presented a poster, “In-gel Visualization and Identification of Phosphoproteomes”.
“Discover U” Undergraduate Research Poster Symposium
The annual Undergraduate Research Poster Symposium was held April 8 in the Purdue Memorial Union ballrooms. Five biochemistry students presented posters at the event: Ashley Ochs (R. Pogranichnyi, ADDL), Moriah Massafaro (Hughes, BTNY), Alexis Zobel (R. Pogranichnyi, ADDL), Monica Bomber (Ogas), and Brittney Offenberger (Stewart, ANSC). Ashley Ochs was awarded third place among the College of Agriculture posters.

Discovery Learning Research Center Poster Session
An undergraduate student research poster session and reception on April 3 highlighted the achievements of students in a host of interdisciplinary internship programs affiliated with Discovery Park. Two biochemistry students participated in the poster session. Junior Peter Mercado-Reyes exhibited a poster about his research in the Clemens lab as part of the Louis Stokes Alliance for Minority Participation (LSAMP) internship program, entitled “Novel Pathway Impacts Neurodegenerative Disease: Ack Modulation Suppresses Pink1 and Parkin Neurodegenerative Phenotypes”. Junior Yu Xue’s research was in the Department of Mechanical Engineering Technology through the Discovery Park Undergraduate Research Internship (DURI) program. His poster was entitled, “Using Plants to Metabolize Volatile Organic Compounds in Indoor Air”.

BCHM 490 Poster Session
30 undergraduates presented their research to faculty and students during this year’s BCHM 490 Senior Poster Session on April 28. This is part of their capstone project, required for graduation from the College of Agriculture, which consists of three credits of BCHM 498 or 499 undergraduate research plus the semester-long BCHM 490 senior seminar, in which they learn how research is presented.

Biochemistry Club Selects New Officer Team
On April 24, the Biochemistry Club held its annual cookout with faculty and announced the new officer team for 2014-15.
President: Corinne Wilschke
Vice President: Christina Smith
Secretary: Samuel Kim
Treasurer: Scott Gentry

Biochemistry Junior Mercedes LaLand (right front) was among 16 students in the MANRRs-Purdue Chapter who traveled to Birmingham, AL to attend the MANRRS 2014 National Conference on March 27-29.
Outreach chair: Kyle Robinson
Outreach co-chairs: Ryan Louer and Jacob Crosser
Ag Council Liaison: Lauren Werner

**Andreas Weber**

Dr. Andreas Weber from Heinrich-Heine University was the guest lecturer for the Plant Sciences Lecture Series on April 15. Dr. Weber met with Sherry Pogranichniy and Linda Vallade during his visit to discuss the possibility of starting a new study abroad program for undergraduates in biochemistry. This program would be modeled after a similar exchange program between Heinrich Heine University in Dusseldorf and Michigan State University. There would be opportunities for students to take classes and participate in undergraduate research.

**Spring Fest and Ag Week**

The Biochemistry Club had a great Spring Fest this year! Throughout the event on April 12 and 13 over 700 community youth came through the lab to make lava lamps, learn about oobleck, design their own UV bead jewelry, squeeze out gummy worms, and have a blast playing with Hollywood snow! The students and parents alike really enjoyed the periodic demonstrations of Mentos and Diet Coke explosions along with hot ice. This successful event was made possible by the incredibly hard work put forward by many members of the Biochemistry Club, including Caolin Hoctor, Monica Bomber, Sam Kim, Christina Smith, Corinne Wilschke, Joshua Saliutama, Will Beyer, Kayleigh Nyffeler and Ryan Louer.

Ag week was also successful with explanations of genetically modified organisms to the Purdue undergraduate community on the Hello Walk on April 10. There were also lava lamps for 40 elementary kids that visited with their college mentors. This was possible through the efforts of Biochemistry Club members including, Will Beyer, Corinne Wilschke and Monica Bomber.

**World Food Prize**

Each year Purdue invites Indiana high school students and their teachers to participate in the World Food Prize Youth Institute, held this year on April 10 and 11. During this two-day event, they interacted with and learned from experts in agriculture, life sciences, and other disciplines related to global food security and network. Sixty Indiana students from grades 9-12 participated along with their teachers/mentors. Each completed a research paper on food security in a developing country, and presented it to a panel of experts from Purdue and finalist were selected to represent Indiana at the Global Youth Institute of the World Food Prize in De Moines, Iowa, later this year. Students also had the opportunity to get some hands-on experience by participating in a number of workshops.

Orla Hart represented the Department as a panel judge for student presentations, and together with Biochemistry undergrad Courtney Orme, delivered a workshop, “A cup of tea makes everything better: How tea polyphenols decrease dental disease, impact obesity, type II diabetes and more, by inhibiting salivary amylase”.

Alumni News
Erin Nicklow (B.S. 2013) was one of ten students awarded a 2014 Purdue Mortar Board Graduate Fellowship. Mortar Board annually awards these fellowships to encourage Purdue students of high character and ability to pursue an advanced degree in graduate or professional studies. Recipients are selected based on the three pillars of Mortar Board: scholarship, leadership and service. The fellowship has been available to Purdue students for almost 70 years, and Mortar Board has awarded almost $1 million in fellowships to date.

Going the Extra Mile
Clint Chapple travelled to Athens, GA to attend the 8th Annual Glycoscience Symposium and the DOE Council for Chemical and Biochemical Sciences Workshop at the University of Georgia. He presented a talk entitled, “Evidence for metabolite-driven feedback mechanisms in Arabidopsis” at the symposium. Whitney Dolan (Chapple lab) travelled to Santa Clara, CA where she presented a poster entitled, “Investigating Mediator interactions that influence phenylpropanoid metabolism” at Santa Clara University.

Jim Forney travelled to Arlington, VA to attend a workshop for the NSF Research Experience for Undergraduates programs. He then travelled to College Station, TX to serve on an External Academic Program Review for the Department of Biochemistry and Biophysics at Texas A&M University.

Humaira Gowher travelled to India to give a talk entitled, “Modulators of DNA methylation and their role in gene expression” at the International Conference on Cellular and Molecular Mechanisms of Disease Processes meeting at the University of Kashmir as well as in the Department of Biochemistry at Kashmir. She also presented this talk for the Department of Biochemistry at the Indian Institute of Sciences in Bangalore.

Xiaoqi Liu and Andy Tao travelled to San Diego, CA to attend the American Association for Cancer Research (AACR) annual meeting.

Andy Tao travelled to Jiangsu, China to collaborate with researchers and visit the Jiangsu Wujin Hi-Tech Industrial Zone.

Axelrod Lectures
Kathy Gould from the Department of Developmental Biology at Vanderbilt University School of Medicine presented this year’s Bernard Axelrod Lectures on April 22 and 23. Gould received her A.B. degree in biochemistry from the University of California, Berkeley and her Ph.D. in biology from the University of California, San Diego. Gould was a Fellow of the Jane Coffin Childs Memorial Fund for Medical Research at the University of Oxford working with Sir Paul Nurse. She joined the faculty of VUMC in 1991 where she has been ever since. Her honors include the Boehringer-Ingelheim New Investigator Award, Searle Scholar Award, Investigator of the Howard Hughes Medical Institute, and Fellow of the AAAS. Gould’s laboratory studies the mechanism and regulation of cytokinesis in fission yeast, attempting to gain a comprehensive mechanistic understanding of the process.

The Challenge 5K Run/Walk
The Purdue Challenge, hosted by the Center for Cancer Research, is a walk/run event that started in 2008 as a means to bring together the Purdue University community to combat cancer and support cancer research. The Challenge is open to runners and walkers of all ages and abilities that share a common goal: Fight Cancer! All money raised supports the research happening at the Center. The Challenge also represents support and respect for all that have been impacted by cancer.
This year, the biochemistry department had several participants:
Scott Briggs
Hana Hall
Mark Hall
Kayla Harmeyer
Anton Iliuk and his wife Christina
Michael Melesse and his girlfriend Veronica
Luyen Nguyen
Nina Serratore
Andy Tao and his wife Vicky
Tiffany Young
Yueping Zhang

Strictly Personal
Sherry Pogranichniy’s son Nicholas, a sophomore in Chemistry, received a 2014 Barry Goldwater Scholarship.

Kit Ma (Tran lab) organized a group of 20+ members of the department for a paintball outing on April 26.

Birthdays
Uma Aryal
Yueping Zhang
Wenjie Zeng

Upcoming Events
May 5       Finals Begin
May 10      Semester ends
May 16-18   Commencements
May 20      BCHM Seminar
            H.S. Savithri
            WSLR 116, 3:00 PM
May 22      SPRING FLING
            Faculty, Staff, Grad Staff, & Retirees
            Appreciation Day
            France A. Córdova Recreational Sports Center
May 26      Memorial Day (offices closed)