The Department of Biomolecular Chemistry
UNIVERSITY OF WISCONSIN-MADISON
2016-2017
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Greetings from the Department of Biomolecular Chemistry

Dear Alumni and Friends,

I am delighted to reconnect with you and share with you some of the news and accomplishments of the department - students, staff and faculty – from the past year. The growth in the number of faculty in the department is extraordinary and I think you will find the research programs of our three assistant professors very exciting. Of course the innovative and creative research carried out by our graduate students remains a hallmark of our department’s success. I invite you to read about their accomplishments and those of our faculty and staff. I am also excited to tell you about our recent move to new state of the art facilities on Henry Mall; the Hector F. DeLuca Biochemical Sciences Complex. Despite the move, our department is still part of the medical school, which has been renamed School of Medicine and Public Health.

The new complex, which houses the Departments of Biomolecular Chemistry and Biochemistry, consists of three buildings, two research facilities and a teaching and administrative building, all connected by skywalks. The Department of Biomolecular Chemistry laboratories reside in the Biochemical Sciences Building, which features modern laboratory and office space. The department administrative office and teaching laboratory are located in the renovated 1912 and 1937 Biochemistry Building. Within both buildings are many conference rooms, auditoriums, and teaching spaces, which allow for interaction and collaboration amongst faculty, students, and staff from across campus. A tremendous feature of our new research is its openness—large glass windows in the atrium, in labs and in the beautiful lunchrooms help keep us connected to the rest of the busy campus, and the open flow of the labs help keep us connected throughout our work days to our fellow colleagues.

As chair, I am excited and energized to build upon our strong research history to lead our department to even further successes in the coming years. I invite you to stop by for a visit, reconnect or meet with our faculty, staff and students and tour our new research home. I am proud of the rich environment of collegiality, collaboration, and discovery that defines our department and hope you will be too!

Sincerely,

[Signature]

Biochemical Sciences Building:
Our new home

Biochemical Sciences Building: Our new home
### Department Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Research Area</th>
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<tbody>
<tr>
<td><strong>ANJON AUDHYA</strong></td>
<td>Associate Professor</td>
<td>Understanding the fundamental mechanisms by which membrane proteins, lipids, and other macromolecules are transported through eukaryotic cells.</td>
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<tr>
<td><strong>DAVID A. BROW</strong></td>
<td>Professor</td>
<td>Molecular machines of gene expression and RNA-based gene regulation.</td>
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<tr>
<td><strong>BARON CHANDA</strong></td>
<td>Associate Professor</td>
<td>Understanding the fundamental mechanisms that underlie gating and modulation of voltage-activated ion channels. Dr. Chanda is also an associate professor in the Department of Neuroscience.</td>
</tr>
<tr>
<td><strong>JOSHUA J. COON</strong></td>
<td>Professor</td>
<td>Bioanalytical chemistry, mass spectrometry, and proteomics.</td>
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<tr>
<td><strong>GHEORGHE CRACIUN</strong></td>
<td>Associate Professor</td>
<td>Mathematical and computational methods in biology and medicine. Dr. Craciun is also an associate professor in the Department of Math.</td>
</tr>
<tr>
<td><strong>JOHN M. DENU</strong></td>
<td>Professor</td>
<td>Mechanisms and biological function of reversible protein modifications involved in modulating signal transduction, metabolic regulation and chromatin dynamics. Dr. Denu is also the Epigenetics theme leader at the Wisconsin Institutes for Discovery.</td>
</tr>
<tr>
<td><strong>MELISSA M. HARRISON</strong></td>
<td>Assistant Professor</td>
<td>Transcriptional mechanisms driving early embryonic development and the establishment of totipotency.</td>
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<tr>
<td><strong>CHRISTINA M. HULL</strong></td>
<td>Associate Professor</td>
<td>Transcriptional networks in fungal development and pathogenic spore biology and host-pathogen interactions. Dr. Hull also has an appointment in the Department of Medical Microbiology &amp; Immunology.</td>
</tr>
<tr>
<td><strong>JAMES L. KECK</strong></td>
<td>Professor</td>
<td>Structural mechanisms that drive DNA replication, recombination, and repair reactions.</td>
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<tr>
<td><strong>PATRICIA J. KILEY</strong></td>
<td>Chair and Professor</td>
<td>Signaling pathways and gene expression programs used by organisms to respond to changes in the levels of oxygen in the environment.</td>
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PETER W. LEWIS  
*Assistant Professor*

**RESEARCH**
Epigenetic mechanisms in development and cancer. Dr. Lewis is also an investigator in the Epigenetics Theme at the Wisconsin Institutes for Discovery.

DEANE F. MOSHER  
*Professor*

**RESEARCH**
Cell structure and signaling, molecular medicine, and structural biology.

MICHAEL D. SHEETS  
*Professor*

**RESEARCH**
Post-transcriptional control of vertebrate development, and regulated mRNA translation as an important mechanism for the regulation of early cell-fate decisions in vertebrate embryos.

JAMES DAHLBERG  
*Professor Emeritus*

**RESEARCH**
Mechanism and control of microRNA processing and the function of miRNAs during early development in *Xenopus laevis* and early embryos.

ROBERT H. FILLINGAME  
*Professor Emeritus*

**RESEARCH**
Molecular mechanisms of ATP synthesis during oxidative phosphorylation.

MATTHEW J. MERRINS  
*Assistant Professor*

**RESEARCH**
Biomolecular folding and interactions, membrane dynamics and proteins, and metabolism and endocrinology. Dr. Merrins also has an appointment in the Department of Medicine, Division of Endocrinology, Diabetes and Metabolism.

BRADFORD S. SCHWARTZ  
*Professor*

**RESEARCH**
Initiation and regulation of protease cascades, which govern a variety of essential physiological processes from blood clotting to mechanisms of cell death. Dr. Schwartz has an appointment in the Department of Medicine and is the Chief Executive Officer of the Morgridge Institute for Research.

BMC Trivia

The department will be celebrating its 100th birthday in a few years! Can you answer the questions below related to the rich history of our department? Answers can be found in the Department History link under the About Us tab on the Biomolecular Chemistry website.

https://bmolchem.wisc.edu/history.html

1. Who was the founder and first chair of the department?

2. Who was the first woman to receive a PhD from the department?

3. Who is the author of the series *Principles in Biochemistry*? What year did he or she receive their PhD from the department?

4. What year was the department changed from Physiological Chemistry to Biomolecular Chemistry?

5. When did the department move to the new Biochemical Sciences Complex? Where was the department located previously?
Dr. Joshua Coon, Professor of Biomolecular Chemistry, is a world leader in mass spectrometry approaches. Untangling the multi-faceted networks that regulate complex organisms and their diseases will require innovative technologies to globally monitor many classes of biomolecules, including nucleic acids, proteins, and metabolites. Methods for global analysis of proteins and metabolites – crucial biological effector molecules – are less evolved and markedly less accessible. The overarching, two-fold mission of his program is to facilitate expedient, comprehensive analysis of proteins and metabolites by innovating new mass-spectrometric technologies and to advance biomedical research by applying these techniques. His work reaches across a broad spectrum of biological problems from basic science to applied problems in bioenergy and human health. To accelerate exciting, impactful biology and to disseminate his methods, he collaboratively applies his technology by working with many groups on campus.

One of Josh’s current collaborative projects is using proteomics to identify the function of unknown human mitochondrial proteins. A goal of this work is to fully characterize the mitochondrial proteome with an eye towards filling in knowledge gaps that hinder our understanding of mitochondrial diseases. Although the role of mitochondria in driving ATP synthesis is well known, the function of many mitochondrial proteins remain a mystery. Using the Coon Lab’s cutting edge spectrometry techniques, the function of many new mitochondrial proteins is being identified.

The Coon lab developed NeuCode in vivo labeling for multiplexed quantitation in mouse tissues. Using this approach, coupled with multiple genetically engineered mouse models, a role for Bap1 in maintaining metabolic homeostasis in liver and pancreas was recently demonstrated.

(a–c) Overviews of the experimental design and high-resolution quantitative MS analysis (a), the Y3K data set (b), shown as hierarchical clusters of Δgene strains and significantly perturbed molecules (relative abundances compared to WT as quantified by MS, mean, n = 3; P < 0.05, two-sided Student's t-test), and (c) the multiomic data analysis and visualization tools developed here.
Meet Our New Faculty

**Dr. Peter Lewis** joined the Department of Biomolecular Chemistry as an Assistant Professor in September 2013. Dr. Lewis earned his PhD at the University of California-Berkeley with advisor Michael Botchan. He then completed a postdoctoral fellowship at the Rockefeller University with C. David Allis. Dr. Lewis’s lab studies how chromatin dynamics influence gene expression during mammalian development and tumorigenesis.

Dr. Lewis’s research program is rooted in the idea that chromatin, the physiologically relevant form of eukaryotic genomes, contains an indexing system that represents a fundamental regulatory mechanism that operates outside of the DNA sequence itself. Covalent modifications to DNA and histones - the proteins that package our genome - are implicated in the regulation of gene expression and the stable maintenance of cell type-specific gene expression patterns and cellular identity. Recently, genome-wide sequencing technologies have allowed the notable discovery of somatic mutations in chromatin modifying factors in many types of human cancers. The collective number of oncogenic mutations has led to the emerging view of “driver mutations” in chromatin regulators underlying many human cancers.

A long-term goal of his research program is elucidating the contribution of chromatin structure to the establishment and maintenance of gene expression programs involved in normal and neoplastic development.

The world of histone H3.3. The histone variant H3.3 is enriched at genomic loci undergoing nucleosome turnover. Cells have at least two pathways to deposit H3.3: HIRA chaperone complex is involved in H3.3 deposition at transcription start sites, while the ATRX-Daxx complex is involved in H3.3 deposition at telomeres, pericentric repeats, and other heterochromatic loci.

**Dr. Feyza Engin** received her PhD at the Baylor College of Medicine and then completed a postdoctoral fellowship at Harvard University. She then joined the Biomolecular Chemistry faculty as an Assistant Professor in August 2014. The main goal of Dr. Engin’s laboratory is to understand the role of organelle stress in the pathogenesis of diabetes. The Engin research group is particularly interested in examining the β-cell Endoplasmic Reticulum (ER) Stress and Unfolded Protein Response (UPR) in the context of autoimmune diabetes.

Type 1 diabetes (T1D) results from the destruction of the insulin-secreting β-cells by an immune mediated process. The increasing incidence of T1D around the world, especially among children, has been of great concern. Despite intensive efforts to identify the underlying causes of this disease, it is still not clear why β-cells are destroyed, what triggers the initial immune destruction and how it could be prevented or reversed.

The endoplasmic reticulum (ER) is an organelle that is responsible for the proper folding of proteins and biosynthesis of lipids and steroids. Endoplasmic reticulum stress, caused by protein misfolding, chronic inflammation and environmental factors, is emerging as a novel paradigm for diabetes pathogenesis. To cope with ER stress, the Unfolded Protein Response (UPR), a signaling cascade mediated by ER membrane-localized sensors is triggered to re-establish cellular homeostasis. ER stress and aberrant UPR have been shown to play a role in the pathogenesis of inflammatory and autoimmune diseases. However, the role of ER stress and the UPR in pathophysiology and in the initiation and
propagation of the autoimmune responses in T1D remains incompletely defined.

The Engin lab recently identified a defective UPR in pancreatic β-cells from two different T1D mouse models as well as in islets of T1D patients. Administration of a chemical ER stress mitigator, tauroursodeoxycholic acid resulted in a marked reduction of diabetes incidence in the T1D mouse models indicating that proper maintenance of the UPR is essential for the preservation of β-cells and that defects in this process can be chemically restored for preventive or therapeutic interventions in T1D.

(a). Pancreas sections from non-diabetic and diabetic patients were obtained from nPOD and co-stained with anti-ATF6α (red), and anti-insulin (green) antibodies (upper panel) and 10–20 islets per sample were quantified by MATLAB® (lower panel). (b). Pancreas sections from non-diabetic and diabetic subjects co-stained with anti-sXBP1 (red) and anti-insulin (green) antibodies (upper panel) and 10–20 islets per sample were quantified by MATLAB® (lower panel). (c). Pancreas sections from non-diabetic and diabetic subjects co-stained with anti-P-eIF2α (red) and anti-insulin (green) antibodies (upper panel) and 10–20 islets per sample per time point were quantified by MATLAB® (lower panel). All data are presented as mean ± SEM, with statistical analysis performed by one-way ANOVA (**p < 0.001, *p < 0.05).

Staff News

Kathy Schlinghen, Senior Lecturer for the department’s Teaching Laboratory, retired in May 2015 after teaching in the department for 39 years. Kathy has been an integral part in instructing future medical students in several BMC and medical school courses. Without Kathy’s dedication to teaching, we would not have had such great groups of undergrads and medical students graduate from our University.

Kathy Wilson, the department’s Financial Specialist, retired in June 2016. Kathy provided invaluable financial services to the department for 31 years and worked on the UW campus for a total of 50 years! Her expertise in payroll, benefits, and post award grant financial management was essential to the department. Kathy devoted countless hours to making sure her job was done well and accurately. Upon retiring, Kathy moved to the Rhinelander, WI area where she and her husband have a cabin. She also enjoys spending time with her four grandchildren and one great-grandchild. We will greatly miss Kathy and all she did for our department!

Joe Oliva, our Senior Instrumentation Specialist was awarded the university’s Distinguished title. Promotion to the rank of Distinguished is reserved for a small number of academic staff whose superlative accomplishments are evidenced by peer recognition beyond the work unit. Joe has worked in the Department for the past 25 years and has proven to be a highly skilled, innovative, and independent colleague with a campus-wide reputation of unrivaled dedication and expertise in his craft. We thank Joe for his exceptional service to the department and campus over his 25-year career. Go distinguished Joe!

Tom Neal, a long time member of our summer teaching staff, has left to become Dean in sunny California. Tom taught the summer session of BMC 314: Intro to Human Biochemistry for the past 20 years. Tom is also an alumni and received his PhD in Physiological Chemistry from UW-Madison in 1992 under advisor Frank L. Siegel. During the Fall and Spring academic year, Tom was a professor and Chair at the University of Wisconsin-Baraboo/Sauk County. Recently, Tom accepted a position as Dean of Instruction of Arts and Sciences at Coastline Community College in Newport Beach, CA. Tom was revered by students and was a joy to have in the department. Good luck, Tom!
The Integrated Program in Biochemistry (IPiB)

It has been ten years since the graduate programs in Biomolecular Chemistry and Biochemistry merged to form Integrated Program in Biochemistry (IPiB) graduate program. In that short period of time we have graduated 33 MS and 250 PhD candidates. Two-thirds of our graduates go on to postdoctoral research positions immediately following graduation, with the second highest percentage (~12%) accepting employment in industry. We actively encourage students to take advantage of professional development opportunities early in their graduate training careers so they have exposure to a broad range of post-graduate career options. These opportunities have included coursework in intellectual property and patent law, elementary education and life sciences communication, and internships in biotechnology and government.

In the 2016-2017 recruiting season, the program received 245 applications from students around the world. Of those applicants, the program recruited 21 outstanding students who will join labs in Biochemistry and Biomolecular Chemistry to begin their thesis work in December 2016.

Our new class is comprised of 11 men and 10 women; 9% of our class are international and 27% are from under represented groups. They join us from the following institutions: Arizona State University, Grand Valley State University, Hamilton College, Indian Institute of Technology, James Madison University, Michigan State University, Mt. Holyoke College, New Mexico State University, Oberlin College, San Diego State University, Union College, University of Arizona-Tucson, University of California-Berkeley, University of California-Davis, University of Illinois-Urbana Champaign, University of Michigan, University of Puerto Rico-Cayey, and the University of Wisconsin-Stevens Point.

The 2016 class continues the research excellence tradition of their peers by having published in such journals as Analytical and Bioanalytical Chemistry, Biochemistry, Journal of Biological Chemistry and Nature Communications. They are former Amgen, Goldwater, Khorana, MARC, Pfizer, and PREP scholars. In addition, they garnered numerous NIH training grant slots and Graduate School fellowships.

The priority of the Integrated Program in Biochemistry is excellence in the training of top young scientists from across the country and internationally. IPiB has 106 PhD candidates at present and we anticipate recruiting a class of 25 in the 2017-2018 admission season, which kicks off in January 2017.

Our current graduate students play an active role in the recruitment of future classmates by helping organize and host three recruitment weekends in January, February, and March each year. Recruitments weekends consist of one-on-one meetings with faculty of interest, tours of campus research facilities, and experiencing the many activities and cultural events Madison has to offer. We strive to create a warm and inviting atmosphere for each student recruit (even though it is typically below freezing in Wisconsin when they visit!) and provide them with a glimpse into the rich research community that defines UW-Madison.
BMC: Where did you complete your undergraduate work? Graduate work? Postdoctoral work? What research topics did you investigate during each of these phases?

MMH: I grew up in Ithaca, New York. As a high school student I worked with an evolutionary biologist (Dan Howard, New Mexico State University) and a population geneticist (Chip Aquadro, Cornell University). I was an undergraduate at Harvard University and spent two years studying the basic mechanisms of gene expression in yeast with Kevin Struhl. After undergraduate work, I spent a year in Oxford, England studying bacterial pathogenesis in Neisseria meningitidis in the lab of Christoph Tang. As a graduate student at MIT, I worked with Bob Horvitz studying how gene expression regulates development in the nematode C. elegans. My postdoctoral work was at the University of California Berkeley studying early embryonic development and gene expression using the fruit fly D. melanogaster with both Mike Botchan and Tom Cline.

BMC: How did you initially become interested in pursuing a career in research? In academia?

MMH: My father was a professor and my mom was an environmental scientist. I have this distinct memory of being about six and out to dinner with my parents. While waiting for dinner, my dad drew a water molecule on a cocktail napkin to explain atoms to my sister and me. Of course, at that time I didn’t want to be a professor, but his enthusiasm for academic pursuits really inspired me. Both my parents constantly ask questions and strive to understand the world better, and that was an important influence on me. Research is problem solving, and I love the challenge. I was drawn to academia because of the possibility to combine cutting edge research with the chance to help train future generations.
I was inspired by the dozens of people my father mentored and his legacy of inspiring and shaping young scientists. Being an assistant professor in the BMC department has been as rewarding as I could have hoped.

**BMC:** What kind of research do you currently conduct in your lab?  
**MMH:** We are studying how during the very first stages of development two distinct cells, a sperm and an egg, can come together to create an entirely new organism. During this time the cells of the embryo transition from specified cell types to pluripotent cells that can then generate an entire new adult organism. Because this process is conserved among all multicellular animals, we are using the many tools available for genetic, genomic, biochemical, and molecular studies in the fruit fly *Drosophila melanogaster* to understand this process. I continue to be amazed that this complex process works as reproducibly and efficiently as it does.

**BMC:** What kinds of questions are you trying to answer through your research?  
**MMH:** We are essentially asking “What needs to happen in a cell for it to transition to a pluripotent cell type such as an embryonic stem cell or an induced pluripotent stem cell?” We are studying this process during embryogenesis because this transition occurs rapidly and efficiently.

**BMC:** How is your research related to human health and disease?  
**MMH:** We are studying basic biological processes involved in embryonic development that are shared among all multicellular animals. I strongly believe that is difficult to predict how fundamental biological discoveries will impact human health. This was really brought home for me when I was working on my PhD in Bob Horvitz’s lab, and he won the Nobel Prize for, among other things, the discovery of programmed cell death. Bob, John Sulston, and Sydney Brenner didn’t set out to make that discovery, and if asked how their lineage of the nematode would impact human health and disease would not have answered that it was going to fundamentally change our understanding of development and cancer progression. Yet that is exactly what it ultimately did. The revolution brought about by CRISPR-mediated genome editing is yet another example of how fundamental research has dramatically altered our capacity to impact human health.

**BMC:** What are some things you like to do outside of the lab?  
**MMH:** Generally being outside (running, biking, hiking). Eating well and drinking well. Spending time with my husband (also an assistant professor at UW Madison). Watching my 3-year old son discover the world and helping to nurture his excitement about learning.

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*Zelda drives zygotic genome activation in Drosophila. Nucleary localized Zelda binds to a set of related heptameric DNA elements early in embryonic development and poises thousands of genes for activation at the maternal-to-zygotic transition (Harrison et al. *PLoS Genet* 2011).*
Paul J. Bertics, Ph.D., died at home on December 22, 2011, suddenly and unexpectedly. At the time of his death, Bertics held the endowed Robert Turell Professorship and was a member of the Department of Biomolecular Chemistry at the University of Wisconsin (UW) School of Medicine and Public Health.

Bertics was born November 6, 1956 in La Jolla, California, the son of John and Pearl (Tarkowski) Bertics and was a 1974 graduate of Carlsbad (California) High School. He received his B.S. at the University of California, Los Angeles, in biochemistry, graduating magna cum laude in 1978. Following college, Paul moved to Madison and entered UW to pursue a Ph.D. He was awarded his Ph.D. in physiological chemistry in 1984 under the mentorship of Harry Karavolas, with his thesis on neuroendocrine progesterone-metabolizing enzymes. Paul returned to California for a postdoctoral fellowship at the University of California, Los Angeles, in biochemistry, graduating magna cum laude in 1978. Following college, Paul moved to Madison and entered UW to pursue a Ph.D. He was awarded his Ph.D. in physiological chemistry in 1984 under the mentorship of Harry Karavolas, with his thesis on neuroendocrine progesterone-metabolizing enzymes. Paul returned to California for a postdoctoral fellowship at the University of California, Los Angeles, in biochemistry, graduating magna cum laude in 1978. Following college, Paul moved to Madison and entered UW to pursue a Ph.D. He was awarded his Ph.D. in physiological chemistry in 1984 under the mentorship of Harry Karavolas, with his thesis on neuroendocrine progesterone-metabolizing enzymes.

Paul joined the faculty at the UW Medical School in 1986 and quickly became an indispensable leader in our academic community.

From the time of his arrival in Madison, Paul led a highly successful and productive research program. His laboratory was always abuzz with new and ongoing projects and participants at the bench. His laboratory was populated with technicians, postdoctoral fellows, and Ph.D. and M.D. candidates and students at many stages of training. Each member of his laboratory played an integral role in his program’s overall efforts. Each had an independent project, but perhaps what made his laboratory so successful and attractive was the encouragement and support each experienced as part of the team led by Paul and his personal dedication to each person and his or her specific area of study. His personal involvement, interest, and commitment to lab members’ work and career exemplified his approach to everything he did professionally and personally. His laboratory was always a “two-way street” and with Paul aboard, there was added and infectious enthusiasm for the research.

Paul received numerous awards for his research including the Dorothy and Charles Inbusch Award for Meritorious Research, the Eli Lilly Biochemistry Award and the highly competitive Kellett Award from UW in recognition of research accomplishments and future potential. Bertics was also an outstanding and inspiring teacher, for which he was often and appropriately well recognized: UW Medical School Student Association Pacemaker Award for Teaching Excellence, UW Medical School Dean’s Teaching Award, UW Medical School (Student Selected) Teaching Award, and the UW Chancellor’s Distinguished Teaching Award.

Paul’s life was not all academics. He enjoyed the out-of-doors and was a skilled fisherman with talents for finding the best streams for large trout. Paul collected and restored antique tube radios. He loved the guitar, played it every day. Paul was devoted to his family, his wife Sandra, and their daughter Victoria, who had her doctorate in marine geobiology and was a delight in his life. For all his skills and accomplishments, Paul was a humble and unassuming person, with a great sense of humor and infectious laugh. He was someone who put people at ease and made them feel good about themselves and what they were doing. He was an extraordinary person and a great friend and colleague. Paul Bertics will be missed, but his legacy lives on in those who knew and learned from him.

To honor the memory of Paul, you can make a tax-deductible donation via our website to support the Bertics Memorial Lectureship. In 2016, Nobel Laureate Randy Schekman presented this lecture.
Each year our faculty, postdocs, and students receive a number of awards recognizing their work and commitment to research and teaching. Several of the recognitions received this year are detailed below. We look forward to continuing our tradition of excellence in research and teaching this academic year.

**FACULTY**

**Professor Jon Audhya** was the recipient of a UW-Madison 2016 Vilas Faculty Early Career Investigator Award. The Vilas Faculty Early Career award recognizes research and teaching excellence of faculty that are in the early stages of their careers.

**Professor David Brow** was elected Fellow to the American Academy of Microbiology and the American Association for the Advancement of Science. Dr. Brow also received 2016 Chancellor’s Distinguished Teaching Award for his exceptional teaching of medical school students.

**Professor Josh Coon**, along with Professors Dave Pagliarini and Lingjun Li, won a prestigious, six million dollar grant to establish the National Center for Quantitative Biology of Complex Systems here at the UW Madison. The center will advance mass spectrometry technology to offer next-generation protein measurement technologies to biologists nationwide.

**Professor John Denu** received a UW-Madison 2016 Kellett Mid-Career Faculty Award. This WARP funded professorship honors faculty who have made major contributions to the advancement of research knowledge, teaching, and service.

**Professor Feyza Engin** was selected to receive a 2016 Shaw Scientist Award from the Greater Milwaukee Foundation. This award recognizes emerging investigators with innovative ideas in biochemistry, biological sciences and cancer research.

**Professor Catherine Fox** was named to Faculty of 1000, Nuclear Structure and Function section.

**Professor Melissa Harrison** was named a 2016 Vallee Scholar by the Bert L and N Kuggie Vallee Foundation. This award is given to early-career biomedical researchers who are engaged in innovative and pioneering work.

**Professor Peter Lewis** was named a Pew Scholar in Biomedical Sciences by the Pew Charitable Trusts. The Pew Scholar is awarded to scientists with particularly creative and innovative approaches and outstanding promise in human health relevant research.

**Professor Michael Sheets**’s publication, “A gradient of maternal Bicaudal-C controls vertebrate embryogenesis via translational repression of mRNAs encoding cell fate regulators,” published in Development was recognized in a UW School of Medicine and Public Health press release.

**POSTDOCTORAL FELLOWS**

**Michael Botts**, a postdoctoral fellow in the Audhya lab, received a F32 Postdoctoral Fellowship from the National Institutes of Health.

**Rashpal Dhillon**, a postdoctoral fellow in the Denu lab, was awarded an R03 grant for Comparative Physiological Studies of Aging from NIH.

**Jing Fan**, a postdoctoral fellow in the Denu lab was awarded a one year fellowship in the metabolism theme at the Morgridge Institute for Research before becoming a Morgridge Investigator and Assistant Professor in the Department of Nutritional Sciences at UW.

**GRADUATE STUDENTS**

**Michael Hanna**, a Molecular and Cellular Pharmacology graduate student in the Audhya lab published a first author paper titled, “Sar1 GTPase activity is regulated by membrane curvature” that was named “Paper of the Week” by the *Journal of Biological Chemistry*.

**Kimberly Krautkramer**, a MD/PhD student in the Denu lab received an F30 Predoctoral Fellowship for Dual Degree Students from the National Institutes of Health. Kim was also first author on a recently published article in the journal *Molecular Cell* titled, “Diet-microbiota interactions mediate global epigenetic programming in multiple host tissues,” was featured in UW-Madison’s campus newsletter.

**Nick Riley**, a Chemistry graduate student in the Coon lab, received an F99/K00 Predoctoral to Postdoctoral Transition Award from the National Institutes of Health, which funds the remainder of his graduate work and up to four years of postdoctoral study.

**Andrew Voter**, a MD/PhD student in the Keck lab, received an F30 Predoctoral Fellowship for Dual Degree Students from the National Institutes of Health.
Keeping the **BMC** Connection

Alumni: Tell us what you are up to….

Are you still involved in the sciences?
Are you teaching?
Are you doing research? If so, where and what is your research focus?
Have you been on any great adventures lately?
We would love to hear from you! Write us, call us, or send us an email! We will publish your updates in our next newsletter and include them in the Alumni section of our [department website](#).

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**Giving opportunities**

We thank you for your continued support of the department and its programs. Your contributions provide the margin of excellence needed to advance the tradition of outstanding research and training in the Department of Biomolecular Chemistry, formerly Physiological Chemistry. To continue to set the standard for excellence in teaching and research, alumni and friends can make a tax-deductible donation to the Department’s Chairman’s Fund ([https://bmolchem.wisc.edu/Alumni-Friends.htm](https://bmolchem.wisc.edu/Alumni-Friends.htm)) through our philanthropic entity, the University of Wisconsin Foundation. This fund provides support for innovative research and training within the Department. Examples of the many giving opportunities include support for the training of our students with stipend funding, awards for excellence in graduate student research or teaching, or meeting travel awards. Other giving opportunities include named lectureships, professorships or funding for particular research programs. If you have any questions about making a financial contribution, a planned gift or establishing a named fund for the Department of Biomolecular Chemistry, please contact Patricia Kiley, Chair, pjkiley@wisc.edu or Kedren Ekelin, Department Administrator, ekelin@wisc.edu.

Thank you for your generous support and Go Badgers!