Dear colleagues and friends of Biological Chemistry;

Welcome once again to the annual newsletter from our Department. This has been a transitional year, since Bill Smith stepped down in 2013 after a successful 10 years of service and the Dean has committed to recruiting a new Chair in 2015. The academic year kicked off once again with the successful departmental Retreat at the Gull Lake Kellogg Biological Station in August, organized by the efforts and enthusiasm of the Biological Chemistry graduate students. As always the scientific sessions at the Retreat were primarily focused on the work by our students and postdoctoral fellows, and this year we welcomed 6 PIBS students (1st year) interested in Biological Chemistry, seven new Biochemistry Master’s students, and six new Chemical Biology students. This year we also had a keynote presentation by our newest faculty member, Dr. Peter Freddolino. Peter is a computational biochemist who initially worked on modeling protein structure with Klaus Schulten and moved on to begin computational modeling of whole cell metabolic and regulatory systems with Saeed Tavazoie at Columbia. We are excited to have Peter as our newest colleague, and the Retreat was a fitting way to welcome him to the Department.

This coming year we will be marking the retirement of Dave Ballou (to active Emeritus Professor) after an incredible 49 years in Biological Chemistry at the University of Michigan, 43 as a faculty colleague. Dave’s contributions to the Department and the University will be celebrated at a Symposium on October 9, 2015, with the event being organized by Bill Smith. For any of you who would like to attend this happy event, please contact the Biological Chemistry office (734-647-6180) or Bill for details as they become available.

As detailed on the pages of this newsletter, this year has also seen successes by and recognition of our students and faculty. Examples are that Stephen Ragsdale, Ph.D. is named the inaugural recipient of the David Ballou Collegiate Professorship, Professor of Biological Chemistry and Dan Goldman, Ph.D. is the inaugural recipient of the Bernard W. Agranoff Collegiate Professorship, Professor of Neuroscience. And in the public domain, Ruma Banerjee, in collaboration with her children Rishi Banerjee Ragsdale and Maya Ragsdale, published an educational children’s book, “Fruity and the Mutants,” that was prominently on display at the annual ASBMB meeting and in ASBMB Today.

Lastly, the alumni mixer co-hosted by Biological Chemistry and Pharmacology at the annual ASBMB meeting in San Diego was a hit, and we will be repeating the party at the Boston meeting (March 28 - April 1, 2015). Please plan to stop in and catch up with old friends if you can.

Regards,

David Engelke, Interim Chair
Stephen W. Ragsdale, Ph.D., Professor of Biological Chemistry, has been appointed to the inaugural David Ballou Collegiate Professorship at the University of Michigan Medical School. The David Ballou Collegiate Professorship was established by the Department of Biological Chemistry in August 2014. David Ballou, Ph.D., Professor Emeritus in Biological Chemistry, is recognized for his work on flavins and biological oxidation mechanisms and is widely respected and has been funded by the National Institutes of Health for over 40 years, often by multiple grants. Dr. Ballou contributed substantially to nearly all aspects of teaching and committee service through the Department as well. He taught in and directed courses in undergraduate, medical and dental biochemistry, as well as multiple graduate courses in specialized aspects of biochemistry and chemical biology.

Dr. Stephen W. Ragsdale received his B.S. in Chemistry and Biochemistry from the University of Georgia in 1979 and his Ph.D. in Biochemistry from the University of Georgia in 1983, working under the direction of Professor Lars G. Ljungdahl. From 1984 to 1987, he was a postdoctoral research fellow at Case Western Reserve University with Professor Harland Wood. He was recruited to our Department in 2007 as Professor of Biological Chemistry after being a faculty member in the Department of Chemistry at the University of Wisconsin, Milwaukee and Charles E. Bessey Professor of Biochemistry at the University of Nebraska, Lincoln.

Steve has made major contributions to our understanding of complex metalloenzymes used by anaerobic microbes to catalyze the key steps in the biological carbon cycle. His major research activities have focused on the involvement of redox and metal homeostasis in metabolic regulation in humans and on anaerobic microbial biochemistry of biological methane formation/utilization and carbon monoxide/carbon dioxide uptake, reduction and fixation. In honor of his contributions to understanding anaerobic microbial metabolism, Professor Ralph Tanner named a newly discovered anaerobic bacterium after Steve — Clostridium ragsdalii.

In his study of anaerobic microbial biochemistry, Dr. Ragsdale has shown that these key processes in the carbon cycle involve unusual enzymes, which contain complex metal centers (nickel iron-sulfur clusters, nickel corphin, and cobalamin) and utilize mechanisms that involve nucleophilic metal ions, organo-metallic intermediates and specialized tunnels as gas channels.

Dr. Ragsdale has broad interests relating science to the arts and humanities. While at the University of Nebraska, he was awarded the Outstanding Research and Creativity Award, was a founding member of the Ethics Center, taught courses in biochemistry as well as in creative processes, and organized the university-wide Nebraska Lectures and symposia on evolution. Similarly, at the University of Michigan, he revamped his Creativity in the Sciences and Arts course (which was featured in the June 2011 issue of ASBMB Today), organized community-based symposia on global warming, has been a finalist for the U-M Provost’s Teaching Innovation Award, and has taught science courses in the Ann Arbor community. He is known as “Steve the Science Guy” at a local youth shelter.

Congratulations, Steve, on this well deserved recognition!
Daniel J. Goldman, Ph.D., Professor of Biological Chemistry and Research Professor in the Molecular and Behavioral Neuroscience Institute (MBNI), has been appointed as the Bernard W. Agranoff Collegiate Professor of Neuroscience in the University of Michigan Medical School.

The Bernard W. Agranoff Collegiate Professorship in Neuroscience was established in December 2013 through a generous donation from Ralph Colton, friends, family, colleagues of Dr. Agranoff, and gift funds. Bernard W. Agranoff, Professor Emeritus in Biological Chemistry and Research Professor Emeritus in MBNI, is a pioneer in the field of neuroscience whose fundamental research on the molecular mechanisms of learning, memory, regeneration, neural signaling and neuroplasticity have transformed our understanding of the brain. This professorship is intended to support the research efforts of an exceptional neuroscientist in the Molecular and Behavioral Neuroscience Institute.

Daniel J. Goldman received his Ph.D. degree from the University of Illinois in 1983. He completed post-doctoral training at the Salk Institute in the laboratory of Dr. Heinemann. Dr. Goldman joined the faculty at the University of Michigan in 1986 as an Assistant Professor in the Department of Biological Chemistry and Assistant Research Scientist in the Mental Health Research Institute (now MBNI). He rose through the ranks to Professor with tenure in the Department of Biological Chemistry and to Research Professor in the MBNI in 2000.

Dr. Goldman’s research focuses on identifying strategies for restoring lost sight to those suffering from blindness. His laboratory has discovered that Muller glia residing in the zebrafish retina respond to retinal injury and disease by dedifferentiating into multipotent retinal stem cells that are able to regenerate all retinal cell types. Dr. Goldman’s research focuses on unraveling the cellular, molecular, and biochemical mechanisms that drive and allow Muller glia reprogramming in the injured zebrafish retina. This information is used to develop strategies for stimulating Muller glia dedifferentiation and retina regeneration in mammals. Dr. Goldman also studies interactions between nerve and muscle. His research investigates how muscle activity regulates muscle function. His lab has uncovered signal transduction cascades that communicate muscle activity to the genome and his lab has found that these signaling cascades affect muscle metabolism, muscle atrophy and muscle innervation. Dr. Goldman anticipates that these studies will suggest strategies for improving muscle function in people suffering from diseases associated with muscle denervation, like age-related sarcopenia and amyotrophic lateral sclerosis.

Dr. Goldman’s research is well funded by the NIH and foundation grants. He has published 81 articles in top tier journals and has received numerous awards for his research including the University of Michigan Research Scientist Achievement Award. Dr. Goldman has also established himself as an outstanding teacher and mentor with over 85 trainees at all levels. Dr. Goldman was recruited to the MBNI by Dr. Agranoff, then Director of the MBNI, and the two of them have collaborated actively, sharing many scientific interests especially in the area of regeneration. Daniel Goldman is an outstanding neuroscientist whose work has gained international recognition, and it is quite fitting that he has been named as the first recipient of the Bernard W. Agranoff Collegiate Professorship in Neuroscience.
The Endowed Lectureships: 2013-2014

Irwin J. Goldstein Lectureship in Glycobiology

J. Michael Pierce, Ph.D.
September 16, 2014
“Three Discoveries From Glycomic Analyses: A Glycan Required for Stem Cell Differentiation, a Pancreatic Carcinoma Cell Surface Marker, and a Human Lectin Cytotoxic for Pathogenic Bacteria”

Dr. Pierce received his Ph.D. from the Johns Hopkins University, Department of Biology and completed an NIH Postdoctoral Fellowship under the direction of Clint Ballou in the Biochemistry Department, University of California, Berkeley. His first faculty position was in the Department of Cell Biology, University of Miami Medical School, where he rose to Associate Professor and was the recipient of the 5-year Faculty Research Award from the American Cancer Society.

He moved to the University of Georgia Complex Carbohydrate Research Center and Department of Biochemistry and Molecular Biology in 1991. He was elected Distinguished Research Professor of BCMB in 2006 and appointed Mudter Family Professor in Cancer Research in 2008. He has served as the Director of the University of Georgia Cancer Center since its establishment in 2004. He is a member of the Editorial Board of both JBC and Glycobiology and serves as Co-Chair of the NCI Alliance of Glycobiologists for Cancer Detection.

Dr. Pierce is the P.I. of the NIGMS National Center for Biomedical Glycomics and the newly funded T32 Graduate Student Training Program in Glycoscience. His research focuses on identifying and exploiting glycan changes during oncogenesis for development of diagnostics and therapeutics, as well as investigating the innate immune functions of a family of lectins discovered by his laboratory in 2001. He holds 15 patents and is President-Elect of the Society for Glycobiology.

William E.M. Lands Lectureship on the Biochemical Basis for the Physiology of Essential Nutrients

Andrew Dannenberg, M.D.
October 14, 2014
“Obesity, White Adipose Inflammation and Breast Cancer”

Dr. Dannenberg is the Henry R. Erle, MD-Roberts Family Professor of Medicine at Weill Cornell Medical College. Dr. Dannenberg received a B.S. from Tufts University and an M.D. from Washington University in St. Louis. He served as a medical resident and gastroenterology fellow at The New York Hospital-Cornell Medical Center before joining the division of Gastroenterology and Hepatology as a faculty member in 1988. From 2007-2012 he served as the Director of the Weill Cornell Cancer Center.

Over the last twenty years Dr. Dannenberg’s research was focused on elucidating the mechanisms underlying the connection between inflammation and cancer including the relationship between obesity, inflammation and cancer. This work has focused on breast cancer but is applicable to many different tissues. His work has shown that obesity is connected to the development of breast cancer in part through the induction of tissue aromatase activity. The long-term goal of this research is to develop evidence-based approaches to reduce the risk of cancer.

Dr. Dannenberg has authored nearly 200 peer reviewed scientific articles and edited several books and his pioneering work has been recognized with numerous awards including the Outstanding Achievement Award from the Eicosanoid Research Foundation in 2013 and the American Association for Cancer Research-Prevent Cancer Foundation Award for Excellence in Cancer Prevention Research in 2011.

continued on next page
Dr. Dannenberg is a member of the Association of American Physicians (AAP), the American Society for Clinical Investigation (ASCI), and the American Association for Cancer Research (AACR). He previously chaired the Program Committee of the AACR “Frontiers in Cancer Prevention Research” meeting. He serves on the editorial boards of the *Journal of Clinical Oncology*, *Current Cancer Therapy Reviews*, *Cancer Investigation*, *Therapeutic Advances in Gastroenterology*, and the *Journal of Clinical Oncology* and is a senior editor of *Cancer Prevention Research*.

Dr. Petsko is the Arthur J. Mahon Professor of Neurology and Neuroscience at Weill Cornell Medical College in New York City, where he is also Director of the Helen and Robert Appel Alzheimer’s Disease Research Institute. He also holds appointments as Adjunct Professor of Biomedical Engineering at Cornell University, Adjunct Professor of Neurology at Harvard Medical School, and Tauber Professor of Biochemistry and Chemistry, Emeritus, at Brandeis University. He received his B.A. from Princeton University, summa cum laude, in 1970, and his Ph.D. from Oxford University (which he attended as a Rhodes Scholar) in Molecular Biophysics in 1973. He was Professor of Chemistry at MIT from 1978 until 1990, when he moved to Brandeis University, where in addition to being Tauber professor of Biochemistry and Chemistry, he was Director of the Rosenstiel Basic Medical Sciences Research Center and Chair of the Department of Biochemistry. He took up his present appointment in New York City in April of 2012, upon the appointment of his wife, Dr. Laurie H. Glimcher, as Dean of Weill Cornell Medical College.

His awards include the Siddhu Award of the American Crystallographic Association, the Pfizer Award in Enzyme Chemistry of the American Chemical Society (for his development of methods to visualize reaction intermediates in three dimensions at atomic resolution), the Lynen Medal for his pioneering contributions to the study of protein dynamics, and in 1991 the Max Planck Prize, which he shared with Professor Roger Goody of Heidelberg for their joint work on the molecular origins of some human cancers. He has been elected to the National Academy of Sciences, the Institute of Medicine, the American Academy of Arts and Sciences, and the American Philosophical Society. He has an honorary Doctor of Laws from Dalhousie University. He is immediate Past-President of the American Society for Biochemistry and Molecular Biology and is currently President of the International Union of Biochemistry and Molecular Biology. He is the founder of several publicly-traded biotechnology companies and is one of the founding editors of the PLoS family of journals. His research interests include protein structure and function and the development of methods to treat age-related neurodegenerative diseases, including ALS (Lou Gehrig’s), Alzheimer’s and Parkinson’s diseases.

His public lectures on the aging of the population and its implications for human health have attracted a wide audience on the Internet (his TED talk, for example, has been downloaded over 600,000 times). For the past twelve years he has also written a widely-read column on science and society, the first ten years of which have just appeared in book form.
Dr. Snyder is the Stanford Ascherman Professor, Chair of Genetics and the Director of the Center of Genomics and Personalized Medicine. He received his Ph.D. from the California Institute of Technology and postdoctoral training at Stanford University. He is a leader in the field of functional genomics and proteomics, and one of the major participants of the ENCODE project.

His laboratory was the first to perform a large-scale functional genomics project in any organism, and has launched many technologies in genomics and proteomics. These include the development of proteome chips, high resolution tiling arrays for the entire human genome, methods for global mapping of transcription factor binding sites (ChIP-chip now replaced by ChIP-seq), paired end sequencing for mapping of structural variation in eukaryotes, de novo genome sequencing of genomes using high throughput technologies and RNA-Seq. These technologies have been used for characterizing genomes, proteomes and regulatory networks.

Seminal findings from the Snyder laboratory include the discovery that much more of the human genome is transcribed and contains regulatory information than was previously appreciated, and a high diversity of transcription factor binding occurs both between and within species. He has also combined different state-of-the-art “omics” technologies to perform the first longitudinal and detailed “integrative personal omics profile” (iPOP) of a person and used this to assess disease risk and monitor disease states for personalized medicine. He is a co-founder of several biotechnology companies including; Protometrix (now part of Life Technologies), Affomix (now part of Illumina), Excelix, and Personalis, and he presently serves on the board of a number of companies.

Dr. Robert T. Clubb obtained his B.S. from the University of Wisconsin and then went on to complete his Ph.D. in Biological Chemistry at the University of Michigan in 1993. He did his postdoctoral research in the laboratory of Dr. Gerhard Wagner at Harvard Medical School as well as at the National Institutes of Health under Drs. G. Marius Clore and Angela M. Gronenborn.

In 1996 he joined the Department of Chemistry and Biochemistry at the University of California, Los Angeles as an Assistant Professor and became PI in the UCLA-DOE Laboratory in the Division of Structural Biology and Genetics. He has risen through the ranks at UCLA and in 2009 was promoted to full professor. He is a member of the American Association for the Advancement of Science, American Chemical Society and The Protein Society.

Dr. Clubb's research investigates the molecular basis of bacterial pathogenesis and focuses on how microbes display and assemble cell wall attached surface proteins and how they acquire essential nutrients from their host during infections. He currently has three main research projects including: Inhibitor Development and Mechanistic Studies of Sortase Enzymes, Bacterial acquisition and heme-iron and Engineering Microbial Surfaces to Produce Biofuels.

Dr. Clubb has trained numerous Ph.D. students and fellows. He is active on the Editorial Board of the JBC as well as numerous other journals. He is a member of the UCLA-DOE Institute for Genomics and Ptoeinomics as well as a Member of the Molecular Biology Institute. For more information on Dr. Clubb, visit his laboratory at http://www.biochemistry.ucla.edu/biochem/Faculty/Clubb/Clubb_Lab/Main.html.
David P. Ballou, Ph.D., Professor of Biological Chemistry in the Medical School, retired from active faculty status on August 31, 2014.

After earning a B.S. in Chemistry from Antioch College in 1965, Professor Ballou spent his entire academic life at the University of Michigan. He earned M.S. and Ph.D. degrees in Biological Chemistry from 1965 to 1971 with Dr. Graham Palmer and did joint postdoctoral studies with Vincent Massey and Jud Coon. He then held a brief Assistant Research Biochemist appointment in the Department before becoming an Instructor in 1972, Assistant Professor in 1974, Associate Professor in 1981, and Professor in 1987.

Professor Ballou consistently distinguished himself and brought credit to the University through both his internationally recognized research contributions and his dedication to the highest standards of educational excellence at the undergraduate, graduate, and postdoctoral levels. Over the course of his career he published over 260 peer-reviewed manuscripts, chapters, and reviews, as well as three books and numerous abstracts. His work on flavins and biological oxidation mechanisms was widely respected and funded by the National Institutes of Health for over 40 years, often by multiple grants including a Merit Award from 1991-2000. He also provided outstanding service to the scientific community as a member of the editorial board of Enzyme Research and the Journal of Inorganic Biochemistry, and frequent participation on review committees for the NIH and other national and international organizations. He was the recipient of the Faculty Recognition Award (1989) and the Distinguished Faculty Achievement Award (2006) from the University of Michigan, and in 2006 was named a Fellow of the American Association for the Advancement of Science.

Dr. Ballou contributed substantially to nearly all aspects of teaching and committee service through the Department of Biological Chemistry. He taught in and directed courses in undergraduate, medical, and dental biochemistry, as well as multiple graduate courses in specialized aspects of biochemistry and chemical biology. He typically served on approximately 20 dissertation committees per year, including 10 of his own successful doctoral students. One of his Ph.D. students was Bruce Palffy, a current Associate Professor in our Department.

During his retirement Dr. Ballou will continue several of his activities in the Department of Biological Chemistry and within the University of Michigan. He will continue to serve on graduate student committees on which he currently participates, as an advisor for undergraduate biochemistry majors, and on various committees such as the preliminary examination committee. Dr. Ballou will also maintain a small research laboratory where he will be carrying out some experimentation on unfinished business of the past as well as on several collaborations with scientists at the University of Michigan and at other universities.

Dr. Ballou is a highly valued member of our department and we are delighted that he is now Professor Emeritus of Biological Chemistry.
Faculty News


**Yali Dou** received the Medical School’s Basic Science Research Award.

**Carol A. Fierke** was named as a Fellow of the American Chemical Society and was awarded the Emil Thomas Kaiser Award by the Protein Society.

**Jairam (Jerry) Menon** and **Bill Smith** were inducted into the U-M Medical School’s League of Research Excellence, which recognizes those faculty who have made outstanding contributions to the research environment.

**Audrey Seasholtz** was named the Associate Director of the Neuroscience Graduate Program in June 2014.

Alumni News

**Pimchai Chaiyen** (PhD., Ballou/Massey, 1997) was named 2013 Thailand Research Fund (TRF) Senior Research Scholar.

**Xinxin Ding** (Ph.D., Jud Coon lab, 1988) has these new positions: Professor of Nanobioscience; Director of Laboratory of Molecular Toxicology; and Director of Center for Preclinical Nano-Drug Discovery and Development, SUNY College of Nanoscale Science and Engineering. He can be reached at: xding@albany.edu

**Rebecca Fagan** (Ph.D., Palfey, 2009) is now an Assistant Professor of Chemistry at Bucknell University in Lewisburg, PA.

**Fred Guengerich** (Postdoctoral Fellow, Jud Coon lab, 1973-1975) endowed professor of Biochemistry at Vanderbilt Medical School, has been appointed Deputy Director of the Journal of Biological Chemistry. At the 20th International Symposium on Microsomes and Drug Oxidations held in Stuttgart, he gave a lecture at the Anniversary Session on Catalytic diversity of cytochrome P450.

**Katherine Hicks** (Ph.D., Fierke, 2005) is now an Assistant Professor in the Department of Chemistry at SUNY, Cortland, NY.

**Jay Pieczynski** (Ph.D., Margolis, 2010) is now an Assistant Professor in the Department of Biology at Rollins College, Winter Park, FL.

**Kunyoo Shin** (Ph.D., Margolis, 2006), is now an Assistant Professor in the Cell, Developmental & Cancer Biology Department at the Oregon Health and Science University in Portland, OR.

**Jun Wu** (Ph.D., Kaufman, 2007) is now an Assistant Professor in the Department of Molecular and Integrative Physiology and a Research Assistant Professor in the Life Sciences Institute, both at the University of Michigan, Ann Arbor.

A symposium was held on July 31, 2014 to honor the scientific contributions of Nobel Laureate **Marshall Nirenberg** (Ph.D. Biological Chemistry, 1957), sponsored by the New York Academy of Sciences and International Union of Biochemistry and Molecular Biology. The symposium was entitled: “Fifty Years of the Genetic Code: A Symposium to Honor the Legacy of Marshall Nirenberg” and was held on the 50th anniversary of his landmark presentation of the preliminary identification of all 64 codons that make up the genetic code.
Manila Hada, a candidate in Roland Kwok's laboratory, has been named as a Barbour Scholar for the 2014-2015 academic year. This prestigious scholarship is awarded to women of the highest academic and professional caliber on the basis of potential for contributions critical to the development of their home country in science, medicine, and other relevant disciplines.

Erin Taylor, a candidate in Dr. Patrick O'Brien's laboratory, has been awarded the 2014 EBS Endowment for the Development of Graduate Education (EDGE) Award.

Chase Weidmann, a candidate in Dr. Aaron Goldstrohm's laboratory, has been awarded a Rackham Predoctoral Fellowship. One of Rackham's most prestigious fellowships, it is awarded to candidates with outstanding research and who have achieved academic excellence in their graduate career.

The following Biological Chemistry graduate students received Rackham Research Grants between October 2013 and October 2014:
- Amin Ali (Trivel Lab)
- Mariam Ayash (Fuller Lab)
- Meredith Skiba (J. Smith Lab)

The following Biological Chemistry graduate students received Rackham Travel Grants between October 2013 and October 2014:
- Brittany Bowman (Ross Lab)
- Anna Ganios (Thompson Lab)
- Manila Hada (Kwok Lab)
- Jenna Hendershot (O'Brien Lab)
- Amber Smith (J. Smith Lab)
- Chase Weidmann (Goldstrohm Lab)
- Elia Wright (Fierke Lab)

The following Biological Chemistry graduate students were awarded positions on the following NIH Training Grants:
- Elizabeth Abshire (Trivel/Goldstrohm Lab) Chemical Biology Interface (CBI)
- Renee Arvola (Goldstrohm Lab) Genetics Training Program
- Jennifer Bohn (Goldstrohm Lab) Cellular Biology Training Program (CBTP)
- Thomas Jurkiw (O'Brien Lab) Cellular Biology Training Program (CBTP)

The following Biological Chemistry graduate students were reappointed for a second year to the following NIH Training Grants:
- Wallace Chan (Zhang Lab) Proteome Informatics of Cancer Training Program (PICT)
- Justin McNally (O'Brien Lab) Pharmacological Sciences Training Program (PSTP)
- Meredith Skiba (Smith Lab) Cellular Biology Training Program (CBTP)
Annual Student Awards

The Halvor N. and Mary M. Christensen Award

Presented to a second-year student on the basis of academic record. This award is given in honor of Mary M. and Professor Emeritus Halvor N. Christensen who served as Chair of Biological Chemistry from 1955-1970, and who generously provided the gift that supports this annual award.

2014 Awardee: Justin McNally
Mentor: Patrick O’Brien, Ph.D.

The Anthony and Lillian Lu Award

Presented to a student on the basis of academic background, achievement in the graduate program, and potential as a scientist. This award is made possible by the Lu Family who generously provided the gift that supports this annual award.

2014 Awardee: Qingyun Dan
Mentor: Janet Smith, Ph.D.

The Adam A. and Mary J. Christman Award

Presented to a third-year student judged to be the most outstanding in that class. The Christman Award is named in memory of former long-time faculty member Professor Adam Christman.

2014 Awardee: Andy Sikkema
Mentor: Janet Smith, Ph.D.

The Lee Murphy Memorial Prize

Awarded annually to the student who embodies the highest ideals of scientific integrity and who has published a paper or a series of papers judged most significant by the Awards Committee. This award is named in honor of Lee Murphy, an alumnus of this department.

2014 Awardee: Curtis Powell
Mentor: Daniel Goldman, Ph.D.
The Minor J. and Mary Lou Coon Award

Awarded annually to the student who exhibits overall excellence in research, teaching, and service to the department. This award honors Professor Coon, former Chair of the department, and Mary Lou Coon who have provided the gifts that support this award.

2014 Awardee: Chase Weidmann
Mentor: Aaron Goldstrohm, Ph.D.

Eugene E. Dekker, Ph.D., former professor, died in Ann Arbor in December last year at the age of 86. He received his B.A. degree in Chemistry from Calvin College in Grand Rapids in 1949 and then his M.S. and Ph.D. degrees in Biochemistry from the University of Illinois and subsequently taught biochemistry in the Medical School at the University of Louisville in Kentucky. Gene then accepted the position of postdoctoral fellow in Jud Coon’s laboratory in our Department from 1956 to 1958, studying reactions in which β-hydroxy-β-methylglutaryl Coenzyme A contributes to steroid biosynthesis in liver, and also gained some teaching experience. He was then given the position of Assistant Professor in our Department and began his independent career in research starting with enzymatic reactions in amino acid metabolism. His areas of research over many years included chemistry, metabolism and enzymology of amino compounds by animals, plants and bacteria; elucidation of new metabolic pathways; study of new enzymes and metabolic intermediates; relation of structure to function in enzyme catalysis; mechanism of action and comparative biochemistry of enzymes; selective chemical, enzymatic, and site-directed mutagenic modification of enzymes, including aldolases, dehydrogenases, and ligases; nitrogen assimilation and translocation by plants; and biochemistry of aging. Gene Dekker was greatly appreciated for contributing to the administration of our Department, having served as Assistant Chair from 1975 to 1979 and then as Associate Chair until 1988.

New Postdocs

Sojin An, Ph.D.
Mentor: Dr. Uhn-Soo Cho

Bo Cheng, Ph.D.
Mentor: Dr. Tom Kerppola

Kanishka de Silva, Ph.D.
Mentor: Dr. Tom Kerppola

Hye Kyong Kweon, Ph.D.
Mentor: Dr. Phil Andrews

Tatiana Misanina, Ph.D.
Mentor: Dr. Ruma Banerjee

Markus Ruetz, Ph.D.
Mentor: Dr. Ruma Banerjee

Aparna Sapra, Ph.D.
Mentor: Dr. Bruce Palfey

Philip Smaldino, Ph.D.
Mentor: Dr. David Engelke

Thanyaporn Wongnate, Ph.D.
Mentor: Dr. Steve Ragsdale

Chunchao Zhang, Ph.D.
Mentor: Dr. Phil Andrews

In Memorium

Sojin An, Ph.D.
Mentor: Dr. Uhn-Soo Cho

Bo Cheng, Ph.D.
Mentor: Dr. Tom Kerppola

Kanishka de Silva, Ph.D.
Mentor: Dr. Tom Kerppola

Hye Kyong Kweon, Ph.D.
Mentor: Dr. Phil Andrews

Tatiana Misanina, Ph.D.
Mentor: Dr. Ruma Banerjee

Markus Ruetz, Ph.D.
Mentor: Dr. Ruma Banerjee

Aparna Sapra, Ph.D.
Mentor: Dr. Bruce Palfey

Philip Smaldino, Ph.D.
Mentor: Dr. David Engelke

Thanyaporn Wongnate, Ph.D.
Mentor: Dr. Steve Ragsdale

Chunchao Zhang, Ph.D.
Mentor: Dr. Phil Andrews

Eugene E. Dekker, Ph.D., former professor, died in Ann Arbor in December last year at the age of 86. He received his B.A. degree in Chemistry from Calvin College in Grand Rapids in 1949 and then his M.S. and Ph.D. degrees in Biochemistry from the University of Illinois and subsequently taught biochemistry in the Medical School at the University of Louisville in Kentucky. Gene then accepted the position of postdoctoral fellow in Jud Coon’s laboratory in our Department from 1956 to 1958, studying reactions in which β-hydroxy-β-methylglutaryl Coenzyme A contributes to steroid biosynthesis in liver, and also gained some teaching experience. He was then given the position of Assistant Professor in our Department and began his independent career in research starting with enzymatic reactions in amino acid metabolism. His areas of research over many years included chemistry, metabolism and enzymology of amino compounds by animals, plants and bacteria; elucidation of new metabolic pathways; study of new enzymes and metabolic intermediates; relation of structure to function in enzyme catalysis; mechanism of action and comparative biochemistry of enzymes; selective chemical, enzymatic, and site-directed mutagenic modification of enzymes, including aldolases, dehydrogenases, and ligases; nitrogen assimilation and translocation by plants; and biochemistry of aging. Gene Dekker was greatly appreciated for contributing to the administration of our Department, having served as Assistant Chair from 1975 to 1979 and then as Associate Chair until 1988.
New Ph.D. Students

Elizabeth Abshire received her Bachelor of Science in 2012 from the University of Washington, Seattle, WA. Mentors: Dr. Raymond Trievel and Dr. Aaron Goldstrohm

Rene’ Arvola received her Bachelor of Science in 2013 from Purdue University, West Lafayette, IN. Mentor: Dr. Aaron Goldstrohm

Jennifer Bohn received her Bachelor of Science in 2013 from the University of Maryland, Baltimore, MD. Mentor: Dr. Aaron Goldstrohm

Gregory Dodge received his Bachelor of Science in 2013 from the Rochester Institute of Technology, Rochester, NY. Mentor: Dr. Janet Smith

Thomas Jurkiw received his Bachelor of Science in 2013 from Wayne State University, Detroit, MI. Mentor: Dr. Patrick O’Brien

New M.S. Students

Youdinghuan (David) Chen received his Bachelor of Science in 2014 from Pacific Lutheran University in Tacoma, WA. Mentor: Dr. David Turner

Xu (Jackson) Han received his Bachelor of Science in 2014 from Hong Kong Baptist University, Hong Kong. Mentor: Dr. Anne Vojtek

George Murphy, III received his Bachelor of Science in 2014 from Michigan State University, Lansing, MI. Mentor: Dr. Carol Fierke

Paul Russell received his Bachelor of Science in 2014 from the University of Michigan, Ann Arbor, MI. Mentor: Dr. Ari Gafni

Jonathan Wagner received his Bachelor of Science in 2011 from the University of Wisconsin, Madison, WI. Mentor: Dr. Michael Uhler

Arthur Wolin received his Bachelor of Science in 2013 from Northern Michigan University, Marquette, MI. Mentor: Dr. Tom Kerppola

Arthur Yan received his Bachelor of Science in 2014 from the University of Michigan, Ann Arbor, MI. Mentor: Dr. Yali Dou
Ph.D. Degrees Granted

Curtis R. Powell, Ph.D.
April 17, 2014
“The Role of Apobec2 During Zebrafish Retina and Optic Nerve Regeneration”
Mentor: Daniel J. Goldman, Ph.D.

Mark R. Taylor, Ph.D.
May 7, 2014
“The Role of Divalent Metal Ions in Enzymatic DNA Ligation”
Mentor: Patrick J. O’Brien, Ph.D.

Noah A. Wolfson, Ph.D.
May 12, 2014
“The Determination of HDAC8 Substrate Specificity”
Mentor: Carol A. Fierke, Ph.D.

Cody Vild, Ph.D.
August 18, 2014
“Structural Analysis of ESCRT-III Dependent Regulation of LIP5 Reveals Divergent Mechanism of VPS4 Regulation”
Mentor: Zhaohui Xu, Ph.D.

Jenna M. Hendershot, Ph.D.
September 8, 2014
“Mechanism of Nucleotide Flipping by Human Alkyladenine DNA Glycosylase”
Mentor: Patrick J. O’Brien, Ph.D.

M.S. Degrees Granted

Amin Ali, M.S.
August 15, 2014
“The Mechanism of H3K9 Tri-methylation by the Ternary Complex of SUV39H1, HP1 Alpha and DEK Protein”
Mentor: Ray Trievel, Ph.D.

Mariam Ayyash, M.S.
August 15, 2014
“Characterization of Conserved Domains Within Vps13p: A Trans Golgi Network Protein in Saccharomyces Cerevisiae”
Mentor: Robert Fuller, Ph.D.

Rahaman (Remu) Navaz Gangji, M.S.
August 15, 2014
“Sufficiency of ASCL1A and LIN-28 Activation for Retina Regeneration in Zebrafish”
Mentor: Daniel Goldman, Ph.D.

Ashish Rao, M.S.
August 15, 2014
“Cell Type Specific Tagging of RNA in a Mixed Neural Population”
Mentor: Michael Uhler, Ph.D.

Allison Zimmerman, M.S.
August 15, 2014
“Specificity of Human 8-oxoguanine DNA Glycosylase for Recognition and Excision of Damaged Bases in Different Contexts”
Mentor: Patrick O’Brien, Ph.D.
The Department of Biological Chemistry relies upon the philanthropic generosity of donors to fund many aspects of its operations. Gift funds are essential to supporting activities beyond our basic operations. From endowed professorships and lectureships, to graduate student fellowships, seminar speakers, and gifts in direct support of research, donations help make the department an intellectually exciting and vibrant community. As a benefactor of the Department of Biological Chemistry, you can direct your gift in several ways:

**General Departmental Support**
- Biological Chemistry Select Fund (Research/Education)
- Graduate Program Endowment Fund

**Lectureships**
- G. Robert Greenberg Lectureship
- Irwin J. Goldstein Lectureship
- Martha L. Ludwig Lectureship
- William E.M. Lands Lectureship

**Scholarship**
- Prasanta Datta Memorial Research Travel Endowment

For additional information on how you can make a positive difference in the Department of Biological Chemistry, please visit our giving page at http://victors.us/biochem2014

Or contact:
David Engelke, Ph.D., Interim Chair or
Mindy Warden, Chief Department Administrator
Department of Biological Chemistry
1150 W. Medical Center Drive, 5301 MSRB III, SPC 5606
University of Michigan Medical School
Ann Arbor, Michigan 48109-0600
T: 734-936-1142 / F: 734-763-4581
E: mkwarden@med.umich.edu

**Please Note:**
For 2014 charitable deductions and credits, your gift by check must be postmarked by December 31, 2014.

To ensure credit in 2014, credit card gifts should be made online at http://victors.us/biochem2014 or by calling 888-518-7888 (toll free) or 734-647-6179 (local), M-F 9am - 4pm EST before December 31, 2014.

**Thank you!**

Milton W. and Yvonne Datta, Sumana Datta and Scott Dawson provided a gift of $100,000 to the Department of Biological Chemistry for the establishment of The Prasanta Datta Memorial Research Travel Endowment, in memory of their father and father-in-law. This gift will be used to support members of the Department of Biological Chemistry to travel to other institutions for the purpose of learning new approaches and technologies and bringing this expertise back to the University of Michigan. We thank the Datta Family for this generous gift!