

BIOCHEMISTRY AND MOLECULAR BIOLOGY @ IOWA

2024

Message from the Chair

Dear Faculty, Students, Alumni and Friends,

Greetings from the Department of Biochemistry and Molecular Biology on the beautiful Carver College of Medicine's campus! The past year has brought many changes to the department and are a preview of the many exciting advances to come.

In June 2024, I agreed to be the permanent head of the department after serving almost four years in this position in the interim role. My hiring brings to the department much needed resources to recruit and hire new faculty, and Dr. Denise Jamieson, vice president for medical affairs and dean of the UI Carver College of Medicine, continues to invest well in our future. We look forward to hiring six tenure-track faculty over the next five years. With the funds provided, the department has already hired Dr. Anthony Pedley, a former Steve Benkovic post-doctoral fellow who will join the department as a tenure-track assistant professor in January 2025. Dr. Pedley's NIH R35 funded research aims to understand how the structure, function, and fate of metabolic enzymes are regulated by molecular chaperones. We are delighted he has decided to start his independent career at Iowa.

Hiring new faculty is of paramount importance as many longtime colleagues have departed the department. It is with bittersweet sentiment that Marc Wold (November 2023), David Price (March 2024), Madeline Shea (June 2024), and Dan Weeks (July 2024) retired in the past academic year. The vision and dedication of these faculty (and others) have propelled us to our current standing, and their work undeniably bodes well for the department's future successes. They will be greatly missed.

Nowhere is the promise of great things to come more evident than in our student population. In August, we welcomed five new students in the Biochemistry and Molecular Biology graduate program. This group hails from far (Rhode Island and Oklahoma) and nearby (Iowa and Missouri) and collectively have stellar academic credentials and vast research experience. They, along with our many undergraduates, many of whom are featured in this issue for their remarkable academic and research achievements, continue to enhance the department's research successes and stature.

As I write this introduction, the 2024-2025 academic year has just begun, and we await with excitement the opportunities and challenges that lie ahead. It is a privilege to serve as the chair of this department, and I am extremely supportive of our faculty, students, staff, alumni, and friends. Collectively, we are ushering this department through changing times, educating the next generation of scientists, and advancing science discovery. I look forward to another exciting year.



Kris DeMali, PhD
Roy J. Carver Chair in Biochemistry
and Department Executive Officer,
Department of Biochemistry
and Molecular Biology

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ANNUAL RETREAT

In 2023, the department celebrated its 75th anniversary. A celebration of the 75th anniversary and an annual retreat took place on August 25, 2023 at the University of Iowa Center for Advancement. The 75th anniversary celebration featured talks by alumni and a career panel highlighting the different careers in Biochemistry and Molecular Biology. A poster session featured the scientific works of undergraduate students, graduate students, postdoctoral fellows, research staff, faculty, and emeriti.

Featured talks were given by the following alumni:

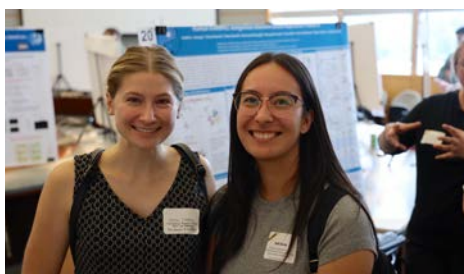
- Dr. **Lacy Barton** (2014 PhD), an Assistant Professor of Neuroscience, Developmental and Regenerative Biology, University of Texas at San Antonio, spoke on, "Guiding the next generation: lessons from *Drosophila* and *this department*."
- Dr. **Juanita Limas** (1999 BS), a Research Scientist and Advisor in Discovery Chemistry Research and Technology at Eli Lilly and Company, spoke on "Drug Hunting in the Pharmaceutical Industry: Making Medicines to Help Improve Patient's Lives."
- Dr. **Yuan Pan** (2015 PhD), an Assistant Professor of Symptoms Research at the MD Anderson Cancer Center, spoke on "The Role of Neuronal Activity in Glioma Pathogenesis."
- Dr. **Michael Feldkamp** (2010 PhD), a Senior Scientist at Janssen BioTherapeutics, spoke on "Considerations for Protein Antigen and scFv Design in the Pharmaceutical Industry."

The retreat also featured a discussion on career paths in biochemistry and molecular biology. PhD students and postdocs were afforded the opportunity to interact with alumni and to learn firsthand about specific careers. This year's featured panelists were:

- Dr. **Elizabeth Boehm** (2016 PhD), a Patent Agent in Biotechnology at Wolf Greenfield & Sacks PC
- Dr. **Shawn Ellerbroek** (1995 BA), the Ralph E. Otto Endowed Professorship in Chemistry at Wartburg College
- Dr. **Shameika Wilmington** (2008 BS), the Director of Research and Development, Global Grooming at Proctor & Gamble
- Dr. **Hannah Campbell** (2019 PhD), an NGS Application Scientist at Integrated DNA Technologies



Dr. Adrian Elcock asking questions after a seminar. Also pictured is Dr. Sheila Baker.



Alumni Dr. Gillian DeWane and Dr. Kelli Sylvers-Davie



Dr. Pamela Geyer with former mentee and career panelist Dr. Shameika Wilmington.



Career panel members Drs. Elizabeth Boehm, Shawn Ellerbroek, Shameika Wilmington, and Hannah Campbell.



Keynote speaker Dr. Yuan Pan with Dr. Sheila Baker, Shivangi Inamdar, and Joseph Laird.

ANNUAL RETREAT



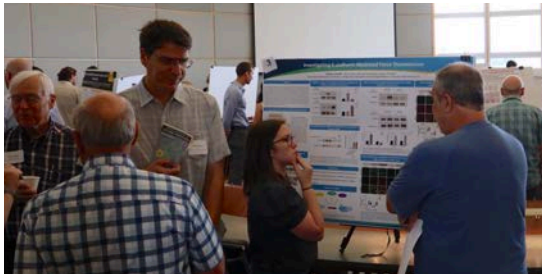
Dr. Pamela Geyer with speaker and former mentee Dr. Lacy Barton.



Dr. David Price with former mentee Dr. John Brogie and alumnus Dr. Zhen Xu.



Drs. Marc Wold, Lori Wallrath, Pamela Geyer, and speaker Dr. Lacy Barton.



Graduate student Rebecca Splitt presenting her poster to Dr. Todd Washington.



Graduate student Grace Ciampa presenting her poster to Dr. Maria Spies.



Dr. Madeline Shea with speaker and former mentee Dr. Michael Feldkamp.

At the **2023 Annual Scientific Retreat**, poster presentations by students and staff were selected for best poster awards in multiple categories.



Graduate Student:
Nathan Mohar (Wallrath laboratory), received a best poster award for “DNA sequence variation in SMAD7 enhances LMNA-associated muscular dystrophy in Drosophila models.”



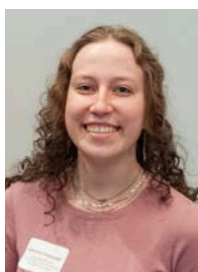
Graduate Student:
Rebecca Splitt (DeMali laboratory), received a best poster award for “Investigating E-cadherin Mediated Force Transmission.”



Postdoc/Research Scientist:
Kelli Sylvers-Davie, PhD (Davies laboratory), received a best poster award for “The physiological impact of EL inhibition by ANGPTL3 on HDL.”



Research Staff:
Isa Perales (Geyer laboratory), received a best poster award for “Ectopic expression of the Drosophila A-type lamin affects differentiating, not progenitor germ cells in the ovary.”



Undergraduate Student:
Katherine Piaszynski (Geyer laboratory) received a best poster award for “Testing effects of centrosome dysfunction on germline stem cell maintenance in the Drosophila ovary.”

FACULTY NEWS



Lori Wallrath accepted the positions of **Director of Undergraduate Studies** in the Department of Biochemistry and Molecular Biology effective July 1, 2023 and **Director of the Interdisciplinary Graduate Program in Genetics** effective August 15, 2023. In April 2024, she was elected to the **Class of 2023 Fellows of the AAAS**.



Pamela Geyer received the **2024 John P. Long Teaching in the Basic Sciences Award** at the collegiate Celebration of Excellence in Research, Scholarship, Teaching, and Service event.



Mallory Tollefson, PhD, joined the department as an **Instructor** in Fall 2023. Mallory, an Iowa native, was mentored by **Dr. Michael Schnieders**, and graduated with a PhD in Biomedical Engineering in May 2023.



Sheila Baker joins Dr. Daniel Tranel (Neurology) as a principal investigator on the Neuroscience Training Program T32 grant. First awarded in 1999, the T32 has been renewed for another five years (2024-2029) of funding by the National Institute of Neurological Disorders and Stroke (NINDS).

Retirements

The Department of Biochemistry and Molecular Biology celebrated the careers and service of four faculty this year. Our students, alumni, and department are grateful for their hard work and commitment.



Marc Wold

The department celebrated the career of Dr. Marc Wold in December 2023. Dr. Wold is currently finishing up some collaborative papers on the role of RPA4 in neurological diseases and has been enjoying more time for bicycle adventuring and nature photography.



David Price

The department celebrated the career of Dr. David Price in March 2024. He is currently revising a manuscript for publication that outlines how DFF-ChIP, a method developed over the last few years in his lab, can be used to obtain unprecedented accuracy in mapping genome-wide occupancy of transcription factors, transcription machinery, and their interactions with local chromatin. He is continuing to collaborate with Dr. Jeff Meier concerning HCMV gene expression and has been spending his time analyzing structures of complex protein-nucleic acid interactions using the artificial intelligence of AlphaFold3.



Madeline Shea

In May 2024, the department celebrated Dr. Madeline Shea's career. Dr. Shea enjoyed catching up with former and current members of the department. She was grateful to everyone who sent recollections presented by Dr. Fuentes. She is currently editing manuscripts, serving on the Board of Directors of the Gibbs Society of Biological Thermodynamics and preparing for the 38th annual Gibbs conference, and looking forward to staying in touch with alums of her laboratory.

FACULTY NEWS



Daniel Weeks

In July 2024, Dr. Weeks retired. He is currently winding down his laboratory.

So many memories!



Drs. Margaret Price, David Price, Pamela Geyer, Marc Wold, Madeline Shea and Mr. Michael Wold at Marc Wold's retirement dinner.



Drs. Marc Wold and Madeline Shea at her retirement dinner.



Drs. David Price, Margaret Price, Susan Beekmann, Brenda Kunkel, Jeffery Meier, and other guests at David's retirement dinner. David chose to celebrate his retirement on his birthday.

Newly Awarded Grants

Several faculty secured new funding to support their research collaborations and student trainees.

Kris DeMali, PhD

- *Role of Smooth Muscle Sorbs2 in Vascular Pathobiology*, American Heart Association, 2024-2026. Co-Investigator.

Miles Pufall, PhD

- *Treating Advanced Uterine Endometrial Cancer by Reactivating p53*, US Department of Defense, 2023-2024. Subcontract with the University of New Mexico.
- *The Effect of Transcription Factor Binding on UV Lesion Accumulations*, National Science Foundation, 2023-2024.
- *Characterizing the Functional Impact of Mutations in Nr4a2-related Neurodevelopmental Syndrome*, Eagles Autism Foundation, 2024-2026. Co-Investigator.

Maria Spies, PhD

- *Iowa Biotech-TP: Predoctoral Program in Biotechnology*, National Institutes of Health T32, 2023-2028.
- *Assembly and Dynamics of Molecular Machines in Genome Maintenance*, National Institutes of Health R35 Competitive Renewal, 2019-2029.

Michael Schnieders, PhD

- *Iowa Biotech-TP: Predoctoral Program in Biotechnology*, National Institutes of Health T32, 2023-2028. Co-PI.
- *Exploring Cyclodextrin Binding Prediction with AMOEBA on Pharmaceutically Relevant Compounds*, Pfizer, Inc, 2023-2024.
- *Optimizing Genetic Testing for Deafness for Clinical Diagnostics*, National Institutes of Health R01, 2024-2025. Co-PI.

Lori Wallrath, PhD

- *Contributions of genetic variation to LMNA-associated muscular dystrophy*, Muscular Dystrophy Association, 2023-2026

FACULTY NEWS

Highlighted Publications

Inamdar SM, Landford CK, **Baker SA**. Photoreceptor Ion Channels in Signaling and Disease. *Adv Exp Med Biol.* 2023;1415.

Sylvers-Davie KL, Bierstedt KC, Schnieders MJ, **Davies BSJ**. Endothelial lipase variant T111I does not alter inhibition by angiotensin-like proteins. *Sci Rep.* 2024 Feb 20;14(1):4246.

DeWane G, Cronin NM, Dawson LW, Heidema C, **DeMali KA**. Vinculin Y822 is an important determinant in ligand binding. *J Cell Sci.* 2023 June 15;136(12):jcs260104.

Dawson LW, Cronin NM, **DeMali KA**. Mechanotransduction: Forcing a change in metabolism. *Curr Opinion in Cell Biology.* 2023 Oct;84:102219.

Tworek JW, **Elcock AH**. Orientationally Averaged Version of the Rotne-Prager-Yamakawa Tensor Provides a Fast but Still Accurate Treatment of Hydrodynamic Interactions in Brownian Dynamics Simulations of Biological Macromolecules. *J Chem Theory Comput.* 2023 Aug 8;19(15):5099-5111.

Hacker WC, **Elcock AH**. Spotter: A Single-Nucleotide Resolution Stochastic Simulation Model of Supercoiling-Mediated Transcription and Translation in Prokaryotes. *Nucleic Acids Res.* 2023 Sep 22;51(17):e92.

Sanaboyana VR, **Elcock AH**. Improving Signal and Transit Peptide Predictions Using AlphaFold2-predicted Protein Structures. *J Mol Biol.* 2024 Jan 15;436(2):168393.

McDonnell RT, **Elcock AH**. AutoRNC: An automated modeling program for building atomic models of ribosome-nascent chain complexes. *Structure.* 2024 May 2;32(5):621-629.e5.

Fuller MJ, Mix MR, Voigt E, Hoffman DS, **Geyer PK**. Guidelines for organizing accessible and inclusive research retreats. *Trends Biochem Sci.* 2024 Apr;49(4):277-279.

Perales IE, Jones SD, Piaszynski KM, **Geyer PK**. Developmental changes in nuclear lamina components during germ cell differentiation. *Nucleus.* 2024 Dec;15(1):2339214.

Geyer PK, Hoffmann DS, Barr JY, Widmayer HA, Blaumueller CM. Granting access: Development of a formal course to demystify and promote predoctoral fellowship applications for graduate students. *PLoS One.* 2024 Apr 26;19(4):e0301480.

Perales IE, Jones SD, Duan T, **Geyer PK**. Maintenance of germline stem cell homeostasis despite severe nuclear distortion. *Dev Biol.* 2024 Jul 20:S0012-1606(24)00189-1.

Santana JF, Spector BM, Suarez GA, Luse DS, **Price DH**. NELF focuses sites of initiation and maintains promoter architecture. *Nucleic Acids Res.* 2024 Apr 12;52(6):2977-2994.

Pisano MD, Sun F, Chen Y, Parashar D, Zhou V, Jing X, Sompallae R, Abrudan J, Zimmermann MT, Mathison A, Janz S, **Pufall MA**. IL6Myc mouse is an immunocompetent model for the development of aggressive multiple myeloma. *Haematologica.* 2023 Dec 1;108(12):3372-3383.

Zimmerman JAO, Fang M, **Pufall MA**. PI3K δ Inhibition Potentiates Glucocorticoids in B-lymphoblastic Leukemia by Decreasing Receptor Phosphorylation and Enhancing Gene Regulation. *Cancers (Basel).* 2023 Dec 27;16(1):143.

Corrigan RA, Thiel AC, Lynn JR, Casavant TL, Ren P, Ponder JW, **Schnieders MJ**. A generalized Kirkwood implicit solvent for the polarizable AMOEBA protein model. *J Chem Phys.* 2023 Aug 7;159(5):054102.

Gogal RA, Nessler AJ, Thiel AC, Bernabe HV, Corrigan Grove RA, Cousineau LM, Litman JM, et al., **Schnieders MJ**. Force Field X: A computational microscope to study genetic variation and organic crystals using theory and experiment. *The Journal of Chemical Physics.* 2024;161(1).

Thiel AC, Speranza MJ, Jadhav S, Stevens LL, Unruh DK, Ren P, Ponder JW, Shen J, **Schnieders MJ**. Constant-pH Simulations with the Polarizable Atomic Multipole AMOEBA Force Field. *J Chem Theory Comput.* 2024;20(7):2921-33.

Nessler AJ, Okada O, Kinoshita Y, Nishimura K, Nagata H, Fukuzawa K, Yonemochi E, **Schnieders MJ**. Crystal Polymorph Search in the NPT Ensemble via a Deposition/Sublimation Alchemical Path. *Cryst Growth Des.* 2024;24(8):3205-17.

Gaur P, Bain FE, Honda M, Granger SL, **Spies M**. Single-Molecule Analysis of the Improved Variants of the G-Quadruplex Recognition Protein G4P. *Int J Mol Sci.* 2023 Jun 17;24(12):10274.

Bhat, D.S., Malacaria, E., Di Biagi, L., Razzaghi, M., Honda, M., et al., **Spies, MA†**, and **Spies, M†**, Therapeutic Disruption of RAD52-ssDNA Complexation via Novel Drug-Like Inhibitors. *NAR Cancer.* 2023 Jun;5(2): zcad018.

Mohar NP, Cox EM, Adelizzi E, Moore SA, Mathews KD, Darbro BW, **Wallrath LL**. The influence of a genetic variant in CCDC78 on LMNA-associated skeletal muscle disease. *Int J Mol Sci.* 2024 Apr 30;25(9):4930.

GRADUATE NEWS

New Students

In Fall 2023, the department welcomed Jordan Riley to the graduate program.



Jordan Riley
BS, Biology
University of Sioux Falls

In Fall 2024, the department welcomes five new graduate students from diverse geographic locations and backgrounds.

Alexander Dumas, BS, Biology, Siena College, Loudenville, New York

Luke Handlos, BS, Biochemistry, Northwest Missouri State University, Maryville, Missouri

Megan Latham, BS, Microbiology, University of Oklahoma Norman Campus, Norman, Oklahoma

Gabriel Prather, BS, Biomedical Engineering, St. Louis University, St. Louis, Missouri

Rachel Rethwisch, BA, Chemistry and Biochemistry, Coe College, Cedar Rapids, Iowa

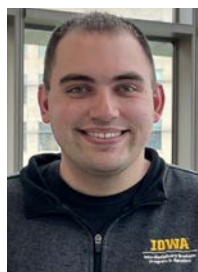
Student Accomplishments



Grace Ciampa, a fourth-year graduate student (Song laboratory), was awarded a **National Institutes of Health F31 grant** for her project "Examining the Function of a Novel Protein in the Cardiac Junctional Membrane Complex."



Sydney Walker, a third-year graduate student (Davies laboratory), was awarded an **American Heart Association grant** for her project "Uncoupling the physiological functions of ANGPTL3."



Nathan Mohar (Wallrath laboratory), a third-year Genetics graduate student, received best poster and presentation awards at the **2023 Pharmacological and Pharmaceutical Sciences Research Retreat**, the **2023 Interdisciplinary Graduate Program in Genetics Retreat**, and the **2023 Midwest Drosophila Conference**.

2023 Dr. Lois Gehring Graduate Student Scholarships

Lucy Langmack and Andrew Kalenkiewicz were awarded the 2023 Dr. Lois Gehring Graduate Student Scholarships. This award is made to the most meritorious Biochemistry and Molecular Biology graduate students based on academic and research achievements. It is named in honor of Lois Bigger Gehring, an extremely talented biochemist and graduate of the University of Iowa.



Lucy Langmack (Abel laboratory) Lucy is a 2nd-year Biochemistry and Molecular Biology graduate student. Her research focuses on the functional impact of *de novo* mutations in the nuclear receptor transcription factor Nr4a2 linked to Nr4a2-related Neurodevelopmental Syndrome.



Andrew Kalenkiewicz (Elcock laboratory) Andrew is an MSTP/Biochemistry and Molecular Biology graduate student. His work focuses on biophysical simulations of the *E. coli* cell envelope, using novel methods in coarse-grained model-building.

UNDERGRADUATE NEWS

2024 Gene F. Lata Undergraduate Research Symposium

Every spring the department celebrates the research achievements of our undergraduates at the Gene F. Lata Undergraduate Research Symposium.

This annual event is held in recognition of Dr. Gene F. Lata's commitment and dedication to undergraduate education in biochemistry. Dr. Lata joined the faculty at the University of Iowa in 1950 and retired in 1992 - a span of 42 years as an active faculty member in the department. During his tenure, Dr. Lata was a researcher, a dedicated teacher, counselor and mentor to students in biochemistry. He helped organize the first undergraduate biochemistry curriculum on campus in 1971 and served as the director of the program until his retirement in 1992. He personally advised hundreds of undergraduates who received a BS in biochemistry, many of whom have gone on to highly successful careers. Dr. Lata's course, Experimental Biochemistry, which he developed and wrote a textbook about, is still a required course for all undergraduate biochemistry majors.

Many of the participants are earning Honors designations on their diplomas, and all have completed a substantial research project during their course of study. The Spring 2024 presenters were:



Brenna Powers, Wallrath laboratory, *Identifying Candidate Drugs to Treat Rare Types of Muscular Dystrophy*

Jack E. B. Miller, Geyer laboratory, *The Role of the Centrosome in Loss of Germline Stem Cell Homeostasis in the Emerin Mutant Drosophila Ovary*

Josiah Power, Nuxoll laboratory, *Thermal Susceptibility of Single-Species and Polymicrobial Biofilms of Staphyococcus aureus and Pseudomonas aeruginosa*

Rivers Maw, Baker laboratory, *Methodological Analysis of AHA Incorporation into Retinal Protein*

Hasya Joshi, Song laboratory, *Nuclear Translocation of Junctophilin-1*

At the conclusion of the symposium, undergraduates are recognized for exceptional work. These awards are made possible by the generous support of friends of the department. The Spring 2024 awardees were:

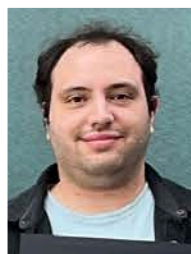
MONTGOMERY BIOCHEMISTRY SCHOLAR'S PRIZE



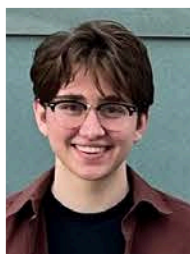
Jack E. B. Miller

This prize is awarded to a meritorious graduating senior in Biochemistry and Molecular Biology. The award is based on the student's research accomplishments and academic performance. **Jack E. B. Miller** (Geyer laboratory) was awarded the **2024 Montgomery Biochemistry Scholar's Prize**. Jack will be attending the University of Iowa in Fall 2024 as a graduate student in the Interdisciplinary Graduate Program in Genetics.

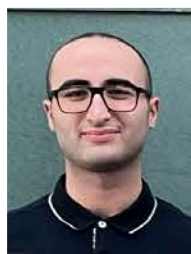
REX MONTGOMERY BIOCHEMISTRY SCHOLARSHIPS



Adam Benmoussa



Rhett Ellerbroek



Mostafa Telfah

The **Rex Montgomery Scholarships** recognize one or more deserving undergraduate students pursuing a degree in Biochemistry and Molecular Biology. This year's recipients were junior **Adam Benmoussa** (M. Spies laboratory), sophomore **Rhett Ellerbroek** (DeMali laboratory), and sophomore **Mostafa Telfah**.

UNDERGRADUATE NEWS

PROFESSOR H.G. WITTMANN & PROFESSOR H.G. KHORANA SCHOLAR AWARDS



Josiah Power



Hasya Joshi

The Wittmann and Khorana Scholar Awards are awarded to graduating Biochemistry and Molecular Biology majors who have the highest achievement in Biochemistry and Molecular Biology courses and who have demonstrated the highest understanding of biochemistry and molecular biology and its value to society. This year's recipients were senior **Josiah Power** (Nuxoll laboratory) for the **2024 Professor H.G. Wittmann Scholar Award**. After graduation, Josiah will be attending The Johns Hopkins University to pursue a PhD in Chemical Engineering. Senior **Hasya Joshi** (Song laboratory) was awarded the **2024 Professor H.G. Khorana Scholar Award**. After graduation, he plans to attend medical school.

REIKO T. AND YUAN C. LEE AWARD FOR INTERNATIONAL STUDENTS



Aditi Parab



Corentin Charles

This **2024 Reiko T. and Yuan C. Lee Award for International Students** prize was established by the Lee Family Foundation with the purpose of supporting one or more annual awards to international students excelling in Biochemistry and Molecular Biology. This year's international recipients were junior **Aditi Parab** (Song laboratory) and sophomore **Corentin Charles** (DeMali laboratory).



Brenna Powers (Wallrath laboratory) received the **Joseph E. and Ursil I. Callen Prize**. The Callen Prize is awarded to an outstanding graduating senior in the College of Liberal Arts and Sciences who has excelled academically, shown civic leadership, and will attend graduate school in the Fall at the University of Iowa in the Biomedical Sciences Graduate Program.

Biochemistry and Molecular Biology Club (BMBC)

This year the Biochemistry and Molecular Biology Club (BMBC) Co-Presidents Ethan Hahlbeck and Christian Brandt organized several events that were well attended by BMB majors at all stages of their education. The fall semester kicked off with the annual "Pizza with Professors," in which students were treated to pizza as they rotated through discussion tables. At each table, a professor would cover a given topic, such as the differences between a BA and BS degree in BMB and types of employment available upon graduation. The Fall semester also included a networking event in which BMB majors met with current graduate students who discussed how to apply to graduate school, what life is like as a graduate student, and what positions are available for BMB PhD graduates. The semester concluded with a joint event with the Microbiology Undergraduate Students Association (MUSA). Students presented posters describing their research, followed by a reception with refreshments.

Spring semester kicked off with laboratory tours where undergraduates saw first-hand the active research environments within the department. The semester concluded with another joint event with MUSA in which both clubs hosted a booth at a local elementary school science night. The BMB students offered hands-on activities where young children and their parents could spool DNA from a solution and make edible DNA. The colored mini marshmallows representing the bases that make up DNA (A, G, T and C) were a big hit with the young children!

ALUMNI NEWS

ALUMNI ACCOMPLISHMENTS

Biochemistry and Molecular Biology is proud of our alumni, like you, who are doing great things. Help us celebrate your by sharing your news with us. Please send your updates to biochem@uiowa.edu.

Congratulations to the following alumni on their recent achievements!



Bryan Allen, MD, PhD

Bryan Allen (MD/PhD, 2008), a former graduate student in Dr. Daniel Weeks's laboratory, was appointed chair and department executive officer (DEO) of the Department of Radiation Oncology in the Roy J and Lucille A Carver College of Medicine effective July 1, 2023. Dr. Allen has expertise and been awarded numerous accolades as a clinical and translational scientist, clinician, educator, and mentor. He has been a faculty member in the Department of Radiation Oncology since 2013.



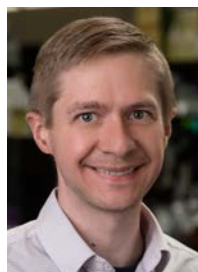
Sarah Bergeron, PhD

Sarah Bergeron (PhD, 2011), a former graduate student in Dr. Peter Rubenstein's laboratory and currently an assistant professor of chemistry at Nicholls State University, received the Louisiana Science Teachers Association William Craig Outstanding University Educator Award for 2023. This award recognizes university faculty members who have reached out to K-12 educators and made a difference in their careers. *Photo credit: Houma | Thibodaux Times*



Tyler Weaver, PhD

Tyler Weaver (PhD, 2019), a former graduate student of Catherine Musselman, will join the faculty at the University of Virginia School of Medicine in the Department of Biochemistry and Molecular Genetics in January 2025. The Weaver laboratory will focus on understanding the complex interplay between chromatin structure, chromatin modifying enzymes, and DNA damage repair. His laboratory will examine fundamental questions at the interface of chromatin biology and DNA damage repair using a powerful combination of biochemistry, single-molecule fluorescence, structural biology, and cell biology approaches.



Tyson Shepherd, PhD

Tyson Shepherd (PhD, 2011), a former graduate student in Dr. Ernesto Fuentes's laboratory, recently co-founded Firelight Biosciences to deploy novel tools and techniques to substantially reduce bioproduction costs and timelines. Firelight's state-of-the-art microbial engineering platform is delivering on the promises of synthetic biology by enabling clients to get from concept to scale-up at the speed of the market.



Arpit Sharma, PhD

Arpit Sharma (PhD, 2018), a former graduate student of Dr. Eric Taylor's laboratory and currently a postdoctoral fellow at Harvard T.H. Chan School of Public Health was recently awarded the 2024 Edgar Haber Research Award. This award supports researchers in their early scientific careers in gaining knowledge and insight into cardiovascular health studies.

OTHER NEWS

OTHER NEWS

Biochemistry Summer Undergraduate Fellowship Program (BSURF)

This summer, the department hosted five undergraduates from colleges and universities for the Biochemistry Summer Undergraduate Fellowship (BSURF). This ten-week research experience is an excellent opportunity for undergraduate students to gain hands-on experience in an active research laboratory under the direction of an established scientist. The summer research experience culminates with a presentation at the Summer Undergraduate Research Conference. Pictured below are Annie Paik and Seojin Pyoun from Grinnell College, Elizabeth Quam from Iowa State University, Jackson Kilburg from Drake University, and Paul Roscoe from Dordt University.



Don Boehme, a Supply Chain Associate in Biochemistry Stores, celebrated 30 years at the University of Iowa. Don began his career in 1993 in Facilities Management, transferring to Biochemistry Stores in 1998. During his time in Biochemistry Stores, Don has worked with five managers and navigated significant changes in inventory technology. Also pictured: Rosemary Stratton, Department Administrator

Sonya Housholder, an Academic Program Management Associate in the departmental office, celebrated 25 years at the University of Iowa. Sonya began her career in the Department of Nursing at Iowa Health Care, working in the Main Operating Rooms, before joining the Office of the Dean in the Carver College of Medicine, where she worked in several divisions over a 22-year span. Sonya joined the Department of Biochemistry and Molecular Biology in 2022 and works primarily with the PhD program, graduate recruiting, seminars, and workshops. Also pictured: Rosemary Stratton, Department Administrator



Art Spector, MD, Professor Emeritus of Biochemistry and Molecular Biology, provided insight and good practices for “Retiring a Research Lab” in a May 2024 interview with ASBMB Today. Dr. Spector’s expertise comes from 39 years as a principal investigator of an NIH-funded laboratory. Read his words of wisdom at <https://www.asbmb.org/asbmb-today/careers/050324/retiring-a-research-lab>.

IOWA

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The department would love to spotlight your news and accomplishments in next year's newsletter. Please send us your updates and successes either by email to biochem@uiowa.edu or use the QR code for the online submission form. Include your name, current position, address, degree, graduation year, and your UI mentor.

FACULTY

Sheila Baker
Brandon Davies
Kris DeMali (Chair)
Adrian Elcock
Ernesto Fuentes
Pamela Geyer
Miles Pufall
Peter Rubenstein
Michael Schnieders
J. Martin Scholtz
Michael Ashley Spies
Maria Spies
Lori Wallrath
Todd Washington

EMERITUS FACULTY

Arthur Arnone
Thomas Conway
John Donelson
Alice Fulton
Bryce Plapp
David Price
Madeline Shea
Arthur Spector
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