August 2025



CONGRATULATIONS TO...

Cassandra Smoak, Cottrell lab, was awarded a fellowship with the Purdue Drug Discovery Training Program T32. Trainees are supported with a 2-year NIH graduate research assistantship and will continue to participate in the program until graduation.

AUGUST GRADUATES...

Doctoral Students

Four PhD students participated in commencement on August 9th. Pictured from left to right: **Lizhi (Bobby) Cheng**, Chapple lab; **Smriti Hoda**, Briggs lab. Both graduated in August and are seeking employment. **Debasmita Saha**, Briggs lab, and **Ronard Kwizera**, Kirchmaier lab, received their degrees in December.

Debasmita Saha is a Postdoc at Seattle Children's Research Institute. **Ronard Kwizera** is a postdoc at the University of Chicago.



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Undergraduates



Andrew Ragaishis B.S. Biochemistry Next: Unknown

UNDERGRADUATE SUMMER PROGRAMS...

Biochemistry had 10 students participate in the SCARF program this summer - participants are pictured below.



Front row: Niah Patel, Anya Piarowski, Anna Fisher **Middle row**: Tanvi Nadimpalli , Laurie McIntyre Carolyn Jia **Top row**: Louis Delaby, Justin Walder ,Blaine Wagner, Ethan Tuttle

Summer Undergraduate Research Symposium

Students who presented posters at the symposium are listed below.

Wyatt Carter presented a poster titled "Modifying Peptide Charge to Enhance Encapsulation in SelfAssembling Nanotubes" Mentor(s): Anna Pavlishchuk (Science); Jean A Chmielewski (Science) Other Acknowledgement(s): Pranshul Sardana (Engineering)

Zhiyuan Chen presented a poster titled "Cardiomyocyte Differentiation of

hiPSCs and 8p Chromosome Mutation Mentor(s): Matthew Thomas Tegtmeyer (Science); Autumn Liberty Bandy (Science) † Presenting Undergrad Author; ‡ Contributing Undergrad Author; * Undergrad Acknowledgment Other Acknowledgement(s): Andres Catalino Castillo Jimenez (Engineering)

Louis Delaby presented a poster titled "Investigating the role of Rm62 RNA helicase in R-loop homeostasis, gene regulation, and neurodegeneration in aging" Mentors: Hana Hall; Kendall Cottingham Other Acknowledgement: Nima Goodarzi

Anna Fisher presented a poster titled "Harnessing the MVA pathway and IPP transporter to modulate MVA/MEP cross-talk and terpenoid flux in Solanum lycopersicum" Mentors: Natalia Dudareva; Manuel Bellucci Other Acknowledgements: Mearaj Ahmed Abdul Jabb Shaikh, Emily Spray

Lucas Hendershot presented a poster titled "Azithromycin Drug Resistance in Acanthamoeba" Mentor(s): Christopher Aaron Rice (Vet Med) Other Acknowledgement(s): Chayan Sharma (Vet Med)

Carolyn Jia presented a poster titled "Investigating the role of Set3 and Set4 in azole resistance in Candida glabrata" Mentors: Scott Briggs; Justin Gregor Other Acknowledgement: Emily Spray

Laurie McIntyre presented a poster titled "Investigating the role of Remodelers and Modifications of Chromatin in Gibberellin-Dependent Responses in Arabidopsis thaliana" Mentors: Joseph Ogas; Jiaxin Long Other Acknowledgement: Emily Spray

Tanvi Nadimpalli presented a poster titled "Examining the Effects of Candida albicans and Candida glabrata Metabolites on Cell Proliferation in Gastric Cancer Cells" Mentors: Majid Kazemian; Yuxin Zhuang Other Acknowledgement: Emily Spray

Niah Patel presented a poster titled "Sanitization of Seeds -A Mechanism for Produce Growers to Reduce the Risk of Foodborne Pathogen Contamination of Fresh Produce" Mentors: Hansel Cordoba, Vinoothna Ramisett, Amanda J Deering Other Acknowledgement: Emily Spray

Anya Piarowski presented a poster titled "Identification of HIF1a interacting proteins." Mentor: Xing Liu Other Acknowledgement: Emily Spray, Rajasi Somesh Dravid

Ethan Tuttle presented a poster titled "A conserved function for Cdc14 phosphatases in fungal cell wall homeostasis" Mentor: Mark C Hall, Other

Acknowledgement: Emily Spray

Elly Uggen presented a poster titled "Investigating the role of Remodelers and Modifications of Chromatin in Gibberellin-Dependent Responses in Arabidopsis thaliana" Mentor(s): Joseph P Ogas (Agriculture); Jiaxin Long (Agriculture) Other Acknowledgement(s): Emily Spray (Agriculture)

Blaine Wagner presented a poster titled "The Role of PKL and INO80 Chromatin Remodelers in Apical Hook Formation in Arabidopsis thaliana" Mentors: Joseph Ogas Other Acknowledgement: Emily Spray

Justin Walder presented a poster titled "Engineering flux through the MVA Pathway to Enhance Terpenoid Synthesis in Tomato" Mentor: Joshua Widhalm, Mearaj Ahmed Abdul Jabb Shaikh Other Acknowledgements: Manuel Bellucci, Emily Spray

NEW FACES...



Lisa Mydy joins our department as an assistant professor this fall. She earned her PhD at the University of Wisconsin-Milwaukee, and had research roles at the University at Buffalo, Abbott Laboratories, and the University of Michigan prior to arriving at Purdue. Her focus is determining the structure and function of novel plant peptide cyclases that form macrocyclic peptides that are under active investigation for treatment of cancer and other diseases.

Lisa is thrilled to work with rotation students and get her lab up and running!

NEW ROTATION STUDENTS...

The Biochemistry Department welcomed 7 new graduate students for rotations this fall. They are pictured below.

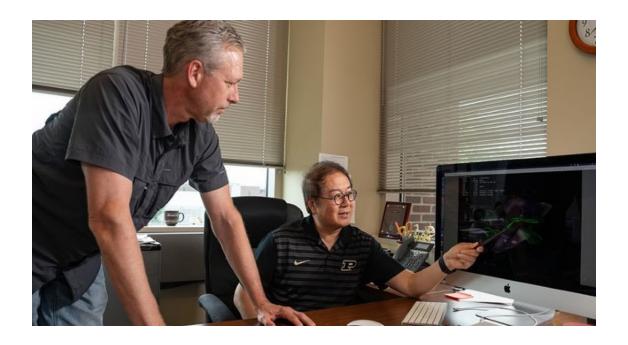


Front Row L-R: Brakstin Hockley, Sara Walis Middle Row L-R: Virginia Akins, Taylor Bias

Back Row L-R: Joshua Stephenson, Daniel Shappard, David Fries

BIOCHEMISTRY IN THE NEWS...

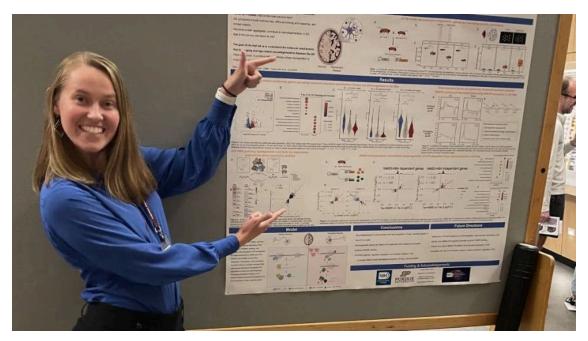
Mark Hall and Zhong-Yin Zhang are featured in a COA news article, titled "Joint agriculture-pharmacy project seeks to develop novel antifungal treatment." They jointly supervise a position held by a postdoctoral scientist who will help develop novel, patent-pending antifungal compounds. You may read the article here.



GOING THE EXTRA MILE...

Tommy Sheeley and **Ann Kirchmaier** travelled to the 24th Annual Midwest DNA Repair Symposium, University of Michigan, Ann Arbor, from 5/17/25-5/18/25 to present "DNA Replication Checkpoint Activation Perturbs Replication Profiles of Cells with Defects in Replication-Coupled Chromatin Assembly." **Thomas Sheeley**, Harish Kothandaraman, Nadia Atallah-Lanman, and **Ann L. Kirchmaier.**

Ann Kirchmaier gave a talk titled "Impacts of the Replication-Coupled Chromatin Assembly Network on Epigenetic States and DNA Replication." at the 50th Anniversary Symposium from 8/6/25-8/8/25 at the McArdle Labs & UW Carbone Cancer Center, University of Wisconsin-Madison.



Kendall Cottingham, Hana Hall lab, was awarded the Howard Zalkin Extramural Training Award in Biochemistry; she used the funds to travel to Cold Spring Harbor Laboratory to present her thesis research at the Eukaryotic mRNA Processing Meeting from August 19 – 23. Her poster was titled Targeting the m6A RNA pathway exacerbates transcription stress in a *Drosophila melanogaster* Alzheimer's disease model".

GRANTS...

Majid Kazemian received \$36,063 from the Brigham And Women's Hospital for his proposal titled "KSHV Infection And Persistences" 04/01/2025 to 3/31/2026

Majid Kazemian received \$50,000 from the Supporting Partnering for Advanced Research teamwork (SPARK) Program for his proposal titled "Developing a platform to target and remove problematic antibodies"

Ann Kirchmaier and **Elizabeth Tran** received \$50,000 from the Purdue Institute for Cancer Research/Tylor Trent Pediatric Pilot Grant Program for the proposal titled "*HLRCC & DNA Replication Stress Response to RNA:DNA Hybrids*" 7/1/25-6/30/26.

Andy Mesecar received a \$50,000 Trask Award for his proposal titled "Development of Ubiquitin Specific Protease 7 (USP7) inhibitors as treatments for hepatocellular carcinoma" 7/01/25 – 12/31/25

RECENT PUBLICATIONS...

Smoak, CN, Gardner, EN, Chua RN, Liu ME, Gardner EN, Cottrell KA. ZYS-1 is not an ADAR inhibitor. https://doi.org/10.1101/2025.08.08.669362

Young AA, Juhler IG, Pierce JR, Bohlin HE, Harper HA, Onishile DS, Chua RN, Liu ME, Gardner EN, Elzey BD, Cottrell KA. PACT suppresses PKR activation through dsRNA binding and dimerization, and is a therapeutic target for triple-negative breast cancer. *RNA*. 2025 Aug 13 PMID: 40803890 DOI: 10.1261/rna.080637.125

IMPORTANT DATES...

Please join us for the Department of Biochemistry Seminar Series. All seminars will begin at 3:30 pm, in WSLR 116, unless otherwise noted.

Sep 9	Teresa O'Meara University of Michigan, Microbiology & Immunology
Sep 16	Anita Corbett, Emory College of Arts and Sciences, Biology
Sep 23	Jayakrishnan Nandakumar, University of Michigan, Molecular Cellular &
Developmental Biology	
Oct 7	Yini Li. Purdue University, MCMP
Oct 21	Nicholas Brown, University of North Carolina, School of Medicine

ATTENTION BCHM ALUMS...

We would love to hear from you! If you have any alumni news to share or had a change of address, please let us know! Updates can be sent to bchm-alumni-friends@purdue.edu.

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