

**October 2021
Department News**



CONGRATULATIONS TO...

The Biochemistry Club was awarded a \$1365 grant which will enable them to develop and expand its Outreach program to the Hana Community Center. The Outreach Program was developed to connect with and engage underserved and underrepresented kids from the Greater Lafayette Area.



Abigail Sipes one of three students who received the 2021 Astronaut Scholarship. Founded in 1984 by the six surviving Mercury 7 astronauts, the Astronaut Scholarship Foundation honor is known nationwide for being among the highest merit-based monetary scholarships awarded to undergraduate students in science, technology, engineering and math. The scholarships are awarded to students in their junior and senior years of college.

Read the full article [here](#).

Aaron Stevenson received a 2021 OUR scholarship. OUR Scholars are full-time undergraduate researchers who excel in their programs. OUR Scholars are a full academic year and must meet program requirements, such as presenting at the annual Undergraduate Research Conference or “Celebrate” (when available) events and completing wraparound professional development.



Cameron Matthews has been selected to represent Purdue at the Agriculture Future of America Leaders Conference in November. AFA provides personal and professional development programs to college students and young professionals in agriculture.

Amirah Haweit was awarded the 2021 John Deere Scholarship during the 2021 MANRRS Regional Cluster. MANRRS is a national society that welcomes membership of people of all racial and ethnic groups to participate in agricultural and related science careers.

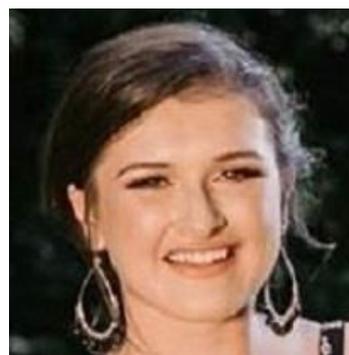


UNDERGRADUATE NEWS...



Jack Schwartz has been offered an internship for Summer 2022 with Lily in the MIH division.

Bailey Tomson has an internship with Advanced Agrilitics.



Madeline Sheiss has accepted an internship at Cargill in Forth Worth Texas for summer 2022.

GOING THE EXTRA MILE...

Natalia Dudareva gave a seminar titled "Plant Terpenoids: Biosynthesis and Perception" for the NSF NeuroNex group, NSF NeuroNex award 'Odor2Action' (<https://neuronex.org/projects/22>) on October 7, 2021.

Natalia Dudareva gave the main lecture entitled "Plant volatiles: from emission to perception" at the 34th Latin American Chemistry Congress – CLAQ 2020, Cartagena, Colombia, Virtual, October 11-15, 2021.

Natalia Dudareva served as a Panel Manager for the USDA AFRI A1103 “Foundational Knowledge of Plant Products” program for the fiscal year 2021, September 28 - 30, 2021.

SAFETY CORNER...

Hazard Alerts

Outdoor Sirens

The outdoor sirens are in place to alert people who are already outside, to seek shelter. If you hear the siren, you should know you are being warned about weather, or some other “shelter-in-place” situation. Once you seek shelter in the nearest building, you are to use all means at your disposal to determine the nature of the warning (i.e. computer, phone, radio, etc.). The sirens only sound for a short time, but the hazard warning is not lifted until one receives an “all clear” from Purdue emergency personnel.

Indoor alarms

When the indoor alarm is sounding, one must leave the building immediately. Please proceed down the nearest stairwell and gather with your lab/office mates across the street and in front of Nelson Hall of Food Science or inside the lobby if the weather is poor. Please make sure everyone is accounted for and safe.

GRANTS...

Natalia Dudareva received a \$24,802 COVID-19 Research Disruption Fund Grant from Purdue University’s offices of EVPRP and the Provost for “Deciphering molecular mechanisms in plant volatile emission”.

Natalia Dudareva (Co-PI) received \$1,002,041 from the National Science Foundation for “Elucidating the interplay between two chromatin regulators HDA8 and ELP3 in dynamic control of primary and secondary metabolic networks”.

Humaira Gowher received a \$25,000 COVID Disruption Fund Grant from Purdue University’s offices of EVPRP and the Provost and Executive VP for Academic Affairs and Diversity.

Hana Hall received a \$25,000 COVID-19 Research Disruption Fund Grant from Purdue University’s offices of EVPRP and the Provost and Executive VP for Academic Affairs and Diversity.

Ann Kirchmaier received an \$8500 COVID-19 Research Disruption Fund Grant from Purdue University’s offices of EVPRP and the Provost and Executive VP for

Academic Affairs and Diversity.

Sujith Puthiyaveetil received a \$25,000 COVID-19 Research Disruption Fund Grant from Purdue University's offices of EVPRP and the Provost and Executive VP for Academic Affairs and Diversity.

PUBLICATIONS...

Weng, J. K., J. H. Lynch, J. O. Matos, **N. Dudareva**. Adaptive Mechanisms of Plant Specialized Metabolism Connecting Chemistry to Function. 2021. *Nature Chemical Biology*. **17** (10):1037-1045.

Wang K., K.M. Reichermeier, **X. Liu**. 2021. Quantitative analyses for effects of neddylation on CRL2 VHL substrate ubiquitination and degradation. 2021. *Protein Science* online ahead of print.

Zhou, X., J. He, C. N. Velanis, Y. Zhu, Y. He, K. Tang, M. Zhu, L. Graser, E. de Leau, X. Wang, L. Zhang, **W. A. Tao**, J. Goodrich, J.K. Zhu, C. J. Zhang. 2021. A domesticated Harbinger transposase forms a complex with HDA6 and promotes histone H3 deacetylation at genes but not TEs in Arabidopsis. *Journal of Integrative Plant Biology*. **63** (8): 1462-1474.

Hsu, C. C., J. V. Arrington, **W.A. Tao**. 2021. Universal Sample Preparation workflow for Plant Phosphoproteomic Profiling. *Methods in Molecular Biology*. 2358: 93-103.

IMPORTANT DATES...

Please join us for the Department of Biochemistry Seminar Series. All seminars will begin at 3:30 pm, in WSLR 116, unless noted virtual. In-person and virtual seminars will be available via zoom.

Join Zoom Meeting

<https://purdue-edu.zoom.us/j/94957989438>

Nov. 2 Karen Adelman, Virtual, Harvard Medical School, Department of Biological Chemistry and Molecular Pharmacology

Nov. 9 Blaine Bartholomew, University of Texas MD Anderson Cancer Center, Department of Epigenetics and Molecular Carcinogenesis.

Nov. 16 Humi Gowher, Purdue University, Department of Biochemistry

Nov. 30 Carolyn Rasmussen, University of California, Riverside, Department of Botany and Plant Sciences

Dec. 7 David Rogers, St. Jude Children's Research Hospital, Department of Pharmacy and Pharmaceutical Sciences

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.

CONGRATULATIONS TO...



Makayla Marlin received an OUR scholarship. OUR Scholars are full-time undergraduate researchers who excel in their program. OUR Scholars are a full academic year, and must meet program requirements, such as presenting at the annual Undergraduate Research Conference or “Celebrate” (when available) events and completing wraparound professional development.

AUGUST B.S. GRADUATES...



Dominique Bennett
Next Stop: Unknown

NEW FACES...



Jaimie Turner recently joined the Biochemistry Department as the new Lead Administrative Assistant to the Department Head of Biochemistry. Please feel free to stop by the main office in BCHM 120 to say hello and introduce yourself.

Jaime has over 17 years of campus experience including 14 years of high-level administrative experience during her time at Purdue. Her previous positions include Lead Administrative Assistant to the Director of the Birck Nanotechnology Center and Administrative Assistant to the Department Head of Physics. During her free time Jaime likes to camp, hike, garden, read and spend time with her family and two dogs.

GRADUATE STUDENT NEWS...

In August, the Department of Biochemistry welcomed 10 new students to our graduate program.



Bridget Kaiser
University of Wisconsin, Wi.



Kai Liu
National Chung-Hsing University,
Taiwan



Lois Luo
Wake Forest University, NC



Grace Meng
Grand Valley State University, MI



Anik Paul
University of Dhaka, Bangladesh



Shomoita Sayed
University of Dhaka, Bangladesh



Kratika Singhal
University of Illinois, Chicago



Kendall Souder
West Liberty St. College, WV



Beinan Yang
Lawrence University, NY



Yuxin Zhuang
Zhejiang University, China
University of South Carolina

UNDERGRADUATE NEWS...

In August the Department of Biochemistry welcomed 27 new undergraduate students.



BIOCHEMISTRY IN THE NEWS...

Majid Kazemian and a team of scientists have discovered a gene that controls the severity of colon cancer. Read the news article [here](#).

SAFETY CORNER...

Proper disposal of broken glass is a question that comes up a lot in the labs. Flasks get dropped during cleaning, beakers are knocked over off a lab counter, accidents happen quite often. According to Purdue's REM Sharps and Infectious Waste Handling and Disposal Guidelines, clean broken glass should be put into a corrugated cardboard box or other strong disposable container. If you are using a box not purchased from the Lily Storeroom, then make sure to tape up all corners and the openings where the flaps meet on the bottom of the box to prevent small pieces from escaping. These boxes should not exceed 20 lbs. worth of broken glass. Mark these boxes as "broken glass" and make sure your lab staff and students know where it is located. Once 20 lb. of clean broken glass has been accumulated, the box should be taped shut on top the way you taped the bottom, with all seams and flaps connections covered, and prominently labeled "SHARP OBJECTS – GLASS DISCARD." The box should then be checked for any protruding sharps before handling. After inspection, the box should be transported to the back-dock area and sat next to the dumpster where the Purdue Trash Pickup can see it and will dispose of it safely. Dropping it directly into the dumpster could cause it to blow back on you, or blow back on the garbage men when the dumpster is emptied. Below are the items numbers for the glass disposal boxes the Lily storeroom sells, and a link to the Purdue website REM Sharps and Infectious Waste Handling and Disposal Guidelines page.

Lily stock # 120097A and 120097B

[Sharps and Infectious Waste Handling and Disposal Guidelines \(purdue.edu\)](#)

GRANTS...

Majid Kazemian received \$100,00 NIH administrative supplement to build HIPAA aligned storage and computing solution.

PUBLICATIONS...

Simpson, J. P., J. Olson, **B. Dilkes**, **C. Chapple**. Identification of the Tyrosine- and Phenylalanine-Derived Soluble Metabolomes of Sorghum. 2021. *Frontiers in Plant Science*. <https://doi.org/10.3389/fpls.2021.714164>

Lee, K. Z., M. A. Mechikoff, A. Kikla, A. Liu, P. Pandolfi, K. Fitzgerald, **F. S. Gimble**, K. V. Solomon. 2021. NgAgo possesses guided DNA nicking activity. *Nucleic Acids Research*. Online ahead of print.

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Oct. 5 Alice Barkan, virtual, University of Oregon

Oct. 11-12 Fall Break, no classes

Oct. 19 Paul Thomas, St. Jude Children's Research Hospital

Oct. 26 Vered Tzin, Virtual, Ben-Gurion University of the Negev

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