

OCTOBER 2020

BIOCHEMISTRY NEWS

CONGRATULATIONS TO...

Orla Hart was appointed as an Education Fellow of the American Society for Biochemistry and Molecular Biology in recognition of her work in the scholarship of teaching and learning, and her work with the society in creating and evaluating their national certification exam.

Natalia Dudareva, Distinguished Professor of Biochemistry, has recently stepped into the role of Director of the Center for Plant Biology (CPB) replacing Clint Chapple, also a Distinguished Professor of Biochemistry and the center's director for its first five years. Natalia hopes to continue the CPB's success and build on it by publishing high-impact research findings in the top scientific journals and improve collaboration across plant science disciplines. She also hopes to build stronger connections between students and faculty and develop stronger connections with industry. Read the full article [here](#).

Steve Broyles on his retirement from the Biochemistry department on August 31, 2020. Dr. Steve Broyles joined the department in 1988. He has had a long-standing interest in gene regulation in poxviruses, and studied the virus' RNA polymerase and proteins that regulate its activity. His recent interests have turned to host cell defenses against virus infection and the viral proteins that counter those defenses.

Dr. Steve Broyles was awarded *Emeritus Professor of Biochemistry in recognition of his many years of distinguished service to Purdue*. He recently moved to the Chicagoland area to be closer to his daughters and granddaughter.



NEW OPPERMAN COMMONS



Things have changed a bit in the Biochemistry building! Thank You to Gilbert and Amelia Opperman for their generous donation that helped create Opperman Commons.

The new Opperman Commons space, shown above as a panoramic view, is partially open! There are 9 individual spaces at tables where students can sit to read, study, have lunch or just take a break and listen to some good tunes. The spaces open are on the right side in the picture above.

It has been quite a challenge to get to this point due to the coronavirus; but a lot of people on campus helped over the summer. The Opperman's came for a visit earlier this month and were delighted to see the progress so far. There is more to come with this project and a celebration will be planned upon completion.

GRADUATE STUDENT SPOTLIGHT

Fabiola Muro Villanueva, Chapple lab



Fabiola Muro Villanueva grew up on a farm in Chihuahua, Mexico, and credits her early interest in science to her father who had a degree that would be equivalent to animal science and range management, so he always had that science knowledge.

Biology-related study was an obvious choice to a student so attuned to science and Nature. Fabiola earned bachelor's degrees in in biochemistry and in genetics at New Mexico State University, where she also discovered her passion for the lab. "I was not looking for a PhD when I started my bachelor's, but as soon as I started doing research, I knew I would want to get a PhD," she says.

Fabiola applied to eight doctoral programs for fall 2013 and chose Purdue on the basis of her conversations with professors whose research interests mirrored her own. "That's what made it a match for me, that I could see myself working with them," she says.

Geography was secondary, she had never been to the Midwest before. It just happened to be where the professors were doing the research she was interested in.

Under the mentorship of Distinguished Professor Clint Chapple, Fabiola's work focuses on genetically modifying the cell wall of plants and studies how those changes affect plant growth and development, ultimately to make cheaper biofuels from plant waste. "Research is not just about yourself," she says. "You can actually have an impact on someone's life, especially on the agricultural side of things."

Fabiola completed her degree this month and will graduate in December. She will remain at Purdue as a postdoc in Professor Chapple's lab. Her professional goal is to continue conducting research that will add to both scientific knowledge and benefit society.

Excerpted from an article courtesy of Agricultural Communication

GRANTS

Dr. Jeremy Lohman received a \$1,214,305 four-year grant from the NIH for his proposal "*Malonyl-thioester Isosteres to Determine Enzyme Structure-Function Relationships.*"

RECENT PUBLICATIONS

Bornowski, N., J. P. Hamilton, P. Liao, J. C. Wood, **N. Dudareva**, C. R. Buell. 2020. Genome sequencing of four culinary herbs reveals terpenoid genes underlying chemodiversity in the Nepetoideae, *DNA Research*. 27(3): dsaa016

Saha, Debasmita, A. Norvil, N. Lanman, **H. Gowher**. 2020. Simplified MethylRAD Sequencing to Detect Changes in DNA Methylation at Enhancer Elements in Differentiating Embryonic Stem Cells. *Epigenomes* 4; 24

Wang, L., J. Laing, B. Yan, H. Zhou, L. Ke, C. Wang, Y. Narita, Z. Zhang, M. Olson, B. Afzali, B. Zhao, **M. Kazemian**. 2020. Epstein-Barr Virus episome physically interacts with active regions of the host genome in lymphoblastoid cells. *Journal of Virology*. Epub.

Radhakrishnan, S., J. Norley, S. Wendt, N. LeRoy, H. Hall, S. Norcross, S. Doan, J. Snaider, B. A. MacVicar, **V. M. Weake**, L. Huang, M. Tantama. 2020. Neuron activity dependent redox compartmentation revealed with a second generation red-shifted ratiometric sensor. *ACS Chemical Neuroscience*. 11: 2666-2678.

IMPORTANT DATES

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

<https://zoom.us/j/9577929238?pwd=TFRlVmlYdkc0NjdQVmhzSUVzRHMxdz09>

(Meeting ID: 957 792 9238 Passcode: biochem20)

October 27	Shinhan Shiu, Michigan State, Dept. of Plant Biology
November 3	Judy Callis, UC Davis, Dept. of Molecular and Cellular Biology
November 10	Bruce Knutson, SUNY-Upstate Medical University, Dept. of Biochemistry and Molecular Biology
November 17	John Morgan, Purdue University, Dept. of Chemical Engineering
November 24	Last day for students on campus
November 25-28	Thanksgiving Break