## **DEPARTMENT OF**

# **Biochemistry & Molecular Biology**

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Please send submissions to Jeff Mason, masonje6@msu.edu

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### Seminar Calendar



#### Announcements

Registration is now open for the Office for Faculty and Academic Staff Development's workshop "Navigating Conflict Narratives and Difficult Conversations" Thursday, April 7 from 10:00 AM – 12:00 PM EST by Zoom. Learn to examine your personal conflict narratives and how they impact how you engage in conflict, define what a difficult conversation is, identify how conflict manifests in different environments, and discuss strategies and skills for conflict resolution. Register here.

BMB graduate student Carson Broeker recently helped curate exhibition pieces for "The Observation Experiment" going on now

at the MSU Museum. Much of the exhibition focuses on how we observe the world around us and digging

common to scientists, many in the public have never seen these items and don't know how they are useful to scientific research. New employees, or anyone that needs a refresher on the basics of growing plants in the greenhouse, can

deeper into what these observations actually mean, something we can all relate to as scientists. Part of Carson's exhibition has a citizen science component, letting the public interact with loaned equipment from the BMB department, such as gel electrophoresis tanks, tabletop centrifuges, and more. While these items are

watch a new narrated slide set by MSU Research Greenhouse Complex here. They are also willing to come and present the slide set live (either in person or via zoom) to your lab group to allow you to ask questions and to dive deeper into topics if need be.

The Bailey Scholars Program (BSP) is offering the opportunity for MSU Faculty and Post-docs in any discipline to apply to be a Faculty Fellows with the program to further their development in the scholarship of teaching and learning. BSP is an integrated learning and leadership community at MSU that was established to foster a diverse learning community where students grow with and from one another while practicing self-directed learning. Check out their website here or email Jennifer (jeno@msu.edu) for more information.

# **Noteworthy News**



Join me in congratulating Martha Faner, who was appointed to serve as Director of Curriculum Integration for MSU's Division of Medical Education.

With this new role, Dr. Faner will take on administrative responsibilities within the Division of Medical Education to support current and future strategies in the delivery of the D.O. curriculum.

Read more here.

SPARTANS WILL.

"Accommodating Students with Invisible Disabilities", a discussion around teaching students with invisible health conditions and other neurodiverse learning impacts will be held Wednesday, March 23rd 12:30-2:00 p.m. This discussion will help to shed light on the ways accommodations can be implemented in partnership with the Resource Center for Persons with Disabilities to aid in learning for all students. Zoom registration here.

Applications for the fifth cohort of MSU's STEM Teaching and Learning Fellowship are now open. This fellowship is designed for faculty who are actively engaged in teaching undergraduate science courses at any level. The fellowship will run from August 2022 through December 2023 and fellows will receive a professional development stipend. Learn more <a href="here">here</a>.

The TA Tuition Pool application for Summer Semester 2022 is now open. The link to the application can be found on the Graduate School web site <a href="here">here</a>. These tuition credits are available only to students who are appointed as teaching assistants in the Summer semester, and they can only be used for Summer semester credits. They can be used toward required courses that go beyond the 5 credits included in the assistantship benefits.

Robert Last's plant biochemistry lab is in need of at least 2 students to handle plant care in their many growth chambers and greenhouse rooms over the summer. The job would also include some lab work, such as dishes, and possibly some research-related work if time allows. Read more <a href="here">here</a>.

The Department of Chemistry and the Center for Photochemical Sciences at Bowling Green State University is accepting applications to fill an interdisciplinary tenure-track Assistant Professor position at the interface of biochemistry and the photosciences. Learn more here.

The <u>Sauer Lab</u> at MIT is hiring a research technician to join a lab whose research is centered on elucidating the molecular mechanism of AAA+ proteases using cryo-EM structural biology and biochemistry. The successful applicant will be responsible for expressing and purifying soluble and membrane proteins, generating novel constructs using PCR and other molecular cloning, and assisting with biochemical assays based on project needs. Click <u>here</u> to apply or email Alireza (alirezag@mit.edu) for more information.

# **Recent Publications**

Al-Hilfi A, Walker KD. "Biocatalysis of precursors to new-generation SB-T-taxanes effective against paclitaxel-resistant cancer cells." *Arch Biochem Biophys.* April 2022.

Hunsicker-Wang LM, Vogt MJ, Hoogstraten CG, Cosper NJ, Davenport AM, Hendon CH, Scott RA, Britt RD, DeRose VJ. "Spectroscopic characterization of Mn2+ and Cd2+ coordination to phosphorothioates in the conserved A9 metal site of the hammerhead ribozyme." *J Inorg Biochem.* February 2022.

Heo L, Sugita Y, Feig M. "Protein assembly and crowding simulations." *Curr Opin Struct Biol.* February 2022.

Espinoza-Corral R, Lundquist PK. "The plastoglobule-localized protein AtABC1K6 is a Mn2+-dependent kinase necessary for timely transition to reproductive growth." *J Biol Chem.* February 2022.

Sharma G, Merz KM. "Mechanism of Zinc Transport through the Zinc Transporter YiiP." *J Chem Theory Comput*. February 2022.

Lou YR, Pichersky E, Last RL. "Deep roots and many branches: Origins of plant-specialized metabolic enzymes in general metabolism." *Curr Opin Plant Biol*. February 2022.

Pinkaew D, Martinez-Hackert E, Jia W, King MD, Miao F, Enger NR, Silakit R, Ramana K, Chen SY, Fujise K. "Fortilin interacts with TGF-β1 and prevents TGF-β receptor activation." *Commun Biol.* February 2022.

Kirst H, Ferlez BH, Lindner SN, Cotton CAR, Bar-Even A, Kerfeld CA. "Toward a glycyl radical enzyme containing synthetic bacterial microcompartment to produce pyruvate from formate and acetate." *Proc Natl Acad Sci.* February 2022.

Turmo A, Hu J, Hausinger RP. "Characterization of the nickel-inserting cyclometallase LarC from *Moorella thermoacetica* and identification of a CMPylated reaction intermediate." *Metallomics*. February 2022.

Singh AK, Santos-Merino M, Sakkos JK, Walker BJ, Ducat DC. "Rubisco Regulation in Response to Altered Carbon Status in the Cyanobacterium *Synechococcus elongatus* PCC 7942." *Plant Physiol*. February 2022.