

DEPARTMENT OF

Biochemistry & Molecular Biology

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COLLEGE OF NATURAL SCIENCE | BMB.MSU.EDU

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

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Seminar Calendar

Monday, February 28

Microbiology & Molecular Genetics Work in Progress Seminars

Rochelle Ratnayake (Parent lab) "Determining the Mechanism of How Bacterial Polysaccharide ECA Mitigates Bacteriophage Infection"

Kayla Conner (Hardy lab) "Characterizing Internalin P Variants and Homologs in *Listeria*"

Noon

Zoom link. Email Rob (abramov5@msu.edu) for the password

Molecular Plant Science Seminars

Jian Hua, Cornell University

"Plant autoimmunity: causes and mediators" 4:00 PM Zoom link (Passcode: 862930)

Tuesday, March 1

The Exchange – (Science discussion for BMB graduate students) "John Williams, City of Hope - protein engineering and cancer" 8:00 AM Email David (arnosti@msu.edu) for the Zoom link

Noteworthy News



Claire Vieille was selected as the new director of the Genetics and Genome Sciences (GGS) Program.

The GGS Program is an interdepartmental, degree-granting program that provides graduate education in genetics.

Read more here.

SPARTANS WILL.

PRL Tuesday Noon Seminars

Saad Raza (Vermaas Lab) "Plant Diterpene Permeability through Biological Membranes Explored via Molecular Simulations"

Noon **Zoom link** (passcode prl2021)

Wednesday, March 2

Metabolism, Membranes and Metalloenzymology Interest Group

Mihiravi Gunasekara (Hong lab)

"Scaling unfoldase activity of the membrane-integrated AAA+ protease FtsH" 4:00 PM Email Teri (compeaut@msu.edu) for the Zoom link

Thursday, March 3

BMB Seminar Series

John Williams, City of Hope

"Atoms to Animals: combining MOA, single cell studies, diffraction and protein engineering to create clinically relevant biologics"

11:00 AM Zoom link (Passcode: 698925)

EEB Seminar Series

Krista Nichols, Northwest Fisheries Center / NOAA

Petra Deane, Mascoma LLC "Career exploration panel" 3:30 PM Email Barbara (eeb@msu.edu) for the Zoom link

Announcements

Reminder, due to scheduled maintenance, the EBS Portal and HR/Payroll system will be unavailable from 7 p.m. Friday, February 25 to 7 a.m. Monday, February 28.

The MSU Graduate Women In Science are seeking presenters and volunteers for Girls Math and Science Day 2022 held on Saturday, May 21st, 2022 from 1-5pm. The event is an opportunity for middle school girls to participate in science demonstrations while working with enthusiastic graduate students and researchers. The day is composed of four 30 minute sessions where girls participate in hands-on workshops on a range of topics in science. Please note that GMSD 2022 will likely be held outdoors; activities should be engineered with this in mind. Those interested in submitting an activity and presenting a workshop click here and those interested in volunteering click here. Questions should be directed to (gmsd.gwis.msu@gmail.com).

The Prevention, Outreach and Education (POE) Department invites all Faculty, Staff, Graduate Students and Professionals to register for POE 3rd Annual Summit titled "Prevention as Action: Strategizing our Individual and Collective Influence" on March 1st from 9:00 AM to 5:00 PM (morning and afternoon sessions) at the MSU Union (3rd Floor). They will be hosting a hybrid event and will be offering virtual attendance also. They will have interactive and action-oriented workshops around prevention of gender-based violence, harassment, and discrimination. Registration here.

The Natural Science Collections is offering \$6,000 summer professional internships. This interdisciplinary program will provide professional training in natural science collections curation and management to MSU graduate students during the summer of 2022 (May 16 – August 18). Training will be structured to encompass both theory and practice. Email Alan (alan@msu.edu) for details.

The Brudvig lab has an opening for an undergraduate student to conduct mentored research in plant and restoration ecology of prairies in Michigan, during the summer 2022 field season (~May – August, with flexibility around specific dates). They will work with this student to develop and conduct their own research project related an aspect of restoring prairies from former agricultural lands, with a focus on the consequences of sourcing seeds from local vs. non-local regions. Email Lars (brudvig@msu.edu) for details.

The Beal Garden is searching for students to work this summer. Anyone with a love for the outdoors, hardworking, and is team oriented is welcomed to apply. Positions are full-time, \$15/h, May 9th-August 19th. Click here or email Katie (mcpeekka@msu.edu) for more information.

Undergraduate students over the age of 18 who are interested in biological research using plants, cyanobacteria, and algae. Our world-renowned labs (dpb.carnegiescience.edu) are located on the Stanford campus, and we offer a vibrant environment for highly motivated students interested in hands-on experience in science. Click here for more information.

The Ohio State University Department of Horticulture and Crop Science is hiring an Assistant Professor of Plant Bioengineering and Synthetic Biology to lead a vibrant research and teaching program in the area of plant metabolic engineering and synthetic biology. Email Guo-Liang (wang.620@osu.edu) for details.

Recent Publications

De-la-Peña C, León P, Sharkey TD. "Editorial: Chloroplast Biotechnology for Crop Improvement." *Front Plant Sci.* February 2022.

Gatreddi S, Urdiain-Arraiza J, Desguin B, Hausinger RP, Hu J. "Structural and mutational characterization of a malate racemase from the LarA superfamily." *Biometals*. February 2022.

Singh AK, Ducat DC. "Generation of Stable, Light-Driven Co-cultures of Cyanobacteria with Heterotrophic Microbes." *Methods Mol Biol.* January 2022.

Xue S, Pattathil S, da Costa Sousa L, Ubanwa B, Dale B, Jones AD, Balan V. "Understanding the structure and composition of recalcitrant oligosaccharides in hydrolysate using high-throughput biotin-based glycome profiling and mass spectrometry." *Sci Rep*. February 2022.

Poliner E, Busch AWU, Newton L, Kim YU, Clark R, Gonzalez-Martinez SC, Jeong BR, Montgomery BL, Farré EM. "Aureochromes maintain polyunsaturated fatty acid content in Nannochloropsis oceanica." *Plant Physiol.* February 2022.

Teoh ST, Leimanis-Laurens ML, Comstock SS, Winters JW, Vandenbosch NL, Prokop JW, Bachmann AS, Lunt SY, Rajasekaran S. "Combined Plasma and Urinary Metabolomics Uncover Metabolic Perturbations Associated with Severe Respiratory Syncytial Viral Infection and Future Development of Asthma in Infant Patients." *Metabolites*. February 2022.

Ding X, Zhang X, Paez-Valencia J, McLoughlin F, Reyes FC, Morohashi K, Grotewold E, Vierstra RD, Otegui MS. "Microautophagy Mediates Vacuolar Delivery of Storage Proteins in Maize Aleurone Cells." *Front. Plant Sci.* February 2022.

Lei L, Burton ZF. "Superwobbling" and tRNA-34 Wobble and tRNA-37 Anticodon Loop Modifications in Evolution and Devolution of the Genetic Code." *Life*. February 2022.