



Please send submissions to Steve Lundback, lundback@msu.edu, 212 Biochemistry (Mailbox on 2nd Floor)

Announcements

[Rima Mouawad, CMB Dissertation Seminar](#)

"Differential Activities and Gene Regulation by the Drosophila Retinoblastoma Proteins"

Tuesday, August 20, 2019

1:00 PM, 208 Biochemistry

[Save the Date: Thermo Metabolomics Seminar Series](#)

"Harness the Power of Metabolomics"

Tuesday, September 10

Room 208 Biochemistry (8:30 am-3:30 pm).

Registration details will follow soon.

[GNPS Metabolomics Workshop, MSU](#)

Dr. Robert Quinn (BMB) will be hosting a metabolomics workshop this September 11th. This workshop is designed to teach analysis of mass spectrometry data (with a focus on untargeted metabolomics) with new bioinformatic tools that can translate this highly technical data into biologically relevant information. GNPS is a new database and data analysis server for tandem (MS/MS) mass spec data analysis. With GNPS you can visualize your metabolomics data in novel ways that enable identification of known compounds, determining the structure of unknowns, and with statistical tools that are designed to identify biological patterns in the overall data. Contact Rob Quinn by August 30th if you are interested in attending. The location will be determined by the number of respondents.

[Molecular Biophysics Symposium in Honor of the Grand Opening of the MSU Cryo-EM Core Facility](#)

Friday October 4th and Saturday October 5th, 2019.

To inaugurate the new Cryo-EM facility at Michigan State, we are hosting a symposium to highlight cutting edge research in molecular biophysics. We will feature invited talks, student posters and a tour of the new cryo-EM facility. Registration is free but required.

[COGS Fall Welcome Cookout](#)

For new and returning graduate students and their families.

Saturday, August 24, 2019, Noon – 3 pm.

Noteworthy News



Undergraduate researcher Maddy Niblock was recently recognized as one of 15 Honors College Wielenga Research Scholars. Maddy will receive an annual stipend for her work in the lab for the 2019-2020 academic year. Maddy has worked on regulation of the insulin receptor gene in *Drosophila*, and will be continuing work with Ana-Maria Raicu on mechanisms of repression by retinoblastoma proteins.

The Wielenga Scholars Program was made possible by the support of Thomas and Sue Wielenga. Thomas was a 1978 Honors College mechanical engineering alumnus, who subsequently received advanced degrees in computer-aided design and mechanical engineering from the U.S of Michigan. Thomas developed the mechanical simulation program, ADAMS, under his thesis adviser, Milton Chase, to model the dynamics of rollover vehicles during crashes. He served as a consultant and expert in the vehicle dynamics and accident reconstruction field, and patented and licensed an anti-rollover braking system, which saves ~1,000 lives annually.

SPARTANS WILL.

[Graduate Student Welcoming, Orientation and Resource Fair](#)

Mini Workshops will be presented by Graduate School staff. Topics include setting expectations, wellness, and career planning & student success. Each workshop will be 20 minutes long.

Saturday, August 24, 2019, 9:00 AM – 12:00 PM, MSU Union

[2019 Conference on Computational Health](#)

George Mias is organizing a Conference on Computational Health in Grand Rapids (at Secchia) on August 27th, as part of the Systems Computational Omics group initiative. This one-day conference will showcase the newest research in computational biology and health at Michigan State University, from the Systems Computational Omics group, and highlight the interdisciplinary connections between computational and statistical work, and clinical research. The social program will focus on facilitating cross-disciplinary connections between computational and clinical/experimental researchers, that may lead to fruitful translational collaborations towards improving global healthcare.

[Assistant/Associate Professor of Plant Synthetic Biology, Cornell University](#)

The School of Integrative Plant Science at Cornell University invites applications for a tenure track position at the Assistant or Associate Professor level in Plant Synthetic Biology. The expected affiliation for the position will be the SIPS Section of Plant Biology on the Ithaca campus. The position will have a 60% research and 40% teaching responsibility. The successful candidate will teach in the areas of comparative physiology, plant hormone biology, stress response, chemistry of plants, and/or plant genetic engineering using synthetic biology tools. Initial screening of applications will begin on October 21, 2019 and continue until the position is filled.

[Postdoc positions, University of North Texas](#)

There are 2 PostDoc Positions available in the BioDiscovery Institute at the University of North Texas in the Alonso Lab. These postdocs will study the function of candidate genes involved in lipid storage and stability in pennycress, a promising alternative source of aviation fuel. This is part of a new interdisciplinary project funded by the Department of Energy for 3 years. If you are interested, contact me. Please share... Keywords: Lipidomics, Plant Biochemistry, Seed Metabolism, 13C-Labeling, Fluxomics, Mass Spectrometry. Contact [Ana Alonso](#).

[Postdoc positions, University of Arizona](#)

We have two postdoc positions to fill in the Riedel-Kruse Lab, Department of Molecular and Cellular Biology, University of Arizona. Our research focuses on engineering multi-cellular bacterial systems while controlling their morphology, patterning, dynamics, and environmental responses. Past projects include the engineering of the first synthetic, fully genetically encoded cell-cell adhesion toolbox [Glass Cell 2018] and the first high-resolution optogenetic cell-surface patterning method ('Biofilm Lithography') [Jin PNAS 2018] – providing critical tools for engineering synthetic multi-cell systems.

[Postdoctoral position, Virginia Tech School of Plant and Environmental Sciences](#)

Dr. Song Li's research group at the School of Plant and Environmental Sciences, Virginia Tech, VA, USA, is looking for a highly motivated postdoctoral associate to work on single cell regulatory network analysis in plant roots starting in Fall 2019. The appropriate candidate should have a strong background and interest in plant genomics, network analysis, sequence analysis and machine learning.

Recent Publications

For most publications from BMB labs during the past year, see [Recent Publications](#) on the BMB website.

Mouawad R, Prasad J, Thorley D, Himadewi P, Kadiyala D, Wilson N, Kapranov P, Arnosti DN. “Diversification of retinoblastoma protein function associated with cis and trans adaptations.” *Mol Biol Evol.* (2019) Aug 16. doi: [10.1093/molbev/msz187](https://doi.org/10.1093/molbev/msz187)

Klinger GE, Zhou Y, Hao P, Robbins J, Aquilina JM, Jackson JE, Hegg EL. “Biomimetic Reductive Cleavage of Keto Aryl Ether Bonds by Small Molecule Thiols.” *ChemSusChem.* (2019) Aug 16. doi: [10.1002/cssc.201901742](https://doi.org/10.1002/cssc.201901742)

Raghuvanshi R, Grayson AG, Schena I, Amanze O, Suwintono K, Quinn RA. “Microbial Transformations of Organically Fermented Foods.” *Metabolites.* (2019) Aug 10;9(8). doi: [10.3390/metabo9080165](https://doi.org/10.3390/metabo9080165)

Springer N, de León N, Grotewold E. “Challenges of Translating Gene Regulatory Information into Agronomic Improvements.” *Trends Plant Sci.* (2019) Jul 31. doi: [10.1016/j.tplants.2019.07.004](https://doi.org/10.1016/j.tplants.2019.07.004)

Liu J, Lu Y, Hua W, Last RL. “A New Light on Photosystem II Maintenance in Oxygenic Photosynthesis.” *Front Plant Sci.* (2019) July 31;10:975. doi: [10.3389/fpls.2019.00975](https://doi.org/10.3389/fpls.2019.00975)

Lantz AT, Allman J, Weraduwege SM, Sharkey TD. “Isoprene: New insights into the control of emission and mediation of stress tolerance by gene expression.” *Plant Cell Environ.* (2019) Jul 27. doi: [10.1111/pce.13629](https://doi.org/10.1111/pce.13629)

Rennhack JP, To B, Swiatnicki M, Dulak C, Ogrodzinski MP, Zhang Y, Li C, Bylett E, Ross C, Szczepanek K, Hanrahan W, Jayatissa M, Lunt SY, Hunter K, Andrechek ER. “Integrated analyses of murine breast cancer models reveal critical parallels with human disease.” *Nat Commun.* (2019) Jul 22;10(1):3261. doi: [10.1038/s41467-019-11236-3](https://doi.org/10.1038/s41467-019-11236-3)