



Please send submissions to Steve Lundback, [lundback@msu.edu](mailto:lundback@msu.edu), 212 Biochemistry (Mailbox on 2<sup>nd</sup> Floor)

## Seminar Calendar

### MONDAY, FEBRUARY 19

#### **BMB-PRI Faculty Candidate Seminar**

Ruben Rellan Alvarez, CINVESTAV-IPN, Mexico  
"Phospholipid balance as a possible driver of maize adaptation to highlands"

10:00 AM, Room 1425 BPS

#### **PRL Seminar**

Michael Udvardi, Noble Research Institute  
"Genetic and genomic dissection of symbiotic nitrogen fixation in *Medicago truncatula*"

4:10 PM, Room 101 Biochemistry

### TUESDAY, FEBRUARY 20

#### **MMG Seminar**

Michael Baym, Harvard University  
"Evolutionary Approaches to Antibiotic Resistance"

11:00 AM, Room 101 Biochemistry

### WEDNESDAY, FEBRUARY 21

#### **3M Interest Group**

Deanna Broadwater, Lunt Lab, BMB  
"Tunable Fluorescent Organic Salts for Enhanced Imaging and Photodynamic"

4:00 PM, Room 1455-A BPS (iCER)

### THURSDAY, FEBRUARY 22

#### **BMB Cryo-EM Faculty Candidate Seminar**

Jean-Paul Armache, UC San Francisco  
"Structural studies of macromolecules using electron cryo-microscopy (cryo-EM)"

11:00 AM, Room 101 Biochemistry

#### **EEBB Seminar**

William C. Wetzel, Michigan State University  
"It's a variable world: Consequences for the ecology of plants and insects"

3:30 PM, Room 1420 BPS

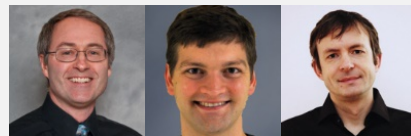
### FRIDAY, FEBRUARY 23

#### **SATE Seminar**

Amit Singer, Princeton University  
"Mathematics for Cryo-Electron Microscopy"

11:30 AM, Room 1400 BPS

## Noteworthy News



Research led by [Dr. Lee Kroos](#) has produced experimental and modeling results that, for the first time, shed light on how a particular type of enzyme functions during spore formation, offering the opportunity for advances in the areas of human health and disease. Their research was published in [PNAS](#) and highlighted in [NatSci News](#).

**SPARTANS WILL.**

## Announcements

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Checkout the [Grad/Postdoc News](#) page on the BMB website for the latest events and opportunities.

### **BMB Town Hall Meeting**

On Tuesday, February 20<sup>th</sup> at 4:00 PM, BMB will host a Town Hall meeting in Room 208, Biochemistry. Issues associated with the recent Nassar affair will be discussed. The discussion will be moderated by a group of BMB faculty and staff members.

### **[CIRTL Network](#)**

The Center for Integration of Research, Teaching, and Learning has a number of learning opportunities for graduate students, postdocs, and faculty. Explore CIRTL resources at <http://www.cirtl.net/>.

### **[ComSciCon 2018 National Workshop](#)**

The 6th annual ComSciCon National Workshop, happening June 14th-16th, 2018 in Boston, MA. At ComSciCon's National Workshop, participants build communication skills that scientists and other technical professionals need to express ideas to their peers, experts in other fields, and the general public. Application deadline is March 1st.

### **[North American Mass Spectrometry Summer School](#)**

August 6-9 2018, Madison, Wisconsin. In this four-day course, students will experience an engaging and inspiring program covering the latest in the application of mass spectrometry to omic analyses in plants and animals. Tutorial lectures range from experimental design, sample preparation, and quantification to the basics of high performance mass analyzers and data analysis. Also planned are several hands-on workshops. Limited space available. Apply now through April 1, 2018.

### **[Invitation to the 9th Annual Midwest Graduate Research Symposium at The University of Toledo](#)**

The University of Toledo Graduate Student Association (GSA) cordially invites students from Michigan State University to the 9th Annual Midwest Graduate Research Symposium (MGRS). Each year we are excited to provide this opportunity to talented graduate students across the country and are looking forward to April 7th, 2018. Free Registration deadline is March 10.

### **[Spring 2018 Mid-Career Conversation](#)**

The Academic Advancement Network and Academic Human Resources will host a conversation with administrators on mid-career post-tenure faculty, focused on issues and challenges faced during this time and how MSU administrators can provide support to overcome them. This event will be held on March 28th from 9:00 am to 10:30 am at the MSU Main Library. Register by March 19th.

## Job Postings

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See the BMB website for a full listing of [employment opportunities](#).

### **[Assistant/Associate Professor in Molecular and Cellular Biology, University of Alberta](#)**

Candidates with a demonstrated publication record and research expertise in prokaryotic and/or eukaryotic systems and a strong interest in undergraduate education are encouraged to apply. We are interested in applications from excellent candidates who study any aspect of molecular and cellular biology using diverse experimental approaches. Closing date is February 28, 2018.

## Recent Publications

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

Bramer D, Wei GW. "Multiscale weighted colored graphs for protein flexibility and rigidity analysis." *J Chem Phys.* (2018) Feb 7;148(5):054103. doi: [10.1063/1.5016562](https://doi.org/10.1063/1.5016562)

Parent KN, Schrad JR, Cingolani G. "Breaking Symmetry in Viral Icosahedral Capsids as Seen through the Lenses of X-ray Crystallography and Cryo-Electron Microscopy." *Viruses.* (2018) Feb 7;10:(2). doi: [10.3390/v10020067](https://doi.org/10.3390/v10020067)

Doore SM, Schrad JR, Dean WF, Dover JA, Parent KN. "Shigella phages isolated during a dysentery outbreak reveal uncommon structures and broad species diversity" *J of Virology* (2018) Feb 7. doi: [10.1128/JVI.02117-17](https://doi.org/10.1128/JVI.02117-17)

Fristedt R, Hu C, Wheatley N, Roy LM, Wachter RM, Savage L, Harbinson J, Kramer DM, Merchant SS, Yeates T, Croce R. "RAF2 is a Rubisco Assembly Factor in *Arabidopsis thaliana*." *Plant J.* (2018) Feb 3;. doi: [10.1111/tpj.13849](https://doi.org/10.1111/tpj.13849)

Rohnke BA, Singh SP, Pattanaik B, Montgomery BL. "RcaE-Dependent Regulation of Carboxysome Structural Proteins Has a Central Role in Environmental Determination of Carboxysome Morphology and Abundance in *Fremyella diplosiphon*." *mSphere.* (2018) Jan-Feb;3:(1). doi: [10.1128/mSphere.00617-17](https://doi.org/10.1128/mSphere.00617-17)

Wu K, Wei GW. "Quantitative Toxicity Prediction Using Topology Based Multitask Deep Neural Networks." *J Chem Inf Model.* (2018) Jan 31. doi: [10.1021/acs.jcim.7b00558](https://doi.org/10.1021/acs.jcim.7b00558)

Liu D, Wang Q, Traverse CJ, Yang C, Young M, Kuttipillai PS, Lunt SY, Hamann TW, Lunt RR. "Impact of Ultrathin C<sub>60</sub> on Perovskite Photovoltaic Devices." *ACS Nano.* (2018) Jan 23;12(1):876-883. doi: [10.1021/acs.nano.7b08561](https://doi.org/10.1021/acs.nano.7b08561)

Hodeib M, Ogrodzinski MP, Vergnes L, Reue K, Karlan BY, Lunt SY, Aspuria PP. "Metformin induces distinct bioenergetic and metabolic profiles in sensitive versus resistant high grade serous ovarian cancer and normal fallopian tube secretory epithelial cells." *Oncotarget.* (2018) Jan 9;9(3):4044-4060. doi: [10.18632/oncotarget.23661](https://doi.org/10.18632/oncotarget.23661)