

Interdisciplinary Graduate Studies in
BioMolecular Science



Biomolecular Science Weekly

Month of August

Save The Date:

New Students: BMS Orientation is Monday, August 21st – August 24th. BMS Retreat is Friday, August 25th! Everyone is welcome to join us for the BMS Retreat and Picnic – [see the schedule](#).

Calendar:

Monday, July 31st - Friday, August 4th:

No Events Listed

Monday, August 7th – Friday, August 11th:

Saturday, August 12th - The Department of Entomology hosts the **2017 Bee Palooza** at the MSU Horticulture Gardens and the **Bug House Open House** at the Nat Science Building; 1:00-4:00 PM

Monday, August 14th -Friday, August 18th:

No Events Listed

Monday, August 21st - Friday, August 25th:

Monday, August 21st – Thursday, August 24th: BMS New Student Orientation

Friday, August 25th - BMS Retreat at East Lansing Hannah Community Center; BMS Picnic at Patriarche Park

Monday, August 28th - Friday, September 1st:

Wednesday, August 30th - Classes Begin: A Monday schedule is observed

Announcements:

Course Announcement: Plant Biotechnology Research Forum

BMB 960 Sec 301: Plant Biotechnology Research Forum

This is an advanced seminar focusing on reading of the literature and student presentations on topics related to plant biotechnology. Topic areas in general address modern problems in human health and environmental sustainability. Specifically in 2016 areas have included the engineering of ABA receptors for drought tolerance, engineering a plant biosynthetic pathway for sustainable production of a natural compounds, navigation of agricultural biotechnology workplaces from industrial perspective, repurposing the cutin pathway for triacylglycerol synthesis. The course is part of the training program in plant biotechnology 'Plants for Health and Sustainability' (<https://plantmetabolism.natsci.msu.edu/>), though students not participating in the training program are also very welcome to take the course. Confirmed speakers for 2017 are representatives from the industry, NASA, national labs and academia.

Goals for the course include increasing competence in reading scientific literature and oral presentation skills, and to prepare students for engagement in the affiliated 6th annual Annual Plant Biotechnology Symposium (<https://plantmetabolism.natsci.msu.edu/events/2017-symposium/>). IMPORTANT: Attendance of the Symposium taking place October 26&27 will be a required portion of the course.

During each class, two students will give presentations based on 2-3 published works. The topics and papers will be selected based upon the topics to be discussed at the research symposium, and thus will vary each year. The course will meet once each week for 6-8 weeks. The actual day/time/location of the course is TBD, based upon availability of the participating students during the first half of Fall Semester. While the instructors will provide the students with suggested topics and papers, students are encouraged to go beyond the suggested publications.

Grading will be based upon class participation (30%) and the research presentation (70%). Course materials will be made available to enrolled students at D2L.msu.edu.

If you are not a declared Biochemistry graduate student, you will need to submit the online override request form (<http://bmb.natsci.msu.edu/undergraduate/override-request-form/>) and then contact the instructors (Drs Hideki Takahashi, htakaha@msu.edu, Björn Hamberger, hamberge@msu.edu and Rob Last, lastr@msu.edu) for permission to enroll. Enrollment will be limited to 15 students.

Course Announcement: Genetics Applications for Improving Food Security

GEN 800 Sec 001: Genetic Applications for Improving Food Security Fall 2017, 1 credit

First organizational meeting: Thursday, August 24th at 3:30pm; Location: 1425 BPS

As the world population is projected to reach 9 billion people by the year 2050, issues of food security are increasingly pressing. In this course, students will be introduced to ways in which genetics and genomics tools are used to enhance crop and livestock production in a changing world. We plan to investigate how -omics and other "big data" studies in particular can provide solutions to relevant issues such as climate change, antibiotic resistance, animal welfare concerns, and human malnutrition. Throughout the semester, students will be asked to present scientific papers related to these topics, prepare questions, and moderate class discussion. In addition, a component of this seminar will be

focused on improving students' science communication skills to the general public and understanding how genetic research has manifested in science policy.

Organizers: Ryan Corbett (corbet35@msu.edu), Amanda Koenig (koenigam@msu.edu), and Katerina Lay (laykater@msu.edu) Faculty facilitators: Cathy Ernst, Susanne Hoffmann-Benning, Shinhan Shiu

Course Announcement: Emerging Infections & Emerging Technology

Emerging Infections & Emerging Technology (BLD 861) will be offered this fall. The online course will be two credits. This course uses contemporary outbreaks and cases to investigate the cause of infectious disease emergence and the cutting edge technologies used to investigate and control them. Click [here](#) for more information.

Contact Dr. Frances Puch Downes at 517-884-4366/ downesf@cns.msu.edu or Michelle Russell at 517-432-2559/ russmich@msu.edu with additional questions.

Course Announcement: Law College Class Offerings

If you are reading this, you may be considering taking a course at the Law College during the 2017-18 school year. We would be delighted to have you in our classrooms. The following courses are ones we think could be especially valuable to graduate students in the College of Natural Science:

Education:

- Education Law, LAW 579D. Prof. Kristi Bowman, Fall Mon 4:00-5:40, 2 cr. This course provides an introduction to the legal regulation of public K-12 education in the U.S. and regularly addresses a range of specific topics regarding students' individual and group-based rights.

Environment/Food/Animals:

- International Environmental Law, LAW 548E. Prof. David Favre, Spring Mon/Wed 10:30-11:45, 3 cr. Learn about the use of bilateral and multilateral treaties and other international mechanisms for dealing with global environmental problems.

Intellectual Property/Technology and Law:

- Scientific Research Regulation, LAW 558Y. Dr. Jennifer Carter-Johnson, Spring Mon 2:00-2:50, 1 cr. Learn about the legal regulation of a specific area of scientific research and work together to prepare informative and accessible resource materials for researchers themselves.

Social Justice/Social Work:

- Domestic Violence, LAW 541B. Prof. Veronica Thronson, Spring Mon 4:00-5:40, 2 cr. Study the nature of domestic violence and the role of the law in preventing and deterring such violence.

How to Enroll

This is the tricky part. To enroll in a Law course, we need to ask you to bear with us and complete some paperwork. Because MSU-Law is a separate legal and financial entity from MSU, a grad student

must enroll as a “guest student” at the law college to take this class. We are working with the university on simplifying this process, but unfortunately we aren’t there yet. If you have a graduate assistantship, it will cover this coursework in the Law College and there should not be any out-of-pocket cost. The Law College cannot receive MITW (Michigan Indian Tuition Waiver) funding from the state, but will work with you to honor the waiver commitment. (Please note if this is your situation; we’ll need to figure out a number of things behind the scenes—it won’t impact you in the end, but it might take us a little while.)

After you fill out the forms [here](#) and get the required signatures, submit the forms to Theresa Allen in the Law College in person (Admissions Office, third floor of the Law College building) or by email, allenthe@law.msu.edu. We will then enroll you in the course, space permitting. We look forward to seeing you this year.

Workshops:

Workshop on Writing Proposals for International Dissertation Research Grants/ ISSR Semester-Long Seminar

Thursday, August 31, 5:00-7:00PM; Third Floor International Center (Room 303/305)

This two-hour workshop is open to all students gratis. For those who wish to continue, it also is the first session of the semester-long, 12 or 3-credit seminar "*International Social Science Research (ISSR) Abroad (focus Africa, ME, Asia, Eurasia, and Latin Am): Concept, Design, and Praxis.*"

Free at the workshop: Funding Catalog for Graduate Student International Research; Handout: "Secrets of Writing Winning Proposals;" Advice from MSU graduate students who have won awards; Writing proposals for 2017-18 deadlines for national & local grants; Developing proposals for the dissertation or pre-dissertation grants

Workshop Agenda:

- Finding sources of funding for pre-dissertation and dissertation research using MSU Library Resources and the worldwide web
- Deadlines for application in 2017-2018
- Proposal Strategies: Understanding the proposal process in national competitions and maximizing your chances for success
- “What makes a winning proposal?": Comments by MSU faculty reviewers serving on national panels
- “How I developed a successful dissertation or pre-dissertation proposal:” Advice from a panel of successful MSU graduate students
- Steps in planning and writing a successful proposal – a summary with handouts

ISSR Semester-Long Seminar: Fall Semester 2017 - 1, 2 or 3-credits - Thursdays, 6:00–8:50 pm – 210B Berkey Hall, beginning Sep 7

A full-semester multidisciplinary graduate seminar offered fall semester 2017 as either:

- a) **SOC 890.002** (Wiley) 1, 2, or 3 cr. Must obtain enrollment form via email from David Wiley (wiley@msu.edu) or John Duda (dudaj@msu.edu) and have it signed by their faculty advisor.

- b) **ANP 825.001**, (Wiley) 3 credits required, (enroll on Registrar's website).
- c) WRA 891.001 (Bresnahan) - 3 credits. Must obtain enrollment permission from Roger Bresnahan (bresnaha@msu.edu).
- d) **Independent Study (890)** in the Departments of Economics, Political Science, Geography, History, Agricultural Economics, and the Department of Community Sustainability (CSUS) for 1-2 credits (contact Wiley for details).

For more information or enrollment forms, contact: wiley@msu.edu or bresnaha@msu.edu.

Job Opportunities:

Postdoctoral Position in Environmental (Epi) Genomics

The Laboratory of Environmental Genomics, in the Department of Environmental Health (www.sph.emory.edu/eh) at the Rollins School of Public Health of Emory University in Atlanta, Georgia (PI: Carmen Marsit) invites highly qualified and motivated applicants to a Postdoctoral Fellow position in environmental epigenomics. The laboratory is currently investigating the influence of the environment on the human epigenome and the health ramification of these alterations. Specifically, the fellow will work on research projects focused on the collection, analysis and interpretation of genome-wide epigenetic data including DNA methylation, imprinted gene expression, and miRNA expression, obtained in epidemiologic investigations and/or from experimental studies. Opportunities for the fellow to apply for independent funding will be available and encouraged.

The laboratory is part of the Emory HERCULES Center for Exposome Research and the Winship Cancer Center at Emory, and participates in multiple NIEHS Children's Environmental Health Centers as well as in a number of Developmental Origins of Health and Disease (DOHaD) related projects. The resources and collaborators in these programs will also be available to the postdoctoral associate.

Applicants should possess a Ph.D. in Environmental Health, Toxicology, Epidemiology, Statistics/Biostatistics, or other relevant disciplines. Strong quantitative skills are necessary. Specific experiences in using the R programming environment, in working with genome-scale DNA methylation or other genomics data, in laboratory-based molecular assessment and in the use of bioinformatic databases and platforms is desirable. In addition, candidates should have excellent scientific writing and strong oral communications skills, as well as the ability to work effectively, collaboratively, and collegially with colleagues.

For more information and to apply, applicants should submit a cover letter, curriculum vitae, names of at least 3 individuals who can provide a recommendation through: https://sjobs.brassring.com/1033/ASP/TG/cim_jobdetail.asp?partnerid=25066&siteid=5449&areq=69933br.

Questions can be addressed to Dr. Carmen Marsit, carmen.j.marsit@emory.edu, Dept. of Environmental Health, Rollins School of Public Health, Emory University, 1518 Clifton Road, Atlanta, GA 30322.

Scholarships & Fellowships:

Michigan Diabetes Research Center 2017-2018 Regional Pilot/Feasibility Grant Program

Purpose

The purpose of this Pilot/Feasibility grant is to promote research in diabetes by new and established faculty at Wayne State University, Michigan State University, and the University of Toledo and to enhance communication and collaboration among diabetes investigators within the region.

Eligibility

- Full-time instructional, research or clinical track **faculty** positions at Wayne State University, Michigan State University and the University of Toledo
- Basic and clinical diabetes-related research
- New investigators beginning careers in diabetes-related research, established investigators who have not previously worked in diabetes-related research but wish to focus their expertise on diabetes, or established diabetes investigators who propose innovative research in diabetes that represents a clear departure from their ongoing research

Applications

- Proposals should be for one year of support, with total requested **funding up to \$60,000 (University of Toledo, Michigan State University) or \$70,000 (Wayne State University)** direct costs.
- Application Deadline: **Monday, August 7, 2017**
- Anticipated Funding Date: January 2018
- Regional P/F grant awardees are queried annually by MDRC administrative staff and are required to provide information on the publications and funding that stem from the Regional P/F grant as this information must be reported to NIH. Regional P/F grant awardees are also expected to present their research at the Annual MDRC Diabetes Symposium generally held in the spring.
- Please note - Funding will depend on the successful renewal of the Michigan Diabetes Research Center application.

To apply: Please visit the competition space website at umms.infoready4.com

- Select Michigan Diabetes Research Center (MDRC) Regional Pilot/Feasibility Grant Program from the list of titles.
- Select "Apply" on the right-hand side of this page to access the Regional P/F Application and other templates.
- Please follow the Instructions found in the Regional P/F Application.
- All details are automatically saved as you enter them. When you are ready to submit, click "Submit Application" at the bottom of the page. You will receive a confirmation email once your application has been submitted.

Questions: Contact Sarah Cain, (734)763-2561, cains@umich.edu