BioMolecular Science Weekly

September 11 - 15, 2017

Calendar:

Monday, September 11th:
**BMS Research Forum:** Vanessa Benham; “Mechanisms of the Etiology and Prevention of Adiposity Associated Tumor Formation”; 12:00-1:00 PM; Room 162, Food Safety Building

**Genetics Research Forum:** Ryan Corbett, Amanda Koenig, and Katerina Lay; “What I Did Last Summer”; 1:00-2:00 PM; 1425 BPS

**WiPS Seminar:** Daniel Parrell, “Using Luciferase to Probe the Cellular ATP Levels During Sporulation in Bacillus Subtilis”; Jackson Sorensen, “Genome Reduction and Gene Enrichment in the Soils Above the Centralia, PA Coal Fire”; 12:00 PM; Beacon Conference Room, 1455A BPS

**Entomology Seminar:** Juan Huang, Michigan State University; “Use of Semiochemicals for Integrated Pest Management”; 4:00-5:00 PM; Gordon Guyer Conference Room, 244 Natural Science Building

**Bug Open House:** Our fall open house provides an opportunity to see the Bug House at your own leisure for free. Great event for kids and parents alike; 5:30-7:30 PM; 146-147 Natural Science Building

Tuesday, September 12th:
**MMG Seminar:** Tom Hope, Northwestern University; “Utilizing Imaging Approaches to Reveal Details of the HIV Lifecycle”; 11:00 AM; 101 Biochemistry

Wednesday, September 13th:
No events listed.

Thursday, September 14th:
**BMB Colloquium Series:** Jason Spence, University of Michigan; “Modeling Human Development Using Insights From Organoids and Embryos”; 11:00 AM; 101 Biochemistry

**EEBB Seminar:** Rachael Eaton, Graduate Program Administrator, Rice University and Clifton Ragsdale, Department of Neurobiology, University of Chicago; “Careers Outside of Academia”; 3:30 PM; 1420 BPS
Friday, September 15th:

Science at the Edge: Pankaj Metha, Department of Physics, Boston University, “Understanding Emergent Behaviors in Biology: From Cell Fate to Microbial Ecosystems,” Refreshments at 11:15, Starts at 11:30; 1400 BPS

BEACON Seminar: Helen McCreery, Michigan State University; Title TBD; 3:30-4:30 PM; Beacon Conference Room, 1455A BPS

Announcements:

MSU Postdoc Appreciation Day
Friday, September 15th, 2017, 10:00AM – 3:30PM

Event open to all MSU Postdoctoral Fellows and Research Associates

Agenda:

- 10am-11am, Biomedical and Physical Sciences (BPS) #1425
  New and established postdoc orientation presentation
  Academic Advancement Network at MSU
- 11:00am-11:30am, Biomedical and Physical Sciences (BPS) #1425
  Panel Q&A Session Panelists:
  Dr. Ryan Bixenmann (Career services coordinator, PhD Career Services)
  Dr. Shannon Manning (Professor, Microbiology & Molecular Genetics)
  Dr. Sarah Saunders and Dr. Andrew Eagle (Postdocs, recipients of the Postdoctoral Excellence in Research Award 2017)
  Lydia Weiss (Educational program coordinator, WorkLifeOffice)
- 11:30am-1pm, Molecular Plant Sciences (MPS) Atrium
  Lunch
  Resource fair: Human Resources, WorklifeOffice, BEST program, MSU Libraries, Graduate Women in Sciences, Grad Life & Wellness, Institute for Cyber-Enabled Research (ICER), Office of the University Physician, ...
- 1:30pm-3pm, Biomedical and Physical Sciences (BPS) #1425
  Career and professional development seminar
  John Vasquez, Advisor, PhD Career Services

Registration required to attend the lunch! RSVP by Friday, September 8th 2017 to pda@grd.msu.edu

Mid-Michigan Chapter of Graduate Women in Science (GWIS): Fall Meeting
Monday, September 11th, 2017, 5:30pm, BPS 1415

GWIS aims to build a global community to inspire, support, recognize, and empower in women in science. We strive to achieve this mission by three simple goals:

1. Connect. Strive to build a powerful international network of women scientists.
2. Lead. Mentor the leaders of today so that they can inspire the leaders of tomorrow
3. Empower. Empower women scientists to excel in their careers.
Please join us for an informational meeting to meet other members, learn about our past and future events, discover ways to get involved, and enjoy free food. For any questions, please visit www.gwismidmichigan.weebly.com, or email midmichigan@gwis.org.

NSF GRFP - Panel on Proposals

Join us to learn how to write a successful NSF Graduate Research Fellowship proposal from a distinguished panel of recipients and reviewers. The NSF Graduate Research Fellowship Program recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master's and doctoral degrees at accredited US institutions.

We are live-streaming for remote participants and hosting the lunchtime session for local attendees from 12-1:30 p.m. EDT, Friday, Sept. 8. Pizza will be served. Co-organized by National Institute for Mathematical and Biological Synthesis and the University of Tennessee, Knoxville

Panelists:
(Grant Recipients)
Jordan Bush, Ph.D. candidate, Ecology & Evolutionary Biology
Sarah Cooper, Ph.D. candidate, Genome Science & Technology
Todd Pierson, Ph.D. candidate, Ecology & Evolutionary Biology

(Reviewer)
Terry Hazen, Governor's Chair for Environmental Biotechnology

(Moderators)
Vitaly Ganusov, Microbiology and Brian O'Meara, Ecology & Evolutionary Biology

Where: Hallam Auditorium (Room 206) at NIMBioS, Claxton Education Building, 1122 Volunteer Blvd, Univ. of Tennessee

Can't make it to NIMBioS? For more information about how to join the live stream, visit http://www.nimbios.org/videos/livestream. Send your questions and join the conversation on Twitter using #utkgrfp

For more information, visit http://www.nimbios.org/nsfgrfp

Bioethics Brownbag & Webinar Series

Wednesday, September 13th, 2017, 12pm, C102 Patenge Room, East Fee Hall

Expanded Carrier Screening for an Increasingly Diverse Population: Embracing the Promise of the Future or Ignoring the Sins of the Past?

Current professional guidelines for carrier genetic screening aim to balance potentially helpful information with cost and patient anxiety: recommended testing on the basis of family history, self-reported race/ethnicity, or a condition deemed worth of universal screening. But some private companies have begun to offer expanded carrier screening – testing all conditions for all patients – which will potentially involve returning ancestry information or results validated in other populations.
This talk will explore potential implications and policy options at the intersection of race, reproduction, and commercial use of data.

msubioethics.clickwebinar.com/brownbag

**Course Announcement: Visualization of Scientific Datasets**
Visualization of Scientific Datasets (CMSE 402), Spring 2018

Course instructor: Brian O’Shea, oshea@msu.edu

Date/time: Monday/Wednesday, 10:20-11:40 a.m. in 1220 Engineering Building

Prerequisites: CMSE 202 and Calculus III (any version)

This course is open to both undergraduate and graduate students, and counts towards the CMSE minor and both CMSE graduate certificates! Please contact the course instructor if you have any questions or require an override into the course.

Course description: The purpose of this class is to learn about the visualization of many different types of datasets. This includes understanding the components of effective data visualization, the methods and techniques used to visualize different types of data, and the relationship between data analysis and visualization. Students will gain experience in several widely-used visualization tools and will work with vector and scalar data, multivariate data, geographical data, and time-series datasets. Students participating in this course will have the opportunity to experiment with the new CMSE Visualization Laboratory as well as other campus resources.

**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:

Developing a Professional Identity
Wednesday, September 13th, 2017, 5:30pm to 7:00pm, 110 Chittenden Hall

It is important for PhD students to develop a professional identity, not only to assist them in their job search, but also to safeguard and promote their growing status as researchers and contributors to their respective disciplines. The aim of this ‘hands-on’ workshop facilitated by PhD Career Services is to provide an overview of the importance of developing a narrative via the strategic use of your application materials; to provide an opportunity for attendees to reflect on and discuss the nature of the type of profession they are going to pursue (either academic or alt-ac professions); to identify common understandings / beliefs within academic disciplines and industries for what makes "a good hire" or "candidate"; and to use these common understandings as a first step towards developing a ‘professional practice’ document.

Registration is required. Click here to register or visit grad.msu.edu and click "Workshops/Events" under Professional Development.

Navigating the Master’s Degree
Friday, September 15th, 2017, 9:00am to 1:00pm, 300 Bessey Hall (The Writing Center)

In this 3-hour workshop, the focus will be on understanding the transition from undergraduate to graduate school, navigating the master’s degree coursework and graduation options (thesis, exams, portfolios, etc.), locating and using professional and personal support resources, and writing for degree and future job requirements. Participants will create academic timelines for their master’s work (coursework, conference presentations, internships, etc.) at MSU, and discuss technologies and habits that can help them stay on task. Participants will also discuss how to manage the stress that often
pervades the life of master’s students, and how to select and work with a committee. The workshop will end by having participants explore and share their current writing practices, and writing and revision strategies, as well as sharing strategies for overcoming writer’s block and procrastination. A free pizza lunch will be provided.

Registration is required. Visit http://grad.msu.edu and click “Workshops/Events” under Professional Development.

**Developing Your Non-Academic Cover Letter**

**Tuesday, September 19th, 2017, 5:30 pm to 7:00 pm, 110 Chittenden Hall**

Cover letters are your opportunity to make your job application stand out by emphasizing your strengths and accomplishments. This workshop will present an overview of how to write effective cover letters for non-academic positions. We will provide a detailed explanation of cover letter objectives and information on each section of the cover letter.

Registration is required. Visit http://grad.msu.edu and click “Workshops/Events” under Professional Development.

**Write-In at the Graduate School**

**Friday, September 22nd, 2017, 9:00 am to 12:00 pm, 110 Chittenden Hall and Chittenden Commons**

Are you working on a thesis or dissertation chapter, a proposal, or an article? Do you need a quiet place to write, or a space to collaborate with your peers on a piece of writing? Come to the Graduate School in Chittenden Hall for a Friday dedicated to writing. Participants must come with a specific writing goal and be prepared to write until noon! Graduate writing consultants from the Writing Center will be on hand to help with goal setting and accountability after you leave the session, and to help facilitate the formation of writing groups that can keep you moving toward your goal. Coffee and tea will be available while you write, and lunch will be provided at the end of the writing session. During lunch we will debrief and set future writing goals.

Registration is required. Visit http://grad.msu.edu and click “Workshops/Events” under Professional Development.

**Job Opportunities:**

**Postdoctoral Recruitment Event: November 2-4, 2017**

The Office of Postdoctoral Research at The Ohio State University College of Medicine is excited to announce the 2017 Autumn Postdoctoral Recruitment Event! This event is a collaboration with the Pelotonia Fellowship Program and the Research Institute Training Office at Nationwide Children’s Hospital.

This event will provide an excellent opportunity for outstanding PhD students from leading graduate programs to meet out research faculty, interview for open postdoctoral positions, and discover the exciting and innovative research taking place at The Ohio State University and the Research Institute at Nationwide children’s Hospital.

Highlights include:
• Fully funded travel expenses
• Visit the Ohio State University Campus and learn about what Columbus has to offer
• Network with current postdocs from OSU and Nationwide Children’s Hospital
• Present your research to faculty
• Interview with prospective mentors to discuss postdoc research opportunities at OSU and NCH

Application for this event is open to senior graduate students who have completed or expect to complete their PhD between January 2-17 and June 2018. Preference will be given to US Citizens and permanent residents who are training grant-eligible AND who come from underrepresented backgrounds.

For complete details and application instructions, please visit go.osu.edu/postdocrecruit. Completed applications are due by September 15th, 2017.

Postdoctoral Position Available at Sloan-Kettering Institute, New York City
The Lai laboratory has a funded postdoctoral position available to study intragenomic conflicts across Drosophila species and their control by endogenous RNAi. In prior work, we showed that RNAi has a major role in regulating spermatogenesis, via a special class of rapidly evolving siRNA substrates termed hpRNAs. In ongoing unpublished work, we characterized the genomics of hpRNAs across the Drosophilids, which we believe unlock a map of genomic conflicts controlled by RNAi pathway. We also knocked out the RNAi pathway in a non-model fruit fly and revealed surprising male-specific phenotypes much more overt than in D. melanogaster, reflecting derepression of emergent meiotic drive systems that do not exist in the flagship fruit fly.

We know little of the profound activities of recently-emerged selfish genes that are controlled by hpRNAs and how they affect gametogenesis, and how such factors come to be recognized and extinguished by small RNA pathways. These topics are central to understanding the biology of RNAi and mechanisms of speciation. To elucidate these questions, the ideal postdoctoral candidate will have familiarity with Drosophila genetics and genome engineering, and integrate these techniques with molecular and genome wide approaches in the context of gonadal biology. As well, this project is relevant to other interests in the group that examine the testis with respect to rapidly-evolving miRNAs and protein-coding genes, and specialized post-transcriptional regulatory pathways, that all reflect the unique gene expression environment of this tissue.

If interested, please contact laie@mskcc.org with research statement and CV.

Scholarships & Fellowships:

Ford Foundation Fellowships
The National Academies of Sciences, Engineering, and Medicine is accepting applications for the 2018 Ford Foundation Fellowships Programs for Achieving Excellence in College and University Teaching. Full eligibility information and online applications are available on our website.

Through its Fellowship Programs, the Ford Foundation seeks to increase the diversity of the nation’s college and university faculties by increasing their ethnic and racial diversity, to maximize the educational benefits of diversity, and to increase the number of professors who can and will use diversity as a resource for enriching the education of all students.
Eligibility Requirements:
- U.S. citizens, nationals, permanent residents (holders of a Permanent Resident Card), or individuals granted deferred action status under the Deferred Action for Childhood Arrivals Program (DACA) program, and political asylees and refugees regardless of race, national origin, religion, gender, age, disability, or sexual orientation.
- Individuals planning a career in teaching and research at the college or university level in a research-based filed of science, social science or humanities.

Stipends:
- Predoctoral--$24,000 per year for three years
- Dissertation--$25,000 for one year
- Postdoctoral--$45,000 for one year

Awardees will have expenses paid to attend at least one Conference of Ford Fellows. Approximately 65 predoctoral, 36 dissertation, and 24 postdoctoral fellowships will be awarded.

Application Deadline Dates:
- Predoctoral: December 14, 2017 (5:00 PM EST)
- Dissertation: December 7, 2017 (5:00 PM EST)
- Postdoctoral: December 7, 2017 (5:00 PM EST)

Supplementary Materials receipt deadline for submitted applications is January 9, 2018 (5:00 PM EST)

For more information and to apply online:
www.nationalacademies.org/ford
FordApplications@nas.edu
https://twitter.com/NASEMFordFellow
https://www.facebook.com/NASEM.FordFellowship/

Graduate School Writing Fellows in the Disciplines
Are you interested in developing your own awareness of conventions of writing in your discipline for proposals, articles, and dissertations? Would you like to gain experience in leading a group, facilitating others' writing development, and collaborating with your graduate program director in creating professional development support within your department? Consider making a 2-semester commitment as a Writing Fellow in your graduate program.

This opportunity is open to students in any discipline. The program began as a pilot supported by a national Council of Graduate Schools and ETS grant, and included fellows from the Natural Sciences, Social Sciences, Communication Arts and Sciences, and Arts and Letters.

What is involved:
- Participating in one 4-hour training session in early fall with an experienced writing facilitator; topics will include learning to identify genres of writing in your discipline and learning to facilitate a group (including establishing writing goals, encouraging constructive peer feedback, keeping groups on track)
• Talking with your graduate program director to identify writing needs within your department (e.g., writing comprehensive exams, dissertation proposals, external grant proposals, articles for submission, or some combination of these projects)
• Notifying doctoral students in your program about the group
• Convening regular writing group meetings in fall 2017 and spring 2018
• Writing a short final report on the goals and achievements of your group members at the end of each semester
• Participating in a facilitator meeting once each semester to share challenges and solutions

What you get:
• Practice in the transferable skills of communication, collaboration, and leadership
• The ability to better understand and talk about the diversity of writing that occurs in your discipline
• Better awareness of your own writing practices
• An opportunity to interact with other writing fellows across campus
• A $1000 fellowship for each semester that the writing group has met consistently

Who is eligible:
• Doctoral students in any field who have already passed their comprehensive exams.

How to apply:
• Talk with your graduate program director about the kinds of writing projects in your department that might be appropriate.
• Fill out the application with the required signatures.
• Write a brief description (500 words) that includes: (1) why you are interested in the program, (2) what kind of writing project(s) you and your graduate program director have agreed might be useful to focus on, (3) your desired outcomes both for the group and for your own professional development.
• Send your application, description, and a copy of your CV via e-mail to Logan O-Neil, oneillog@grd.msu.edu, by September 15, 2017.

The Graduate School will fund up to 10 peer writing fellows for 2017-18. For questions, please contact Dr. Judith Stoddart (stoddart@grd.msu.edu).