Calendar:

Monday, September 18th:
**Epidemiology and Biostatistics, Pathobiology and Diagnostic Investigation and MMG Seminar:** Dr. Janani Ravi, PhD, Rutgers University; “Computational Approaches to Understand Host-Pathogen Biology”; 10:00 AM, 1400 BPS

**BMS Research Forum:** Laura Kirby, D. Koslowsky Lab; “Alternative RNA Editing: A Gateway to Dual Coding Genes”; 12:00 PM, 162 Food Safety

**WiPS Seminar:** Huiqing Zheng, Abramovitch Lab; “Chemical Inhibitors of *Mycobacterium Tuberculosis* DosRST Signaling and Persistence”; and Dylan Frabutt, Zheng Lab; “Characterizing the Role Malectin (MLEC) Plays During the Maturation of HIV-1 Envelope Glycoprotein”; 12:00 PM, 1455A BPS

**Entomology Seminar:** Dan Hanh, University of Florida; “From Sleeping Beauties to Macho Males: Understanding Mechanisms of Sress Hardiness Can Impact Our Understanding of Ecology, Evolution and Pest Management”; 4:00 PM, 244 Natural Science

Tuesday, September 19th:

**MMG PhD Preliminary Examination Announcement:** Nkrumah A. Grant, MMG PhD Graduate Student; “The Effects of Relaxed Selection on Metabolic Plasticity in a Long-Term Evolution Experiment with *Escherichia coli*”; 10:00 AM, Biochemistry, Room 208

**MMG Seminar:** Christopher Rao, University of Illinois at Urbana-Champaign; “DNA sensing in *Bacillus subtilis*”; 11:00 AM, 101 Biochemistry

**Genomics Core Seminar:** Jeanne Geskes and Wanessa Wright, PhD, Illumina Inc; “Introduction to RNA Sequencing: Understanding Expression – Powerful Next-Generation Sequencing and Bioinformatics Tools for Transcriptome Analysis”; 12 PM, 162C Food Safety and Toxicology Building; Registration is requested: [http://eventregistration.illumina.com/RNASeqMSU](http://eventregistration.illumina.com/RNASeqMSU)
Wednesday, September 20th:

**3M Interest Group:** Geoffry Davis, Kramer Lab; “Proton Motive Force Influences on Photosynthetic Electron Transfer BackReactions”; 4:00 PM, ICER Seminar Room (1455A) BPS

**Department of Food Science and Human Nutrition Seminar:** Jeff Kornacki, Kornacki Microbiology Solutions, Inc; “Chasing Persistent Strains Through Food Processing Facilities”; 4:00 PM, 1135 Anthony Hall

Thursday, September 21st:

**BMB Colloquium Series:** Jeff Tabor, Rice University; “Repurposing Bacterial Two-component Systems as Sensors for Synthetic Biology”; 11:00 AM, 101 Biochemistry

**EEBB Seminar:** Clifton Ragsdale, Department of Neurobiology, University of Chicago; “Evolutionary Novelties and the Brain and Development of the Octopus”; 3:30 PM, 1420 BPS

Friday, September 22nd:

**Pharm Tox Seminar:** Dr. Zhiyong Xi; “The Endosymbiotic Bacterium Wolbachia-mediated Pathogen Interference in Mosquito and its Current Development for Disease Control”; 9:00 AM, B448 Life Science

**Science at the Edge:** Insoo Hyun, Department of Bioethics, Director of the CWRU Stem Cells Ethics Center, Case Western Reserve University; “Watching a Chaperone Fold a Protein at High Resolution”; 11:30 AM, 1400 BPS

**BEACON Seminar:** Kenna Lehmann, Michigan State University; 3:30 PM, BEACON Conference Room

Announcements:

Join MSU Division of Public Health in Welcoming Dr. Benjamin Cook

Monday, September 18, 2017; 12:00-1:00 PM; MSU College Of Human Medicine, Flint Campus Lecture Hall, Room 132

Live Stream available on Zoom: https://msu.zoom.us/j/411399506, Meeting ID: 411-399-506

**Racial/ethnic mental health disparities: Identifying and addressing determinants within and outside of the healthcare system**

Dr. Benjamin Cook is Director of the Center for Multicultural Mental Health Research and Health Equity Research Lab at Cambridge Health Alliance, and Assistant Professor in the Department of Psychiatry at the Harvard Medical School. He holds a Ph.D. in Health Policy from Harvard University and is a health services researcher focused on improving quality of life, and access and quality of treatment for individuals living with behavioral health disorders. His research interests center broadly around reducing health disparities and improving equity of healthcare, using rigorous methods of measuring and understanding underlying pathways of healthcare disparities, applying these methods to analyses of national data sets and electronic health records, and evaluating innovative interventions with the potential to reduce disparities through clinical improvements and systems integration. He has been PI of multiple NIH and AHRQ R01 studies, and is currently Principal Investigator of a PCORI grant to improve understanding of treatment preferences among racial/ethnic minorities with depression and diabetes, a NIMHD R01 assessing Medicare policy changes on mental health care disparities, and co-leads research projects assessing mental healthcare disparities among transgender individuals and evaluating and
disseminating a youth criminal justice diversion program. Dr. Cook assists with research training for Harvard Medical School psychiatry and psychology interns and fellows, and provides analysis support to Cambridge Health Alliance clinicians interested in pursuing quantitative research studies.

**Announcement from the Office of Regulatory Affairs**

In December 2017, Michigan State University is implementing a new research compliance system, Click™, to manage its Institutional Review Board (IRB) activities. This will affect graduate students with current and future human subjects’ research applications and protocols. Click™ will help streamline the compliance process and enhance security and application transparency for student and faculty investigators.

Educational opportunities, quick guides, and video demonstrations will be available on the Research Administration Project website this fall. There will be additional communications this fall about the upcoming IRB implementation, including training dates and the transition process for active projects. We encourage you to participate in these educational opportunities if your research involves human subjects. Please visit the Human Research Protection Program’s website and the Research Administration Project website for additional information.

**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 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](http://grad.msu.edu) and click “Workshops/Events” under Professional Development.

**Job Opportunities:**

**Positions Available at The University of Kansas**

**Assistant or Associate Professor in Biochemistry, Assistant or Associate Professor in Microbial Pathogenesis; Department of Molecular Biosciences**

We invite applications for two faculty positions as tenure-track assistant or associate professors. One position is in the area of Biochemistry and another in the area of Microbial Pathogenesis. Candidates are expected to develop an internationally visible, rigorous, and well-funded research program and to effectively teach and mentor undergraduate and graduate students. Included for the Microbial Pathogenesis faculty position are specific resources and support mechanisms associated with the NIH Chemical Biology for Infectious Disease Center of Biomedical Research Excellence ([https://cbid.cobre.ku.edu/](https://cbid.cobre.ku.edu/)). As such, preference will be given to those applicants with current or future plans that incorporate an aspect of chemical biology into their research.

The University of Kansas is a member of the prestigious Association of American Universities. KU is a major educational and research institution located in Lawrence, a vibrant, thriving community of more than 90,000 and close to Kansas City and the KU Medical Center.

Applicants must have a PhD or equivalent degree in the chemical or biological sciences and at least two years of post doctoral research experience. Applicants at the Assistant Professor level are expected to demonstrate potential for establishing an independent, externally-funded research program, and those at the Associate level must have extramural funding (as PI or MPI) with clear potential for continuance. The successful candidate will also direct graduate student research and participate in the undergraduate and graduate teaching missions of the University. Minorities, women, veterans and those with disabilities are strongly encouraged to apply. The University of Kansas values candidates who have experience working with students from diverse backgrounds and possess a strong commitment to improving access to higher education for historically under-represented minorities.

To apply online, go to:

Biochemistry: [https://employment.ku.edu/academic/10020BR](https://employment.ku.edu/academic/10020BR)

Microbial Pathogenesis - [https://employment.ku.edu/academic/9958BR](https://employment.ku.edu/academic/9958BR).
A complete online application includes the following materials: a cover letter, curriculum vitae, statement of current research achievements and future research plans, statement of teaching interests and philosophy, and the names and contact information for at least three professional references. Review of applications will begin November 1, 2017 and will continue as long as required to identify a qualified pool. Position inquiries can be directed to Dr. Audrey Lamb (biochemistry position, lamb@ku.edu) or Dr. Scott Hefty (microbial pathogenesis position, pshefty@ku.edu).

**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.

**Positions Available at US Department of Agriculture**

**Research Assistant position at US Department of Agriculture-Animal and Plant Health Inspection Service-Plant Protection and Quarantine-Science and Technology in Beltsville, MD.**

**Essential Job Duties**

The Research Assistant position will work under the supervision of a Section Supervisor to support the APHIS PPQ CPHST Beltsville Lab Diagnostic and Quality Management Team in providing support for the CPHST Beltsville Lab Quality Management System (QMS) and, as needed, confirmatory diagnostics, validation support of biochemical and molecular methods for regulatory plant pests/pathogens. Specifically, the position will receive and log-in diagnostic samples; conduct molecular and serological testing according to the approved work instructions; write and submit diagnostic reports. The position will calibrate or assist calibration and maintenance of laboratory equipment; maintain plants in the greenhouse and/or fungal/bacterial cultures as needed; prepare culture media and buffers; perform general laboratory maintenance tasks; operate and maintain specialized equipment such as thermocyclers, ELISA readers, tissue grinders, freeze-dryers, etc. The position will record extensive experimental data sets in official laboratory notebooks and LIMS, enter and maintain data into computer programs, and generate reports.
The position will track reagents inventories and/or budget expenditures for the diagnostic activities or projects; perform all activities with adherence to the CPHST Beltsville Lab Quality Management System (QMS) and approved Standard Operating Procedure (SOP) or other QM documents in accordance with ISO 17025 laboratory accreditation.

**Minimum Education/Experience**
Bachelor’s degree in microbiology or molecular biology, biotechnology, or other related fields plus three or more years of relevant experience.

**Hiring Range**
Commensurate with Experience ($43,000 - $45,000)

Position will be open until **September 26, 2017**. Please contact workatncstate@ncsu.edu or visit https://jobs.ncsu.edu/postings/90709 for additional information on applying.

The position is based at the CPHST Beltsville Laboratory in Beltsville, MD. US citizenship, permanent residency or US employment authorization card (EAD) is required.

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**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/