Dr. Nilesh Banavali has received FRAP-A award. Congratulations!

The Faculty Research Award Program (FRAP) provides seed funding to support faculty research and other creative endeavors. FRAP-A grant was awarded to Dr. Banavali for developing a Next-Generation Sequencing (NGS) assay to quantify the full sequence-dependent error probability for mutations introduced by error-prone polymerases in all possible k-mer sequence contexts (where k represents the uniform number of nucleotides in each sequence context). The assay will use a specifically designed algorithm to include all possible k-mers in plasmid constructs. Its modular design will provide flexibility in adaptation to various systems and environmental conditions. It will also advance the understanding of the mechanisms by which nucleic acid polymerases make errors that result in mutations.

Kara Levinson, a 4th year PhD student at Dr. Mantis’ lab, has just published her first paper as lead author. Levinson and her colleagues examined the interactions between V. cholerae and 2D6, a protective mouse monoclonal IgA specific for the O-polysaccharide that surrounds V. cholerae's cell body as well as its polar flagellum. The investigators reveal through video, confocal, and scanning electron microscopy that 2D6 employs two distinct mechanisms to promote V. cholerae motility arrest and possibly outer membrane stress.


V. cholerae: arrested motility and outer membrane stress (Levinson et al., 2015)
Dr. Indrahit Lahiri did his PhD with Dr. Janice Pata studying the enzymatic mechanisms of C- and Y- family DNA polymerases. Currently, he is a postdoctoral fellow in the lab of Dr. Andres Leschziner in the Department of Molecular and Cellular Biology (MCB) at Harvard University. Dr. Lahiri is interested to find out how chromatin remodelers alter nucleosome states of the eukaryotic DNA. In particular, he is studying the enzymatic mechanism of the yeast remodelers SWR1 and SWI/SNF by using cryo-electron microscopy and different single molecule techniques.

Dr. Joanne O’Hara is working in Dr. Richard Malley's lab in the Department of Infectious Diseases at Boston Children's Hospital. *S. pneumoniae* is a major cause of morbidity and mortality in infants and children in both developed and developing countries. Hence development of effective pneumococcal vaccines for such a vulnerable population is a global public health priority. Using a mouse model, the goal of Dr. O’Hara’s post-doc research is to better understand the basis for differences in the immune response of infants and adults to pneumococcal infection and immunization, so that more effective vaccines can be rationally designed.

Dr. Emily Paul is currently working in Dr. Stuart Orkin's lab in the Hematology/Oncology department at the Boston Children's Hospital. The goal of her research is to understand how post-translational modifications affect the degradation of Bcla11a, a transcription factor in erythrocytes responsible for the repression of fetal hemoglobin.

In 2014, Dr. Purba Mukherjee completed her PhD on translesion and replicative DNA polymerases from Dr. Janice Pata's lab at BMS. Currently, she is a joint postdoctoral fellow in the labs of Drs. Don Coen and Jim Hogle in the Department of Biological Chemistry and Molecular Pharmacology (BCMP) at Harvard Medical School. As a postdoc, Dr. Mukherjee is interested in the structural and functional characterization of the Herpes simplex virus (HSV-1) replisome using cryo-electron microscopy and single molecule microscopy techniques.

From the left: Dr. Lahiri, Dr. Mukherjee, Dr. Paul and Dr. O’Hara, SUNY Albany Department of Biomedical Sciences Alumni in front of the Harvard Medical School.
Student achievements

Cristina Herrera

ASM Biodefense conference
Cristina is currently a 3rd year PhD student in Dr. Mantis’ group. Cristina’s abstract was selected for the ASM Biodefense conference as a highlighted oral presentation. The conference was in Washington DC February 9-11, 2015. She was given the opportunity to give a 15 minute talk in one of the afternoon sessions. Her talk was titled: “Antibody-Mediated Aggregation of Ricin Toxin In Vitro Correlates with Protection In Vivo” and the session she participated in was "New Treatments for Persisting Problems" with a total of 5 speakers. Cristina presented her research on using camelid antibodies (VHVs) as tools to try to understand how they neutralize ricin toxin. She presented her recent findings that antibody-mediated aggregation of ricin toxin in vitro is a better correlative to antibody's ability to protect in vivo against ricin intoxication.

“The conference overall was a great experience, giving this talk was really exciting and a good learning opportunity. I was also able to talk to other scientists during the conference who are doing similar research and it was exciting to see them come to my talk and ask thoughtful and interesting questions. I also received good feedback on how to continue to make progress.”

The BMS department helped Cristina fund some of the travel cost and she was able to apply for the $200 funds students are eligible for when they give an oral presentation at a conference.

Alternative career pathways

BMS Career Panel

Beyond the Bench: Exploring Career Opportunities in Biomedical Sciences

Date: April 28th, 2015 3:00-4:30pm
Location: DAI Auditorium at David Axelrod Institute (DAI), 120 New Scotland Ave.
Contact for more information: hcristina@albany.edu

Panelists:

Kim Musser, PhD - Chief of Bacterial Diseases at the Wadsworth Center Dr. Musser's laboratory provides diagnostic reference testing for the detection of various pathogenic bacteria in New York State

Charles Silver, PhD – New York City Watershed Inspector General Scientist/Environmental Scientist IV at the New York Attorney General’s Environmental Protection Bureau Responsible for evaluating different environmental issues associated with protecting drinking water quality in the New York City Watershed

Martin Brown, PhD- Technology Leader, Life Sciences and Molecular Diagnostics at General Electric Leads a Research and Development group that develops technology and products for the Healthcare and Life Sciences industries and manages the portfolio of research projects for GE Healthcare’s Life Sciences businesses

Rebecca Landsberg, PhD - Assistant Professor, Biology at the College of Saint Rose Dr. Landsberg is a professor at a primarily undergraduate institution and her research focuses on the developmental effects of maternal alcohol exposure and embryonic development of neurons in the brainstem

Jack Guzewich, MS - Semi-retired food safety consultant Food safety and foodborne disease consultant and trainer
Upcoming events and important dates

The 24th Annual Student Poster Day
Student Poster Day is an opportunity for students to present on their graduate research projects or their required internships, which are an integral part of their academic experience at the School of Public Health. MPH students planning to graduate in May are required to present a poster at Student Poster Day to satisfy their internship requirement.

Date: Friday, April 24th. 10:00am to 1:30pm
Location: lobby of the Cancer Research Center, East Campus
Deadline for abstract submission: April 6, 2015 at 5:00 pm to sph06@albany.edu

Note: BMS department will reimburse the cost of poster printing. Please contact Tony Torres atorres@albany.edu

Front 2015 class schedule is available.
Registration deadline: Please return academic advisement form to Tony Torres. Academic Advisement Form: http://www.albany.edu/bmsadvisement.pdf

Mentor Approval Forms are due for current students. Please ensure to fill this form and return it to Tony Torres, Room 5220, Center for Medical Sciences, 150 New Scotland Avenue, 12208.

Eastern New York Branch of the American Society of Microbiology, Student Chapter invites students to come meet the ENYB-ASM 2015 executive board and hear about the events that we have planned for 2015.

Date: Thursday, March 26, 2015, 3:30-5:30PM
Location: Recovery Room, 62 New Scotland Avenue, Albany

BMS department announcement
Department has a small amount of funds that we would like to make available to the students for the purpose of advancing their dissertation/thesis projects. To be considered for these funds, please send an email to Tony Torres (atorres@albany.edu) with a subject line BMS Research Funds Request-NAME, providing a description of the item (vendor, price, etc) and a justification for the purchase of the item.