2015 Career Development Grants for Postdoctoral Women Recipients

The ASM Membership Board is pleased to announce the recipients of the 2015 Career Development Grants for Postdoctoral Women. The recipients are Ye-Jin Eun, Harvard University, Department of Molecular and Cellular Biology (Ethan C. Garner’s Laboratory); Jennifer R. Honda, National Jewish Health, University of Colorado (Edward D. Chan’s Laboratory); Athenia L. Oldham, University of Oklahoma (Kathleen E. Duncan’s Laboratory); and Daria Natalie Van Tyne, Harvard Medical School, Massachusetts Eye and Ear Infirmary (Michael S. Gilmore’s Laboratory).

Ye-Jin Eun received her Ph.D. in Biochemistry from the University of Wisconsin-Madison and is now a postdoctoral Fellow in the Laboratory of Ethan C. Garner at Harvard, where she studies cell growth and division of the model archaean Halobacterium salinarum. She developed chemical probes to manipulate the intracellular organization of bacterial cells and created physical tools to engineer their growth environment and modulate their cell-cell interactions. She discovered two compounds, DCAP and divin, from a high-throughput, small molecule screen and showed that they perturb the organization of bacterial membranes and cell division, respectively (studies conducted in collaboration with Max Planck Institute for Terrestrial Microbiology). She also showed that the compounds are potent antimicrobials against clinical pathogens while being significantly less toxic to mammalian cells. She demonstrated that DCAP kills nutrient-deprived and biofilm-associated cells efficiently, making it an attractive antimicrobial agent since dormant bacteria and biofilms cause persistent infections and are difficult to eradicate using currently available antibiotics. Eun will use the CDGPW award to travel to Amy Schmid’s laboratory at Duke University to become familiar with molecular cloning and learn systems biology approaches to study the regulatory networks for modulating the activity of archaean cytoskeletal proteins.

Jennifer R. Honda is a postdoctoral researcher in Edward D. Chan’s Laboratory at the University of Colorado Anschutz Medical Campus, where she also received her Ph.D. in Microbiology. Her research focuses primarily on understanding how nontuberculous mycobacteria (NTM) resist innate immunity and cause lung disease in susceptible populations, particularly in Hawaii, which has the highest rate of NTM lung disease in the nation, nearly four times greater than the national average. Honda initiated the first ever NTM study in the Hawaiian Islands, in which she collaborated with colleagues to collect and analyze samples from homes to determine the distribution of NTM. She also studied NTM lung disease in the context of cystic fibrosis in Hawaii patients, and has undertaken studies to identify geological components that drive NTM in the island environment. Additionally, she leads a project in which high school students in Hawaii and Colorado collect and analyze samples to compare the temporal colonization of NTM species on new showerhead surfaces in the two distinct climates. Honda has instructed, trained, and mentored over 300 undergraduate students in microbiology, many of whom have matriculated to professional medical or nursing/dental hygiene programs. She has also refereed and participated in scientific conferences and opportunities that promote diversity. Honda will use the award to visit the laboratory of Matt Bankowski, Diagnostic Laboratory Services, Aiea, Hawaii, to learn techniques for culturing and identifying NTM.

Athenia L. Oldham received her Ph.D. in Cell Biology from the University of Oklahoma Health Sciences Center, Oklahoma City, and then moved into postdoctoral work there as a researcher in the laboratory of Kathleen E. Duncan.
Her research has focused on developing molecular methods to study oil field microbiology and the stability and biodegradation of alternative fuel blends, and she has collaborated on the development of molecular assays to study the microbial ecology of biofilms in corrosive pipeline systems. Her work extends the use of molecular techniques commonly used in medical and clinical labs to industrial and environmental settings, where nucleic acid extraction and molecular techniques are limited due to lack of resources or molecular biology expertise. Throughout her time in the Duncan Lab, Oldham has taught and mentored undergraduate and graduate students, and has been an instructor for workshops at OU and in Brazil for partners in the OU Biocorrosion Center. She also produced online manuals to guide students step-by-step through qPCR. She will use the award to attend the 10-day course “Strategies and Techniques for Analyzing Microbial Population Structures” (STAMPS) at the Marine Biological Laboratory in Woods Hole, Mass.

Daria Natalie Van Tyne began her postdoctoral training in Michael S. Gilmore’s Laboratory at Harvard Medical School, Massachusetts Eye and Ear Infirmary, after receiving her Ph.D. in Biological Sciences in Public Health at Harvard School of Public Health. She uses systematic approaches to uncover new ways that enterococcal bacteria cause disease in the antibiotic and postantibiotic era, including the use of comparative and functional genomics approaches to identify traits that make enterococcal infections naturally refractory to treatment, as well as the factors that predispose these bacteria to readily develop resistance. She spearheaded (in collaboration with colleagues at the Broad Institute) a comparative genome analysis of an early series of bloodstream isolates from an outbreak of multidrug-resistant bacteremia from the mid-1980s. She sequenced and analyzed the genomes of 65 clonal strains from this outbreak, isolates that span nearly three years of cycles of reinfection, as well as the genomes of 28 isolates that immediately predate the outbreak for comparison. Outside of the laboratory, she advises undergraduates who are interested in biomedical sciences, graduate school, and pursuing research careers, and has mentored students who are writing research papers. She has served as a teaching fellow for undergraduate and graduate courses, given guest lectures in additional courses, and developed and presented a series of special topics lectures for undergraduates. Van Tyne used the award to attend the 8th International Conference on Gram-Positive Microorganisms, to be held in Montecatini Terme, Italy.

Call for Nominations. The 2016 Career Development Grants for Postdoctoral Women program is currently accepting nominations. Up to four grants ($1,500 each) are given annually to postdoctoral women with outstanding scientific accomplishment and potential for additional significant research or study in the area of microbiology. For more information on the program and the application process, go to www.asm.org/grants-for-postdoc-women on the ASM website.

ASM Speakers’ Bureau Opens Doors

In the fall of 2013, ASM launched a new program for undergraduate and graduate ASM Student Chapters, the Speakers’ Bureau. Its purpose is to educate students about the many microbiology-related career opportunities. Since its inception,