



QSB SEMINAR SERIES 291

From the Field to the Bench: Using an Evolutionary Model Organism for Host-Microbe Interaction Studies

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Location: SSB 130

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ABSTRACT

Tiny microbes play a huge role in keeping their hosts healthy. In turn, the host controls which microbes are able to thrive in and on the host. Both of these processes are influenced by the host genes, which can control the interplay between the microbes and their hosts at several levels. To determine the role that host genes play on host-microbe interactions, Dr. Milligan-Myhre has adapted the well-described evolutionary model organism, threespine stickleback fish, for host-microbe interaction studies. Her lab has focused on determining how different populations of hosts respond to changes in the microbiota, and how the immune system of different populations of host respond to microbes. In addition, she will discuss the challenges of being a woman of color in STEM, and give advice for how to maintain a balance between pursuing Western Science while maintaining cultural identity.

BIO:

Dr. Kat Napaaqtuk Milligan-Myhre hails from Kotzebue Alaska, just above the Arctic Circle. She earned a B.S. in Medical Microbiology and Immunology and a PhD in Microbiology, both from the University of Wisconsin-Madison. Her PhD thesis focused on characterizing genes and proteins necessary for the obligate intracellular parasite *Toxoplasma gondii* to infect brains. For her post-doctoral fellow at the University of Oregon, she adopted the evolution model organism threespine stickleback for host-microbe interaction studies under Drs. Karen Guillemin and William Cresko. She is passionate about making STEM a welcoming place for everyone, but especially minorities and women, and ensuring her mentees can make the most of their enthusiasm for research. When not teaching or doing research, she likes to run, do beadwork, and bake.

