

SCIENCE AT THE EDGE

2018 SEMINAR SERIES

Quantitative Biology Graduate Program | Gene Expression in Development and Disease

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“Teaming with microbes: lessons from the zebrafish intestine”

Microbial colonization of the digestive tract is a crucial event in vertebrate development, required for maturation of host immunity and establishment of normal digestive physiology. We have developed gnotobiotic zebrafish as a model system to study how intestinal microbial communities are established, how they influence host development, and how perturbations of the microbiota can result in loss of intestinal homeostasis and inflammation. Using defined microbial communities that we can visualize with light sheet microscopy, we are exploring bacterial colonization dynamics of the intestine. We are also using bacterial genetic approaches to identify bacterial factors that influence host programs of intestinal epithelial renewal and innate immune system maturation. Finally, we make use of zebrafish genetics and transgenesis to explore the host pathways that perceive and respond to bacterial factors that influence intestinal homeostasis.

FRIDAY, APRIL 27, 2018
11:30 AM, ROOM 1400 BPS
Refreshments at 11:15