



## KAREN GUILLEMIN



**Karen Guillemín is a professor in the Department of Biology, member of the UO Institute of Molecular Biology and founding director of the Microbial Ecology and Theory of Animals Center for Systems Biology, which is funded by the National Institutes of Health.**

Guillemín pioneered the use of zebrafish as a model organism for studying the interactions of animals with their resident microbes or “microbiomes.” In particular, Guillemín’s research group investigates how resident bacteria influence development, metabolism, and immunity. Working with her UO colleagues across campus, Guillemín has helped in developing new microscopic technologies

that have allowed for live imaging of the bacteria in the zebrafish gut.

Efforts to understand these interactions in normally developing hosts such as zebrafish can provide insights into what goes wrong in many human disease states, particularly in chronic inflammatory conditions, diabetes, and cancer.

Information gained through studies done in Guillemín’s lab eventually may guide efforts of researchers in the Phil and Penny Knight Campus for Accelerating Scientific Impact to develop new approaches, informed by microbiome science, for treating and curing a variety of human diseases.