

**Monsanto Lecture presented by David Logan, Ph.D.
Thursday, September 26, 1:30-2:15 p.m.**

Phenotyping in increasingly physiologically relevant contexts

Our laboratory works with dozens of collaborators worldwide to design and execute large-scale microscopy-based experiments to identify the causes and potential cures of disease. Physiologically relevant model systems are increasingly being used in this work, including co-cultures of two different cell types to better mimic functional tissue and whole organisms such as *Caenorhabditis elegans* to study entire organ systems. Machine-learning approaches, in some cases guided by biologists' intuition, have successfully measured subtle phenotypes in these increasingly complex model systems.