

GDCB SEMINAR

Tuesday, March 8, 2022 — 4:10 p.m.

1414 Molecular Biology Building

'Drosophila as a platform for discovering exercise mimetics'

Abstract: We have pioneered the use of *Drosophila* as a model for adaptations to endurance exercise and demonstrated that many outputs of endurance exercise in humans are replicated in exercise-trained flies, including endurance, speed, flight performance, autophagy, and mitochondrial activity. We have used these techniques to identify several conserved molecules that mimic many of the benefits of chronic exercise even in unexercised animals. Recently, we have begun testing these exercise-mimetic molecules as a way to treat chronic diseases that prevent patients from performing high-intensity exercise, including mitochondrial and neurodegenerative diseases. We have also begun preliminary work to study a novel model of chronic muscle disuse, and are testing whether exercise mimetics can ameliorate disuse phenotypes.



Robert Wessells

Wayne State University

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Host: Hua Bai, genetics, development and cell biology assistant professor

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