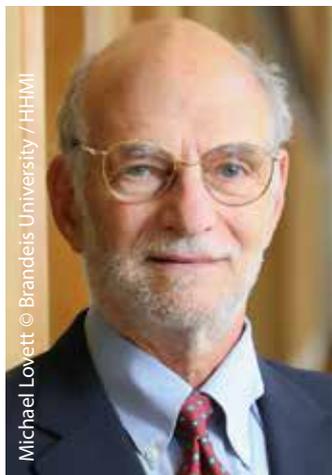
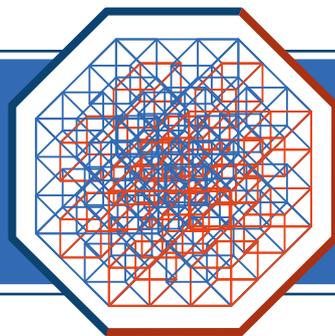


MANFRED EIGEN AWARD LECTURE



Michael Lovett © Brandeis University / HHMI

Prof. Michael Rosbash

Nobel Prize Laureate in Physiology or Medicine 2017

Department of Biology, Brandeis University USA

Howard Hughes Medical Institute

Circadian regulation, gene expression and the fly brain

The mechanism and genes that underlies circadian timing are conserved in all animals, from fruit flies to humans, and include a conserved set of transcription-translation feedback loops. This system also governs a large fraction of all gene expression in many if not most tissues, which explains why so much animal physiology (biochemistry, metabolism, endocrinology, behavior, sleep, etc.) is under temporal control. A large fraction of my current research focuses on the *Drosophila* brain, where ~150 central brain “clock” neurons cells play a prominent role in orchestrating the fly sleep-wake cycle. These cells share the central clock timekeeping mechanism but are otherwise remarkably heterogeneous from a molecular profiling point of view. Neuronal heterogeneity may be a general feature of the tiny fly brain (100,000 neurons) and help explain how it can orchestrate such an impressive array of complex behaviors. Time permitting, I will also discuss an additional topic, one that bridges the identification of RNA-binding protein targets to issues of neuroscience interest.

Tuesday, November 26, 2019

2 pm

Manfred Eigen Hall



Max Planck Institute for Biophysical Chemistry

