LAUFER CENTER
FOR PHYSICAL AND QUANTITATIVE BIOLOGY

Seminar 2017

Genome Evolution in Laboratory Populations of Yeast

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Our research is aimed at understanding the molecular basis of evolution. Yeast species in the "model genus" Saccharomyces possess a unique set of features that make them an ideal system for studying evolution in the laboratory. Yeast is a well characterized eukaryote microorganism with a short doubling time. Saccharomyces yeasts can be propagated either sexually or asexually and either as haploids or diploids. In addition, populations can be frozen creating a "frozen fossil record" of adaptive evolution. These tools allow us to watch evolution in real time as well as to analyze the historical events that led to the modern yeast species.

In our laboratory we are using yeast to address fundamental questions in microbial evolution: (1) How does selection shape the genome? (2) How does the structure of the genome constrain evolution? (3) Are evolutionary outcomes reproducible? (4) What role do chance and determinism play in evolution?

Friday May 12, 2017

2:30 PM Laufer Center 101

Host: Sasha Levy

Refreshments: Hub 110 after seminar

Stony Brook University

For a disability related accommodation,
please call 631-632-5400