



Undergraduate Summer Internship in Systems Biology

Internship Project Description: Summer 2018

Project Title: Evolution of a Signaling Response

Supervisor Name: Michael Springer

Lab PI Name: Michael Springer

Project Description: In order to survive, organisms need to adapt to their environment. Our lab is interested in the qualitative and quantitative differences in how related strains respond to the same environment; in our case how different strains of the yeast *Saccharomyces cerevisiae* responses to mixtures of glucose and galactose. We use a number of fluorescent, genetic, genomic, and computational tools to measure difference, determine the genes responsible for the differences, molecularly dissect these differences, and conceptually understand how these difference lead to the observed phenotype. The internship project will extend this work to related species of yeast and involve learning a range of experimental and analytical skills, including high-throughput data acquisition and computational analysis.