
Seminar 2015

**Exploiting the yeast stress-activated signaling network to inform
on stress biology and disease signaling.**



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The Gasch Lab uses modern techniques in comparative and functional genomics, computational and systems biology, and genetics and molecular biology to study how cells sense their environment, detect when there is a problem, and then coordinate a multi-faceted response to protect themselves. We study these topics in the budding yeast *Saccharomyces cerevisiae* as a model for basic biology. Because defects in sensing and responding to cellular stress are linked to many human diseases, and because much of yeast physiology is similar to human cells, our research is generating important insights into how normal cells function and when problems cause disease.

We are also interested in the relationship between genotype and phenotype, and how environmental responses evolve in natural populations. We study these questions at a mechanistic level in wild isolates of budding yeast. We also leverage evolution and natural diversity to engineer new traits aimed at producing sustainable and economical biofuels from cellulosic materials. As part of the DOE-funded Great Lakes Bioenergy Research Center (GLBRC), our lab is addressing critical bottlenecks in microbial fuel and chemical production.

Friday November 20, 2015

2:30 PM

Laufer Center Lecture Hall 101

Host: Josh Rest

Refreshments following seminar

Laufer Hub 110