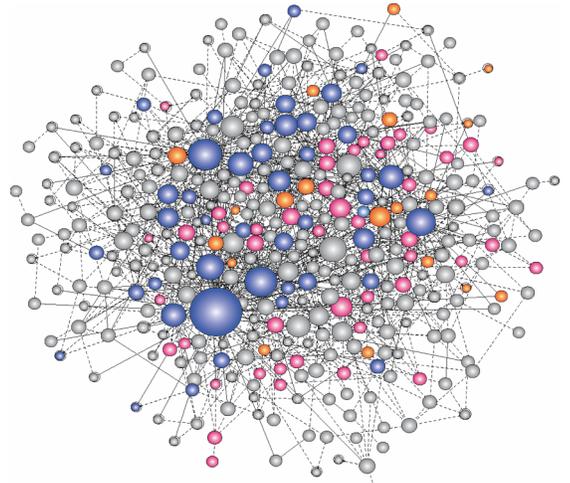


COMPARATIVE GENOMICS OF SIGNALING NETWORKS USING HUMANIZED YEAST

The [Gasch Lab](#) @ the [University of Wisconsin-Madison](#) seeks an ambitious postdoctoral fellow to work at the interface of systems biology, comparative genomics, and molecular genetics to study the **evolution of signaling networks controlling growth-versus-defense responses in eukaryotes**.

Our work shows that the stress-activated signaling network in yeast is orthologous to human proteins that regulate p53 and cause cancer when mutated in somatic tissues. This project will test the degree to which human regulators can complement myriad features of the yeast stress response, by quantitatively profiling proliferation rates, stress tolerance, stress-activated cell-cycle arrest, transcriptomic changes, and transcription-factor activation in yeast expressing normal and disease alleles from humans as well as intervening species across the phylogeny. The project will apply parallelized barcode-sequencing of CRISPR-generated libraries to quantitatively measure multiple phenotypes. Goals of the project are to: test the boundaries of applying humanized yeast to functional discovery, develop predictive models of function from multi-species alignments and functional assays, and dissect coordination of physiological responses during a stress response.



The ideal candidate will have wet-bench experience in genetics, genomics, or related. Experience in comparative genomics, molecular evolution, multiple species alignment, and/or systems biology analysis of high-throughput data is desired; candidates who lack experience in one or more areas should have a strong desire to hone their skills in this area.

Candidates should:

- Have been recently or soon to be awarded a Ph.D. in genetics, genomics or related field
- Demonstrated productivity through first author publications or preprints
- Be highly motivated, independent, and driven
- Be interested in joining a collaborative research group in the Gasch Lab

The Gasch Lab is part of a newly forming center at UW-Madison, [the Center for Genomic Science Innovation \(CGSI\)](#). CGSI and UW-Madison more broadly comprise **a vibrant community with a strong culture of interdisciplinary collaboration and strengths in computational and evolutionary genetics & genomics**. There are many opportunities for research and professional development. Madison is an exceptional place to live and is frequently voted one of the best cities in the country.

To apply, email CV, a statement of research interests, manuscript preprints (if yet to be published), and contact information for three references to Audrey Gasch (agasch@wisc.edu). Email or visit our website <https://gasch.genetics.wisc.edu> for more information.

We are strong supporters of diversity and encourage women and members of underrepresented groups to apply.