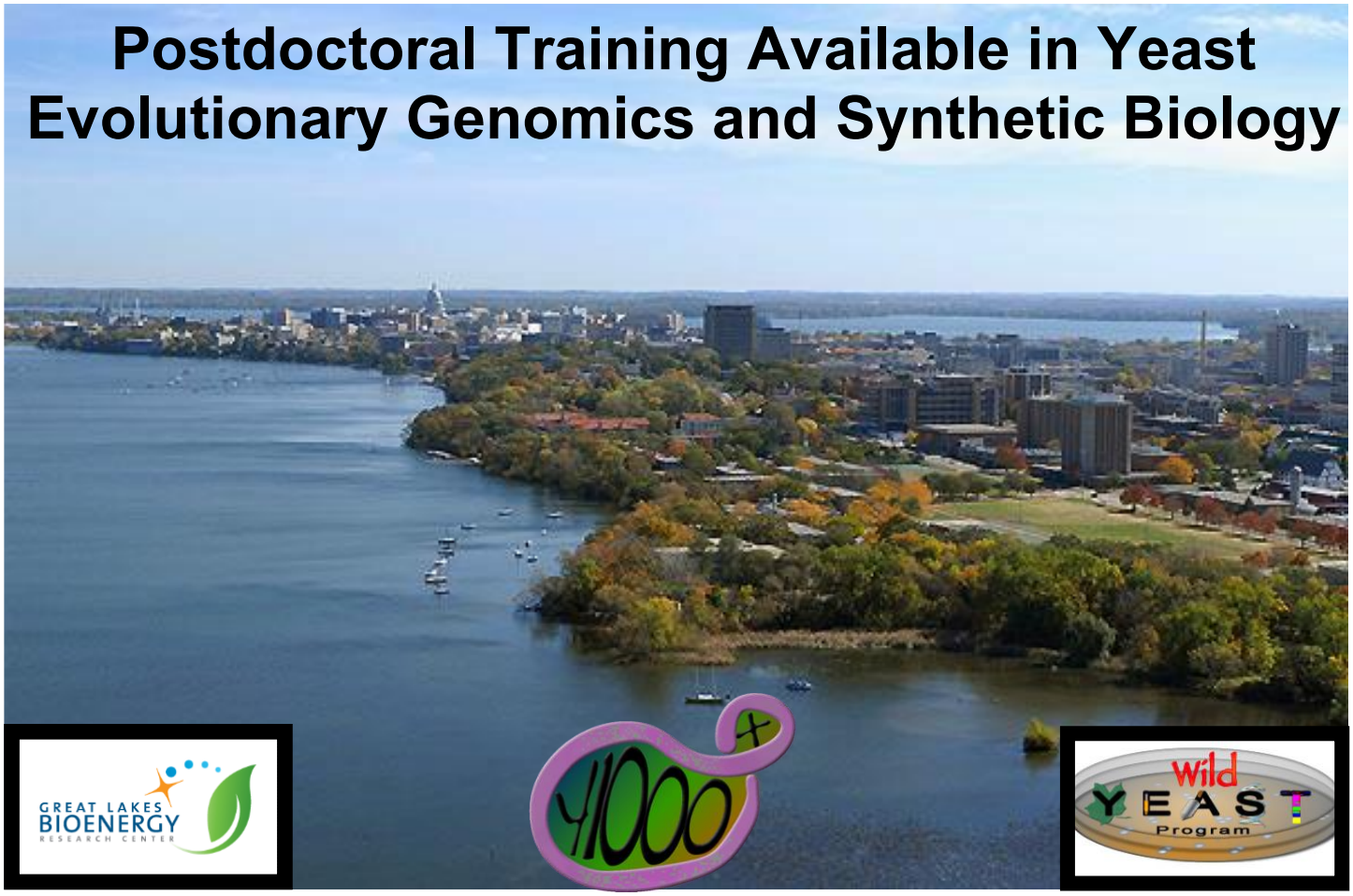
Postdoctoral Training Available in Yeast Evolutionary Genomics and Synthetic Biology



How are yeast metabolic functions genetically encoded? How did they evolve? How can they be manipulated for sustainable human benefit?

DNA sequencing and synthesis allow us to read and write from genomes at a breathtaking pace, and yeasts are leading the way. Yeasts of the subphylum containing *S. cerevisiae*, *C. albicans*, *St. bombicola*, and *Y. lipolytica* are as genetically diverse as the animal kingdom and have evolved myriad energy management strategies to process carbon.

Yeasts compete vigorously for nutrients in every continent and biome, but most species are minimally characterized. You can be among the first to study yeast evolution, ecology, or bioenergy applications using data from Y1000+ Project (http://www.y1000plus.org), which has now sequenced the genomes of essentially all >1000 known budding yeast species (Opulente et al. 2024 *Science*). Projects are available to study basic and fundamental principles of evolution and ecology using this dataset, as well as to mine it for bioenergy research. Many projects are coupling artificial intelligence/machine learning (AI/ML) predictions with rigorous experimental validation (e.g. Harrison et al. 2024 *PNAS*, Aranguiz et al. 2025 *Nature Commun*, Crandall et al. 2024 *MBE*, David et al. 2025 *PNAS*). Metabolic engineering and multi-omic projects to produce advanced biofuels and bioproducts using *S. cerevisiae* and non-conventional yeasts are also available. I also want to hear your ideas!

The ideal postdoctoral applicant will be highly motivated to develop an independent research project in the Hittinger Lab. The candidate should have a strong background in molecular and/or evolutionary genetics, genomics, bioinformatics, microbiology, metabolic engineering, and/or synthetic biology. Experience in machine learning/artificial intelligence (AI/ML), yeast genetics, multi-omics, or metabolic engineering are particularly desirable.

Please send a CV, p/reprints, and contact information for 2 references to cthittinger@wisc.edu. Specifically mention why you are interested in the position in your email. Apply by 15th August 2025 for full consideration, but strong applications may be considered sooner.

Chris Todd Hittinger Lab
University of Wisconsin-Madison

Laboratory of Genetics, DOE Great Lakes Bioenergy Research Center, J. F. Crow Institute for the Study of Evolution, Wisconsin Energy Institute, Center for Genomic Science Innovation

The Hittinger Lab (http://hittinger.genetics.wisc.edu, @HittingerLab) belongs to the oldest genetics department in the country and is located on the vibrant UW-Madison campus (above), which is a major hub for research in biotechnology, microbiology, data science, genomics, synthetic biology, metabolic engineering, and evolutionary biology.