

Postdoctoral position in plant ecological and evolutionary genetics at Purdue University

A postdoctoral position is available in the Oakley lab at Purdue University to study the genetic and physiological mechanisms of fitness tradeoffs across environments. We use a combination of field experiments in native habitats and experiments in controlled growth chambers to investigate the links between sequence polymorphism, molecular phenotypes, organismal phenotypes, and ultimately, fitness in contrasting environments. Current and future work will incorporate transcriptomic and metabolomic approaches to studying genotype by environment interactions for fitness. Additional research in the lab is focused on the evolutionary ecology and genetic basis of heterosis and outbreeding depression. Development of new research directions building on these broad themes is strongly encouraged. There is a vibrant community of interdisciplinary plant biologists at Purdue (<https://ag.purdue.edu/cpb/faculty/>), providing ample opportunity for interaction and new collaborations.

Research activities will include (but are not limited to): Leading growth chamber experiments to estimate freezing tolerance & lifetime fitness, and combining this data with differential expression analyses using RNAseq; field planting and harvesting of experiments at sites in Italy (near Rome) and northern Sweden (three to four trips per year, ~10 days each); overseeing development of CRISPR-CAS9 lines, near isogenic lines, two new recombinant inbred line populations; data analysis; and manuscript preparation.

A PhD in biology or related discipline is required and preference will be given to candidates with a strong background in plant evolutionary biology or plant genetics. The ideal candidate will have an interdisciplinary skill set, having some combination of wet lab, bioinformatic, and experimental biology experience. A strong foundation in R, and at least a basic familiarity with bioinformatic analysis on a cluster is strongly preferred. This is initially a one-year appointment, with the possibility of an extension of another year dependent on funding and performance. A start date sometime before the end of 2019 is preferred, but this is negotiable.

Applicants should send (as a single PDF attachment): CV, a letter summarizing research interests, accomplishments, and fit to the lab and project, and the names and contact information for two professional references. Review of applications will begin September 20, 2019 and will continue until a suitable candidate is found.

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<https://dev.btny.purdue.edu/labs/oakley/>