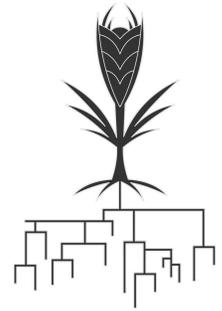


Postdoctoral Scholar – Wheat Genomics

Department of Plant & Microbial Biology, UC Berkeley



A postdoctoral position in wheat genomics is available in the Krasileva Lab in the Department of Plant & Microbial Biology, UC Berkeley. Our research is focused on plant genomics and plant immunity. Plants are able to recognize and defend themselves against diverse pathogens. Plant immunity is innate, and therefore its diversity is specified on the population level rather than within a single organism. We study both natural and induced variation in wheat to understand how to enhance plant defense responses. Specifically, we are working with wheat mutagenized populations that have been screened against wheat yellow rust pathogen in the field. We have already identified mutant lines with enhanced resistance and are interested in isolating the causative mutations using genomics approaches, such as mapping-by-sequencing. We are also sequencing clusters of rapidly evolving disease resistance genes from natural wheat accessions, which will allow us to observe how domestication and polyploidization affected wheat immunity. The long-term goal of this project is to isolate specific nucleotide changes that enhance plant resistance and introduce them to crops using genome editing technologies. The candidate will work closely with PI and other lab members to design and lead research on wheat genomics and plant immunity. The candidate will be responsible for analyzing mapping by sequencing data to map causative mutations from mutagenized lines. In parallel, the candidate will conduct hypothesis driven research in the areas of comparative genomics looking at the evolution of plant disease resistance in polyploid wheat in comparison to its wild relatives, investigate the association between disease resistance genes and ‘dangerous elements’ with the goal to determine how disease resistance genes proliferate in genomes and form new gene fusions. To do this, the candidate will write scripts, work in high performance computing environment, summarize data in figures and provide first drafts of publications. The candidate will have the opportunity to mentor undergraduate students and to provide guidance to graduate students.

Krasileva Lab, an interdisciplinary group of people who combine new technologies, basic and translational research. Our research program spans **plant genomics** and **plant-microbe interactions**. Our common goal is to understand plant innate immunity, a system that maintains plant health and to make an impact on agriculture and food security. We focus on evolution and function of plant immune genes, as well as the mechanisms that regulate genetic diversity. The postdoc will work closely with PI and other lab members to design and lead research on wheat genomics and plant immunity.

To read more, please visit Krasileva Lab website (<https://krasilevalab.org/>) and look through the Krasileva Lab Charter (<https://tinyurl.com/ybvqq5zy>).

Basic Qualifications

- Advanced degree or enrolled in advanced degree program at the time of application.

Additional Qualifications

- PhD (or equivalent international degree) required by the appointment start date. The candidate may have no more than four years of post-degree research experience by start date.

Preferred Qualifications

- Demonstrated practical experience in next generation sequencing analysis and bioinformatics
- Demonstrated theoretical understanding and practical experience in areas of mapping by sequencing, population genetics, comparative genomics
- Demonstrated research effort in formulating testable hypotheses, experimental design, detailed description of data analysis, version-controlled code
- Demonstrated ability to work independently and collaboratively as part of a team
- Demonstrated ability to produce scientific results and to publish papers in international peer-reviewed journals
- Demonstrated effective written and communication skills

Appointment:

The targeted start date for this position is early 2019. The initial appointment is for one year, with renewal based on performance and funding availability. This is a full time appointment.

Salary and Benefits

The annual salary range for this position is \$50,760 to \$59,100. Salary will be commensurate with qualifications and experience. Generous benefits are included <https://vspa.berkeley.edu/postdocs>

Interested individuals should include a 1-2 page cover letter that summarizes research interests and professional goals, along with a current CV and the names and contact information of three references. Letters of reference may be requested for finalists.

Questions regarding this recruitment can be directed to Ksenia Krasileva at kсениак@berkeley.edu

The total duration of an individual's postdoctoral service may not exceed five years, including postdoctoral service at other institutions.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy see:

<https://policy.ucop.edu/doc/4000376/DiscHarassAffirmAction>

The Department is interested in candidates who will contribute to diversity and equal opportunity in higher education.

The University of California, Berkeley has an excellent benefits package as well as a number of policies and programs in place to support employees as they balance work and family.

