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Postdoc: The Genetics of Dehydration Tolerance in Plants

Part of BII Water and Life Interface Institute (WALLI.science)

Moi Exposito-Alonso Lab - www.moilab.science

Assistant Professor, Dept. of Integrative Biology, **University of California, Berkeley**

Freeman Hrabowski Scholar, **Howard Hughes Medical Institutes (HHMI)**

Member, **Innovative Genomics Institute**

Details

Lab location: Valley Life Sciences Building, Berkley, CA 94720, USA

Annual salary \$65,000

1 year contract, with potential extensions up to 4-5 years

Publication date: Sep 2023

Starting date: As early as possible

Closing date: accepting applications until filled

Description

We aim to recruit a highly motivated and skillful researcher with training in genetics, molecular biology, or bioengineering, with strong interest in evolution. As part of the WALLI.science NSF biological integration, we seek to understand the genetics of plant dehydration tolerance in plants using *Arabidopsis thaliana* and other species as model systems, with an eye to study the impacts of climate change on plant species from a molecular evolution angle. This project will leverage field experiments, screening of natural variation and gene knock-outs or knock-ins in seeds or other tissues with strong dehydration characteristics.

The MOILAB is a highly interactive and interdisciplinary lab, and many experiments are conducted in collaboration. In our lab, we target scientific excellence as well as building a positive community for growth. You can read our value statement here: <https://www.moilab.science/our-values>

Responsibilities

- * The position requires leading research independently, preparing publications, and presenting research in scientific meetings. Postdocs in the lab are also examples and mentors to graduate students.
- * Designing and conducting phenotyping of dehydration traits in experiments in the greenhouse and/or field.
- * Willingness to work closely with lab members, and initiative to be an active member of WALLI.
- * Contributing to lab-wide chores towards a productive and positive lab.

Required skills

- * A BSc + PhD in any of the following areas: genetics, molecular biology, biochemistry, cell biology, bioengineering.
- * A track record of research productivity and independence.

Contact

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Valley Life Sciences Building
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Berkeley
UNIVERSITY OF CALIFORNIA

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Inquiries about this position can be made by emailing Moises (Moi) Exposito-Alonso at admin@moilab.science. To be formally considered, please include: (1) a cover letter, (2) CV, and (3) three referees whom I can ask for letters of recommendation.

About the Water and Life Interface Institution (WALII, pronounced “Wally”):

[WALII](http://www.walii.org) studies how life interacts with water, from the molecular to the organismal level, across plants, fungi, and animals. WALII is a virtual institute, with scientists located at nine research facilities across the United States. Working together, WALII team members aim to uncover the rules by which organisms interact with water, exploring four integrated themes: 1) the physical and molecular determinants that allow organisms to survive in the solid state; 2) rehydration responses in desiccation-tolerant and -sensitive systems; 3) the molecular grammar of desiccation tolerance conferred by intrinsically disordered proteins; and 4) the short- and long-term evolutionary history of desiccation tolerance. WALII team members have diverse expertise, ranging from biophysics to plant biology, and experience with several desiccation-tolerant and -sensitive systems.

The institute’s long-term goals are to understand how organisms can tolerate desiccation; invent technologies and concepts to study anhydrobiosis; engineer macromolecules, cells, and organisms that can survive desiccation; and produce the next generation of leaders in all sectors of our society. To achieve these aims, WALII provides mentoring, outreach opportunities, and professional development for all affiliated scientists. That includes funding support for travel to scientific conferences, and internal professional development/training programs.

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