

Junior Specialist Position Dr. Venkatesan Sundaresan lab, Department of Plant Biology, UC Davis

The laboratory of Dr. Venkatesan Sundaresan wishes to employ a Junior Specialist 100% time to work on projects related to plant reproduction. The main project is to gain a deeper understanding of plant embryo formation by gene manipulation using transgenic plants, and using this knowledge to increase seed production, through applying tools ranging from genetics and molecular biology to genomics.

1. **Research (90%):** This position requires intellectual and technical contributions to an active research program on plant reproduction. The candidate will work with a team under the supervision of the PI (Sundaresan) to design experiments, execute them, and organize the results in preparation of scientific publications or grant proposals. Active participation in the writing and editing of scientific papers is expected. The candidate will also supervise and coordinate the activities of undergraduate students regarding the technical aspects of the research. Experience in standard protocols for molecular biology and genetics as well as computational tools, statistical analysis and data visualization, is expected. The specific methods include isolation of female gametic cells by manual dissection, isolation of nucleic acids from plants and their molecular analysis, flow cytometry, fluorescence microscopy, PCR, genotyping of segregating populations of plants for transgenes and performing statistical tests for significance.

Responsibilities will be as follows:

- a. Prepare DNA and samples from transgenic plants and determine genotype by PCR, and ploidy level by flow cytometry. Organize data from these experiments and analyze using statistical methods where necessary.
- c. Construct recombinant clones of plant DNA and RNA using data from genomic databases, including vectors for gene editing and production of parthenogenic progeny. Transfer cloned genes into bacterial, yeast, and plant cells. Molecular analysis of transgenic plants for gene expression and genetic segregation of transgenes, by genotyping and phenotyping.
- d. Record observations of plant growth and characteristics, mainly rice and maize but also model plants such as Arabidopsis. Keep track of and help to maintain plants grown in growth chambers and the greenhouse. Stage and harvest plant material for experiments. Manipulate and monitor conditions for plant growth when required for experiments.
- e. Assist with basic lab functions, such as ordering supplies and equipment, and maintaining lab safety protocols, under the mentorship of the PI.

2. **Professional Competence & Activity (5%):** The candidate will be expected to actively contribute to the weekly research meetings of the laboratory, and will make presentations an average of 2 times a year on the research progress. The candidate will also attend seminars and be able to present posters or talks at conferences.

3. **University and Public Service (5%):** The candidate will assist in outreach activities that include presentation of scientific research results, and participation in organizing short summer training workshops for students from a Historically Black College or University.

Basic Qualifications:

- A degree of B.S. or equivalent in Genetics and Genomics or a related field
- Experience in techniques and protocols of genetics, including PCR, molecular genotyping, construct design and subcloning.
- Knowledge and experience in genetics of plants, e.g. Arabidopsis, rice
- The candidate should be able to prepare lab media, be responsible for proper waste disposal and ensure that the lab is properly stocked.

Preferred qualifications:

- Experience in lab research using molecular biology during the past twelve months
- Experience with micromanipulations including microdissection
- Familiarity with basic programming

To apply: Qualified applicants should submit a cover letter, CV, name and contact information for at least one reference who was a previous employer or supervisor, and a Statement of Contributions to Diversity, Equity and Inclusion, via this URL:

<https://recruit.ucdavis.edu/apply/JPF06516>. The deadline for full consideration is June 17, 2024.

- The University of California, Davis commits to inclusion excellence by advancing equity, diversity and inclusion in all that we do. We are an Affirmative Action/Equal Opportunity employer, and particularly encourage applications from members of historically underrepresented racial/ethnic groups, women, individuals with disabilities, veterans, LGBTQ community members, and others who demonstrate the ability to help us achieve our vision of a diverse and inclusive community.

- Under Federal law, the University of California may employ only individuals who are legally able to work in the United States as established by providing documents as specified in the Immigration Reform and Control Act of 1986. Certain UC Davis positions funded by federal contracts or sub-contracts require the selected candidate to pass an E-Verify check. More information is available <http://www.uscis.gov/verify>.

- UC Davis is a smoke & tobacco-free campus (<http://breathefree.ucdavis.edu/>). If you need accommodation due to a disability, please contact the recruiting department