

Junior Specialist - Sundar Lab 2024

Job #JPF06281

- PLANT BIOLOGY / COLLEGE OF BIOLOGICAL SCIENCES / UC Davis

Apply now: <https://recruit.ucdavis.edu/JPF06281/apply>

View this position online: <https://recruit.ucdavis.edu/JPF06281>

POSITION OVERVIEW

Salary range: A reasonable estimate for this position is \$51,300 at step 1

APPLICATION WINDOW

Open date: January 24, 2024

Next review date: Friday, Feb 9, 2024 at 11:59pm (Pacific Time)

Apply by this date to ensure full consideration by the committee.

Final date: Friday, Feb 16, 2024 at 11:59pm (Pacific Time)

Applications will continue to be accepted until this date, but those received after the review date will only be considered if the position has not yet been filled.

POSITION DESCRIPTION

The laboratory of Dr. Venkatesan Sundaresan wishes to employ a Junior Specialist 100% time from 3-15-2024 to 3-14-2025, 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 of rice, maize and Arabidopsis, as well as computational tools, statistical analysis and data visualization is required. The specific methods include isolation of female gametic cells by manual dissection, nucleic acids from plants and analysis using techniques that include fluorescence microscopy, PCR, genotyping of segregating populations of plants for transgenes and statistical tests for significance.

Responsibilities will be as follows:

- a. Perform plant egg cell isolation and transfection to determine expression of different promoters in female gametes.
 - b. 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 when needed.
 - 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 other 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 presenting scientific research results to the general public, and participation in organizing short summer training workshops for students from Langston University, an HBCU.

QUALIFICATIONS

Basic qualifications (required at time of application)

- A degree of B.S. or equivalent in Genetics and Genomics or a related field, with a strong background in plant molecular genetics.
- Experience in techniques and protocols of plant molecular biology and genetics, including PCR, molecular genotyping, construct design and subcloning.
- Familiarity with growth and manipulations of rice, maize and Arabidopsis plants and ability to work in the greenhouse.
- Experience with the isolation of gametic cells such as egg cells, and with isolation of nuclei and estimation of DNA content by flow cytometry.

- 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 (other preferred, but not required, qualifications for the position)

- Ability to perform DNA and RNA sequence analysis
- Experience with genome editing of rice and maize by CRISPR-Cas9
- Familiarity with the use of bioinformatics tools for genomic studies
- Experience with genetic and phenotypic analysis of rice, maize and Arabidopsis

APPLICATION REQUIREMENTS

Document requirements

- Curriculum Vitae - Your most recently updated C.V.
- Cover Letter
- Statement of Research (Optional)
- Statement of Teaching (Optional)
- Statement of Contributions to Diversity, Equity, and Inclusion - Contributions to diversity, equity, and inclusion documented in the application file will be used to evaluate applicants. Visit <https://academicaffairs.ucdavis.edu/faculty-equity-and-inclusion> for guidelines about writing a statement and why one is requested.

Reference requirements

- 1-3 required (contact information only)

Apply link: <https://recruit.ucdavis.edu/JPF06281>

Help contact: araymos@ucdavis.edu

ABOUT UC DAVIS

UC Davis is a smoke and tobacco-free campus (<http://breathefree.ucdavis.edu/>).

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. For the complete University of California nondiscrimination and affirmative action policy see:

<http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct>

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 at: <http://www.uscis.gov/e-verify>

The University of California, Davis (UC Davis) is committed to inclusive excellence by advancing equity, diversity and inclusion in all that we do. UC Davis celebrates the multi-cultural diversity of its community by creating a welcoming and inclusive environment demonstrated through a variety of resources and programs available to academics, staff, and students. Diversity, equity, inclusion, and belonging are core values of UC Davis that are embedded within our [Principles of Community](#) and are tied with how to best serve our student population. Our excellence in research, teaching, and service can best be fully realized by members of our academic community who share our commitment to these values, which are included in our [Diversity and Inclusion Strategic Vision](#), our strategic plan: "To Boldly Go," our Principles of Community, the [Office of Academic Affairs' Mission Statement](#), and the [UC Board of Regents Policy 4400: Policy on University of California Diversity Statement](#). UC Davis is making important progress towards our goal of achieving federal designation as a [Hispanic-Serving Institution and an Asian American, Native American, and Pacific Islander-Serving Institution](#). The [Office of Diversity, Equity, and Inclusion](#) offers a plethora of resources on their website, and the [Office of Health Equity, Diversity, and Inclusion \(HEDI\)](#) has outlined similar goals in their Anti-Racism and DEI Action Plan." There are a plethora of links available on the [About Us](#) webpage where you can learn more about our Administration, Diversity and Inclusion, Rankings, Locations, Native American Land Acknowledgement, Sustainability, Visiting UC Davis, UC Davis Health, and Campus Safety.

The university is consistently ranked among the top institutions in the world for campus sustainability practices by the [UI Green Metric World University Rankings](#). UC Davis is focused on achieving net-zero greenhouse gas emissions and repeatedly shown its [commitment to preserving a healthy and sustainable environment for generations to come](#).

As a University employee, you will be required to comply with all applicable University policies and/or collective bargaining agreements, as may be amended from time to time. Federal, state, or local government directives may impose additional requirements.



JOB LOCATION

Davis, Ca