Postdoctoral Research Associate – Evolutionary and Systems Biology of Plants and Microalgae
Location: Institute of Genomics for Crop Abiotic Stress Tolerance (IGCAST), Texas Tech University, Lubbock, TX. Lopez-Arredondo Lab. Texas Tech University (TTU), Lubbock, TX
Position Type: Full-Time, Postdoctoral Associate
Project Funding: NSF-funded

Position Description:

We invite applications for a full-time **Postdoctoral Research Associate** to support research in **evolutionary biology**, **molecular and systems biology**, and **functional genomics** of **plants and microalgae**. This position is available immediately and is renewable annually, contingent upon satisfactory performance and funding availability.

The successful candidate will join a multidisciplinary research program focused on understanding the **evolution and plasticity of gene/genome architecture**, and the **diverse molecular mechanisms regulating gene expression** across green lineage organisms. Using integrative omics-based approaches, emphasis will be placed on **alternative gene regulatory strategies**, such as polycistrons, non-canonical promoters, UTR architecture, alternative splicing, RNA stability, and epigenetic control.

Key Responsibilities:

- Conduct research exploring **gene architecture**, **transcriptional regulation**, and **alternative expression control mechanisms** in plants and microalgae.
- Conduct functional validation through genetic transformation and gene editing of plants and microalgae.
- Lead and participate in **de novo genome sequencing, assembly, and functional annotation** projects.
- Analyze and integrate **large-scale multi-omics datasets** (genomics, transcriptomics, metabolomics, epigenomics) to model gene regulation and expression dynamics.
- Develop and maintain robust databases for organizing and visualizing sequencing and gene architecture data.
- Collaborate closely with computational biologists, molecular biologists, and biotechnologists.
- Analyze data, prepare reports, and contribute to publications and patents.
- Contribute to scientific writing (manuscripts, reports), presentations, and mentoring of graduate and undergraduate students.

Required Qualifications:

- Ph.D. in **Molecular Biology, Plant Biology, Microbiology, Evolutionary Biology, Systems Biology**, or related fields.
- Demonstrated experience in **genetic transformation and gene editing in microalgae and plants**.

- Experience with **genome sequencing (short/long read), assembly, and annotation**.
- Experience in programming/scripting languages such as **Python**, **R**, or **Bash** for data analysis and visualization.
- Strong analytical and problem-solving skills.
- Excellent written and oral communication skills.

Preferred Qualifications:

- Experience working with diverse **microalgae or plant species**.
- Skills in **comparative genomics**, **regulatory network modeling**, and **functional annotation pipelines**.
- Proficiency in handling and analyzing **large-scale sequencing datasets**.

Appointment Details:

- The initial appointment is for one year, renewable based on performance and project continuation.
- Competitive salary and benefits, commensurate with qualifications and experience.
- Opportunities for professional development and industry interaction.

Application Instructions:

Please submit the following materials via the Texas Tech University online job portal:

1. A cover letter outlining your research interests and qualifications for this position.
2. CV including a list of publications, and past and current positions.
3. Contact information for three professional references.

Applications will be reviewed on a rolling basis until the position is filled.

Applicants who meet all the required qualifications should visit the Texas Tech University job application site at http://www.depts.ttu.edu/hr/workattexastech/ and search for Requisition ID 41684BR.

For further inquiries or questions related to posting, please contact
Damar Lopez-Arredondo,
Institute of Genomics for Crop Abiotic Stress Tolerance (IGCAST),
Department of Plant & Soil Science,
TEXAS TECH UNIVERSITY, Lubbock, TX, 79409
Email: Damar.Lopez-Arredondo@ttu.edu