Postdoctoral Research Associate – Plant Genome Editing and Synthetic Biology

Purpose

The Biosciences Division of Oak Ridge National Laboratory (ORNL) has an opening for a postdoctoral research associate to work in the DOE Center for Bioenergy Innovation (CBI) to edit and regulate genes in plants using CRISPR-Cas systems. The goal of our research is to accelerate domestication of bioenergy-relevant plants to enable high-impact, value-added, co-product development at multiple points in the bioenergy supply chain.

Major Duties / Responsibilities

You will be expected to work in close collaboration with a diverse team of scientists to perform the following research tasks: 1) Knockout and knockin mutagenesis in plants using CRISPR-Cas systems, 2) regulation of gene expression using synthetic transcription factors and synthetic promoters, and 3) pathway engineering using synthetic circuits. Duties and Responsibilities include:

- Design and build plasmid constructs
- Transform the gene constructs into plants
- Develop new transformation protocols based on emerging CRISPR technologies
- Collaborate with other team members to characterize phenotypic changes in the genetically-modified plants
- Present research progress in project meetings and national/international conferences
- Publish scientific results in peer-reviewed journals in a timely manner
- Work with staff to develop new proposals

Qualifications

A Ph.D. in plant biology, biotechnology, biochemistry, molecular biology, genetics, or a related field is required. Applicants cannot have received the most recent degree more than five years prior to the date of application and must complete all degree requirements before starting their appointment.

Preferred Qualifications:

- Expertise in genome editing
- Experience in plant transformation
- Effective writing and presentation skills, demonstrated by a strong publication record from previous research
Appointments will initially be for 24 months with a possibility of an extension of up to 12 months, contingent on performance and availability of funding.


**Technical Contact**

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For more information about CBI, please visit:

[https://cbi.ornl.gov/](https://cbi.ornl.gov/)