



Heuermann Postdoctoral Fellowships in Plant Science Innovation

University of Nebraska-Lincoln

The Center for Plant Science Innovation (PSI, <https://www.unl.edu/psi>) at the University of Nebraska-Lincoln (UNL) is seeking applications for postdoctoral fellowships that aim to develop and transition high caliber early career scientists to independent research careers. Heuermann Postdoctoral Fellows are expected to develop research projects of their design, under the mentorship of two or more UNL faculty members, including at least one PSI faculty member. Opportunities for career development, including course instruction, will be tailored to meet the career goals of Heuermann Postdoctoral Fellows. Two fellowships are available. One fellowship is open to candidates who wish to pursue projects in any aspect of fundamental and/or translational plant biology. A second fellowship is available for candidates who integrate high-throughput plant phenotyping (HTTP) into their projects using state-of-the-art greenhouse- and/or field-based systems at UNL. Successful candidates are expected to develop innovative, interdisciplinary projects that address agricultural grand challenges, ideally at the interface of fundamental and translational plant biology. Fellows will have access to faculty expertise across plant science, computational biology, and engineering and state-of-the-art facilities and equipment; such as the Nebraska Center for Biotechnology (<https://biotech.unl.edu/center-biotechnology>) and Holland Computing Center (<https://hcc.unl.edu/>).

The starting annual salary is \$60,000. Benefits and research funding will be provided to successful candidates. Projects will be supported for two years with a potential extension for a third year based on progress and availability of funding.

Requirements

- PhD in plant science, biochemistry, biotechnology, engineering, computational biology, or related disciplines (Note: Candidates who are expected to complete PhD requirements within six months of the application deadline will also be considered.)
- Publication-based evidence of scientific research caliber
- Excellent written and oral communication skills
- Demonstrated experience in interdisciplinary research (Preferred)
- Prior experience in plant phenomics research for the phenotyping-connected fellowship (Preferred)

Application Details

Application deadline: **October 31, 2023**

Earliest expected starting date: **January 01, 2024**

The application packet should include:

- CV
- Cover letter expressing interest in the position
- Description of a proposed research project, including the hypothesis to be explored, research approaches, expected outcomes, and research contingencies (3-page maximum)
- Abstract of the PhD dissertation
- Abstracts of up to three representative publications
- Names and contacts of three professional references

Please send your application via email to Dr. Ed Cahoon (ecahoon2@unl.edu) or Dr. Yufeng Ge (yge2@unl.edu). In the email title clearly indicate “UNL-PSI Heuermann Postdoctoral Fellowships Application”. Attach the application packet as a single PDF file. Questions regarding this position and application process can also be directed to Dr. Ed Cahoon or Dr. Yufeng Ge.

The UNL Center for Plant Science Innovation (PSI) provides a dynamic collaborative research environment for 23 faculty and their lab members in the UNL Departments of Agronomy and Horticulture, Biochemistry, Plant Pathology, Biological Systems Engineering, and School of Biological Sciences. PSI research is based on a strong foundation of fundamental research comprising expertise in: (1) plant biochemistry, physiology, and molecular biology, (2) omics and computational biology, (3) microbiology, (4) crop science, and (5) ecology & evolution. A distinctive and defining aspect of PSI is the ability to move fundamental discoveries through a translational pipeline to have impact for improved crop abiotic and biotic stress resilience, nutritional quality, and biofuel and industrial end-use functionalities. This pipeline is supported by state-of-the-art core facilities, including crop transformation capacity, as well as extensive field sites across diverse climatic and soil profiles.

UNL is home of three advanced plant phenotyping systems: LemnaTec HTS, LemnaTec3D Scanalyzer, and Spidercam field facility. The HTS system has four camera modules and is ideal for imaging Arabidopsis, algae, and other short plants. The LemnaTec3D Scanalyzer has five camera modules and can image many field crops and horticultural crops to a height of 2.5 m. The system also features automated conveyor, water and nutrient delivery, and climate-controlled houses for plant growth. The Spidercam facility sits on 1 acre land with a fully automated sensing and cable robotic system for field based, plot-scale phenotyping. More importantly, these three systems can be used jointly to span the lab-based basic plant science to field-based translational research for plant gene discovery and trait analysis. UNL’s Holland Computing Center supports the long-term storage of phenotyping data and resource-demanding computing for image analysis. Candidates can visit this website for more detailed information on these three plant phenotyping systems: <https://ard.unl.edu/phenotyping>.