Postdoctoral Associate: Weed Science: Genomic Analysis of Palmer Amaranth

The Department of Agronomy and Plant Genetics at the University of Minnesota invites applications for a full-time postdoctoral research associate position in the Wyse lab. With funding from the Minnesota Invasive Terrestrial Plant and Pests Center, the successful candidate will lead a project developing assays to identify Palmer Amaranth in seed mixtures. This project will include efforts to 1.) Develop sample purification methods to enable DNA-based species identification assays 2.) Validate and implement existing PCR-based DNA markers for Palmer Amaranth identification and 3.) Develop additional markers via genomic analyses of diverse Amaranthus species, using next-generation sequencing to re-sequence genomes from multiple populations and detect sequence variants.

Essential Requirements

- Ph.D. in the plant sciences (genetics/genomics, weed science, molecular biology)
- Degree must be conferred before start date
- Extensive ‘wet lab’ skills, including nucleic acid isolation and purification, classical molecular techniques, experience with KASP marker development a plus
- Experience working with next-generation sequencing data, whole genome sequencing, and variant detection. Strong programming and data management skills, including experience with common genomics packages,
- Experience working in a Unix cluster environment.
- Excellent written and oral communication skills in English.
- Demonstrated experience preparing high quality peer-reviewed manuscripts.

Preferred qualifications:

- Independent judgment and advanced problem solving
- History of creatively applying genomic/bioinformatic and wet-lab techniques to solve complex biological questions.
- Experience successfully managing several projects simultaneously and meeting timelines
- History of successfully writing grant applications to obtain funding
- A demonstrated commitment to expanding and fostering diversity and equity

Compensation and appointment timeline

The initial appointment is for one year, renewable for a second year dependent upon satisfactory performance. Salary for the first year is $50,000, plus standard University benefits package, including health and dental insurance, paid vacation, sick, and parental leave, optional retirement plan, and UMN tuition benefit (Regents Scholarship Program). The position is available immediately. Selected
candidates will be invited for on campus interviews. Please upload 1.) cover letter stating how your experience fulfills the essential and preferred qualifications for this position, along with your career goals, and 2.) a curriculum vitae including list of publications and conference presentations. Letters of recommendations will be requested from selected candidates after initial screening. Please email Don Wyse (wysex001@umn.edu) with questions about this position.

Apply at https://humanresources.umn.edu/jobs and search for Job ID 319437.