



Job Title: Crop Genetics Research Technician

Department/Office: Department of Biology

Reports to: Dr. Gwonjin Lee

FLSA Status: Exempt

Summary

The Lee Lab at West Virginia State University is seeking a Research Technician for a project investigating how environmental stressors impact local adaptation and meiotic recombination in crops and model plants. The primary responsibilities of this role include managing plant cultivation, conducting molecular biology experiments, performing physiological and bioinformatic data analysis, and assisting with laboratory organization and management and undergraduate student training. This position is employed by the WVSU Research and Development Corporation.

Essential Functions

Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions.

- **Plant Cultivation:** Manage plant growth and maintenance in the field, greenhouse, and growth chambers, including the setup and execution of abiotic stress experiments.
- **Molecular Biology & Genomics:** Perform core molecular biology techniques such as DNA/RNA extraction, PCR-based genotyping, and preparation of sequencing libraries.
- **Microscopy & Image Analysis:** Conduct microscopy and quantitative image analysis to support cytogenetic and cellular studies.
- **Bioinformatics:** Apply computational tools to analyze physiological datasets and perform basic bioinformatics workflows.
- **Laboratory Support:** Maintain laboratory organization, oversee inventory, coordinate purchasing, and ensure proper operation and upkeep of laboratory equipment.
- **Mentorship:** Train and mentor undergraduate researchers, fostering a supportive, safe, and professional learning environment.

Specific Duties and Responsibilities:

- Cultivate plants, monitor growth and reproduction, and maintain environmental conditions.
- Prepare molecular biology reagents and solutions, maintain sample logs, and process plant material for downstream analyses.
- Operate microscopes, capture images, and perform quantitative image analysis. Help manage physiological instruments such as spectrophotometers, balances, or growth measurement devices.

- Organize raw data files, manage digital lab records, and perform routine data processing.
- Provide hands-on instruction to undergraduate students and ensure compliance with lab safety procedures.
- Track consumables, maintain chemical and supply inventories, and coordinate purchase ordering with the PI.
- Support overall laboratory organization, equipment upkeep, and scheduling.

Required and Desired Skills and Traits

Required:

- Basic molecular biology experience (PCR, pipetting, electrophoresis).
- Ability to work independently and collaboratively.
- Strong organizational skills and attention to detail.
- Willing to learn new lab and computational techniques.
- Valid driver's license for fieldwork

Desired:

- Experience with crop cultivation or controlled-environment growth chambers.
- Familiarity with microscopy and quantitative image analysis.
- Exposure to R, Python, Bash scripting or other bioinformatics tools.
- Prior experience training or mentoring students.

Supervisory Responsibilities

This position does not supervise staff but assists in training and mentoring undergraduate student researchers.

Competency

- **Technical Capacity:** Mastery of molecular biology protocols and basic bioinformatics.
- **Thoroughness:** Diligence in experimental reproduction and data integrity.
- **Communication Proficiency:** Ability to explain technical concepts to undergraduate students and present data to the PI.
- **Flexibility:** Adaptability to evolving research goals and experimental timelines.

Work Environment

This role operates in professional laboratories, greenhouse, and field environment. Employees may be exposed to moderate noise, standard laboratory chemicals, and outdoor conditions such as variable weather, uneven terrain, and typical fieldwork hazards.

Physical Demands

Must be able to perform repetitive laboratory tasks (such as pipetting), stand for extended periods, and safely lift and handle plant pots, trays, and soil. Fieldwork requires working outdoors in varying weather conditions, walking across uneven terrain, bending or crouching to collect samples, and transporting supplies or plant materials as needed.

Position Type and Expected Hours of Work

Days and hours of work are Monday through Friday, 8:30 a.m. to 5 p.m. Summer schedule is Monday through Friday, 8 a.m. to 4 p.m. However, due to the nature of the job performed, flexible hours, including evenings, weekends and occasional overnights, may be required.

Travel

Occasional travel may occur for collaboration, fieldwork activities or transporting plant materials and supplies as needed.

Required Education and Experience

- Bachelor's degree in biology, Plant Science, Molecular Biology, Biotechnology, or a related life-science discipline (MS degree preferred).
- Hands-on experience with core molecular biology techniques (e.g., pipetting, PCR, DNA/RNA extraction, electrophoresis).
- Experience working in a laboratory setting, including maintaining accurate records and following established protocols.
- Ability to perform physical and repetitive tasks associated with plant cultivation, sample preparation, and laboratory workflows.

Preferred Education and Experience: Coursework or research experience in genetics, genomics, plant physiology, or bioinformatics. Experience with plant cultivation in greenhouse or controlled-environment chambers. Familiarity with microscopy, quantitative image analysis, or basic R/Python-based data workflows. Prior experience mentoring or training undergraduate students.

Additional Eligibility Qualifications

None required for this position.

Other Duties

Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job. Duties, responsibilities and activities may change at any time with or without notice.

Work Authorization/Security Clearance

This position is designated as security sensitive. Before an offer of employment is made, a pre-employment background investigation will be completed, which may include a criminal background check, educational, DMV and prior employment.

Closing date

This position will remain open until it is filled. However, first consideration will be given to applicants who reply by March 13, 2026.

To Apply

Preferred: Information accepted as emailed in a Microsoft Word or PDF format to rdemployment@wvstateu.edu. Qualified candidates must submit a cover letter, resumé, unofficial transcript and contact information for three professional references (name, title, address, phone number, and email address).

Hard copy applications may be sent to:

ATTN: Search Committee for Crop Genetics Research Technician
West Virginia State University Research and Development Corporation
PO Box 1000, 201 ACEOP Admin. Bldg.
Institute, WV 25112

AAP/EEO Statement

West Virginia State University is an equal opportunity affirmative action institution. No person shall be denied admission to educational programs, activities or employment on the basis of any legally protected status, or be subjected to prohibited discrimination involving, but not limited to, such factors as race color, creed, religion, national or ethnic origin, marital status, citizenship, sex, sexual orientation, gender identity or expression, age, disability, or protected veteran status.

West Virginia State University is committed to providing access, equal opportunity and reasonable accommodation for individuals with disabilities. To request disability accommodation contact: Michael Casey or email: ada@wvstateu.edu.

Concerns and complaints related to bias or equal opportunity in education and in employment based on aspects of diversity protected under federal, state, and local law, or arising under Title IX should be directed to: carloyn.stuart@wvstateu.edu

Women, minorities, people with disabilities and veterans are encouraged to apply.