WVSU Research & Development Corporation

**Institute, West Virginia**

**Job Title:** Plant Breeding and Genetics Research Technician
**Department/Office:** Biology
**Reports to:** Dr. Eloisa Vendemiatti
**FLSA Status:** Exempt
**Prepared by:** Dr. Eloisa Vendemiatti
**Updated:**
**Approved by:**
**Approved Date:**

**Summary**

The Research Technician will serve as the lead technician for a plant-focused genetics, genomics, and breeding research program. This position supports the maintenance of genetic populations, molecular and genotyping workflows, QTL mapping activities, plant tissue culture and transformation for CRISPR-related assays, sequence analysis, and student training. The technician is responsible for ensuring efficient laboratory operations, rigorous documentation, and steady progress toward project milestones. The position is employed by West Virginia State University Research & Development Corporation.

**Essential Functions**

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

- Ensure the effective day-to-day operation of a plant molecular genetics and breeding laboratory
- Maintain genetic populations and experimental materials to support ongoing research and breeding objectives
- Execute and support molecular biology, genotyping, and data management workflows
- Support tissue culture, transformation, and CRISPR-based experimental assays
- Maintain accurate documentation, compliance records, and organized research data
- Train and mentor undergraduate and graduate students in laboratory techniques and best practices
- Contribute to timely progress toward Evans-Allen project goals and deliverables

**Specific Duties and Responsibilities:**

- *Laboratory Management & Operations:* Coordinate daily laboratory activities, including inventory management, ordering, and organization of shared spaces; Maintain standard operating procedures (SOPs), safety documentation, and compliance records; Keep equipment logs current and coordinate routine maintenance and service; Ensure laboratory practices comply with institutional and funding agency guidelines.

- *Genetic Populations & Breeding Support:* Maintain and document genetic populations and breeding materials, including planting, controlled crosses, generation advancement, seed harvest, processing, storage, and pedigree tracking; Assist with greenhouse and/or field sampling and trait data collection; Support selection activities aligned with breeding and research objectives.

- *Molecular Biology, Genotyping & QTL Support:* Isolate high-quality RNA and DNA and perform quality control assessments; Set up and conduct PCR-based workflows and marker-assisted genotyping; Maintain robust sample tracking systems; Organize genotype and phenotype datasets to support QTL mapping and downstream analyses.

- *Tissue Culture, Transformation & CRISPR Assay Support:* Operate tomato tissue culture pipelines, including media preparation, sterilization, regeneration, rooting, acclimatization, and contamination control; Support plant transformation workflows for CRISPR-based assays and gene validation; Maintain traceable records from explant initiation through regenerated and validated materials.

- *Sequence Analysis & Data Management:* Assist with routine sequence analysis tasks, such as quality control checks, alignment review, and construct or variant confirmation, as appropriate; Maintain organized electronic data files and backups; Assist in preparing data summaries for reports, presentations, and manuscripts.

- *Student Training & Mentoring:* Train and mentor undergraduate and graduate students in laboratory techniques, safety practices, documentation standards, and good laboratory practices; Promote quality control, accountability, and a collaborative lab culture.

**Required and Desired Skills and Traits**

***Required Skills and Traits***

- Demonstrated experience with plant RNA and DNA isolation, PCR, and genotyping
- Experience maintaining plant populations, including basic greenhouse or growth-chamber work
- Strong organizational skills and attention to detail, particularly for record keeping and sample tracking
- Ability to manage laboratory operations, documentation, and inventories
- Proven ability to troubleshoot experimental workflows and adapt protocols as needed
- Ability to work independently as well as collaboratively in a research team environment
- Strong communication skills and willingness to mentor and train students
- Commitment to laboratory safety, compliance, and good laboratory practices
- Must have valid driver's license in good standing

***Desired Skills and Traits***

- Experience with plant genetics, breeding populations, or QTL mapping support
- Familiarity with plant tissue culture, transformation, or CRISPR/Cas9-related workflows
- Experience with basic sequence analysis, data organization, or bioinformatics support

- Prior experience in a laboratory management or lead technician role
- Experience mentoring undergraduate or graduate students in a research setting
- Strong problem-solving skills and ability to manage multiple projects simultaneously
- Interest in sustainable agriculture, plant stress biology, or applied plant genetics research

**Supervisory Responsibilities**

- Provide day-to-day guidance and technical supervision to undergraduate and graduate student researchers, including work-study students and interns
- Train students in laboratory techniques, safety procedures, documentation standards, and good laboratory practices
- Monitor student progress on assigned tasks and ensure quality control of experimental work and data recording
- Foster a collaborative and professional laboratory environment
- Communicate regularly with the Principal Investigator regarding student performance, training needs, and workflow coordination

**Competencies**

- **Technical Capacity**: Demonstrated ability to perform and support molecular biology, genotyping, and plant research workflows, including adherence to protocols, quality control, and safe laboratory practices.
- **Personal Effectiveness and Professional Credibility**: Consistent demonstration of reliability, accountability, punctuality, and professional conduct in an academic research environment.
- **Thoroughness and Attention to Detail**: Ability to maintain accurate records, manage sample tracking, follow standard operating procedures, and ensure data integrity across experiments.
- **Collaboration and Teamwork Skills**: Ability to work effectively with faculty, staff, and students, contributing to a collaborative and inclusive laboratory culture.
- **Communication Proficiency (Oral and Written)**: Ability to communicate clearly and professionally, including documenting procedures, maintaining records, training students, and contributing to reports and research summaries.
- **Flexibility and Adaptability**: Willingness to adjust priorities, troubleshoot workflows, and respond effectively to evolving research needs and timelines.
- **Software and Information Literacy**: Proficiency with standard laboratory and office software, data organization tools, and internet-based research resources; ability to learn new digital tools as required.

**Work Environment**

This position is based in an academic research laboratory and associated greenhouse and/or growth chamber facilities. The work environment includes routine exposure to laboratory equipment, biological materials, and chemicals commonly used in plant molecular biology and genetics research. The incumbent is expected to follow all institutional safety guidelines, standard operating procedures, and regulatory requirements.

Work may involve periods of standing, walking between laboratory and plant growth facilities, and performing repetitive laboratory tasks. The position requires the use of personal protective equipment as appropriate. Occasional work outside standard hours may be required to support time-sensitive experiments, plant care, or project deadlines.

The work environment is collaborative and student-centered, requiring regular interaction with faculty, staff, and undergraduate and graduate students.

**Physical Demands**

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job**.** Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The position requires the ability to perform routine laboratory tasks, including standing or sitting for extended periods, walking between laboratory, greenhouse, and growth facility spaces, and using hands and fingers to operate laboratory equipment and handle samples. The incumbent must be able to lift and carry materials such as lab supplies, equipment, or plant materials, typically up to 25 pounds.

Visual acuity is required for tasks such as reading labels, operating instruments, and observing experimental materials. The position may involve repetitive motions and occasional bending, reaching, or stooping. Use of personal protective equipment is required, and compliance with laboratory safety protocols is essential.

**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**

Travel to field sites, professional conferences, and professional development training opportunities may be required.

**Required Education and Experience**

***Education***

- Bachelor of Science degree required in Biology, Genetics, Biotechnology, Plant Science, Molecular Biology, or a closely related field. MS degree preferred.

***Experience***

- Hands-on experience in a biological or life sciences laboratory environment
- Demonstrated experience with plant RNA and DNA isolation, PCR, and genotyping techniques
- Experience maintaining plant populations, including basic greenhouse or growth-facility work
- Experience with laboratory documentation, record keeping, and adherence to standard operating procedures

- Experience working collaboratively in a research team and supporting student training or mentoring

**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 06, 2026.

**Apply**

Preferred: Information accepted as emailed in a Microsoft Word or PDF format to rdemployment@wvstateu.edu. Qualified candidates may 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 Plant Breeding and Genetics Research Technician
West Virginia State University Research and Development Corporation
PO Box 1000, 201 ACEOP Admin. Bldg.
Institute, WV 25112

**AAP/EEO Statement**

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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.**