

Technical Graduate Student Researcher (T-GSR)

Biomedical Sciences Division – School of Medicine

Position Overview

The Technical Graduate Student Researcher (T-GSR) supports faculty, staff, trainees, and collaborators within the Biomedical Sciences Division by facilitating research activities utilizing the School of Medicine (SOM) core instrumentation facilities. This role combines technical expertise, operational support, and collaborative consultation across multiple advanced research platforms. This role also supports wet lab experimentation and by ensuring compliance with regulatory frameworks, optimizing lab workflows, managing resources, and coordinating multidisciplinary research teams.

T-GSR appointments are part-time (50% effort; approximately 20 hours per week) during the academic year and require a commitment for the full fiscal year (July 1 – June 30).

Key Responsibilities

Research Support & Technical Expertise

- Provide consultation on experimental design, protocol development, and troubleshooting for specialized research applications
- Support research projects utilizing core facilities, including:
 - Flow Cytometry
 - Genomics
 - Metabolomics
 - Multiphoton Microscopy
- Collaborate with investigators to optimize methodologies and workflows

Instrumentation Operation & Maintenance

- Operate, monitor, and maintain SOM core instrumentation
- Perform routine quality control procedures
- Maintain reagents and consumables
- Coordinate with vendor technical support as needed
- Train researchers and lab personnel on proper equipment use

Laboratory Operations & Safety

- Assist in managing chemical and equipment inventory
- Support annual physical inventory verification across faculty laboratories
- Handle BSL-2 biological samples in compliance with safety protocols
- Operate laser-based instrumentation safely

- Ensure proper handling, storage, and disposal of chemicals and biological specimens
- Assist in developing training plans for the use of lab equipment such as centrifuges, autoclaves and others
- Maintain laboratory protocols (SOPs) and ensure adherence to experimental standards and reproducibility practices
- Perform tasks requiring lifting of up to 20 pounds (equipment, supplies, etc.)

Training & Development

T-GSRs are required to complete specialized training, including:

- BSL-2 safety and standard operating procedures
- Operation and analysis of advanced instrumentation, including:
 - NanoString platforms
 - Flow cytometry systems (analytical and preparative)
 - 10x Genomics technologies
 - Agilent Seahorse systems
 - Multiphoton microscopy systems
- All required institutional and safety trainings related to biological sample handling

Administrative & Reporting Duties

- Maintain regular (minimum weekly) communication with the SOM Research Building (SOMRB) Laboratory Facilities, Training & Safety Manager
- Submit weekly activity reports detailing:
 - Tasks completed
 - Training progress
 - Issues or updates related to assigned responsibilities
- Accurately log and submit monthly time and attendance reports
- Submit time-off requests at least two weeks in advance

Performance Evaluation

- Mid-year progress review conducted by January 30
 - Final performance evaluation at the end of the appointment period
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Minimum Qualifications

- Enrollment as a Biomedical Sciences (BMSC) graduate student in good standing
 - Acceptance into a thesis or dissertation laboratory
 - Completion of all required university, SOM, and graduate program trainings
 - Current and compliant Academic Review of Progress and Evaluation (ARPE) status
 - Ability to commit to the full appointment term
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Selection Criteria

Candidates will be evaluated based on:

- Prior research experience and technical expertise
 - Familiarity with relevant instrumentation and methodologies
 - Academic performance
 - Demonstrated analytical and problem-solving skills
 - Attention to detail and ability to maintain accurate records
 - Strong written and verbal communication skills
 - Letter of recommendation from thesis advisor addressing:
 - Experimental competence
 - Technical proficiency
 - Work ethic and reliability
 - Relevance of experience to the candidate's thesis research
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Work Environment & Expectations

This role involves work in laboratory environments that include biological materials (BSL-2), advanced instrumentation, and laser-based systems. Strict adherence to safety protocols and operational standards is always required.