

Physiology and Pharmacology Shared Research Infrastructure Terms of Reference

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Purpose and Function

The Department of Physiology and Pharmacology Shared Research Infrastructure serves as a centralized research support hub that provides essential specialized equipment and technical expertise to departmental researchers. This state-of-the-art facility enables investigators to conduct sophisticated experimental procedures and analyses through access to advanced instrumentation for cell imaging, protein analysis, metabolic studies, and drug screening. While dedicated staff are not currently available in the facility, individual pieces of equipment will have a designated expert to provide training and consultation services to help researchers optimize their experimental protocols. By consolidating expensive resources and technical knowledge in a shared space, the core facility promotes research efficiency, fosters collaboration among research groups, and enables both established and new investigators as well as trainees to pursue cutting-edge research questions in physiology and pharmacology.

Location and Access

The facility is housed in MSB 235. Approved users will be provided with a calendar for booking equipment and access codes/keys for entering the facility.

List of Equipment and Services

When fully functional, the facility will house equipment for cell imaging, protein analysis, metabolic studies, and drug screening. In the current year (2026), the facility houses for common use:

- Eppendorf Centrifuge 5702R
- Beckman Coulter Allegra 25R Centrifuge
- Beckman Coulter DU730 UV/VIS Spectrophotometer
- BioRad Peltier Thermocycler (PCR machine)
- BioRad CFX Opus 384 Real Time PCR system
- iBright imaging system
- EVOS imaging system
- Countess (cell counter)

Sustainability, Resources and Budget

Sustainable funding for the facility is covered by collection of facility membership fees. The fee structure is as follows:

- \$100 per piece of equipment access per lab/year
- Maximum of \$500 per year per lab for access to all equipment
- Fees are collected in January and provide access until December 31st of that year

User fees collected will be used to create a fund for equipment repair and maintenance. Fees are subject to change as the facility grows and new equipment is added. All users will be notified in advance of any increases to fees.

Future expansion and growth of facility

The facility will continue to accumulate equipment through available funding opportunities until it adequately meets the needs of our department. We welcome suggestions for additional equipment that would have broad utility in the department. Faculty members are welcome to house their equipment for shared use within the core facility. The equipment needs to be in working order, suit the needs of the users, and fit within the physical space available.

To inquire about donating equipment to the facility, contact the Chair of the Physiology and Pharmacology Research Committee (Dr. Rithwik Ramachandran) and Space and Facilities Committee (Dr. Cheryle Sèguin). In certain cases, it may be possible to house donated equipment within individual labs for shared use by facility members.

Faculty members who donate working equipment will be exempt from paying user fees for that specific piece of equipment for a period (typically 5 years) to be determined based on the equipment's age, condition, and anticipated maintenance needs. Standard fees will still apply for access to other equipment.

Governance, Administration, and Responsibilities

The Department of Physiology and Pharmacology Research Committee is responsible for identifying new funding opportunities and seeking funds to acquire new pieces of equipment that will be housed in the core facility. The research committee will also consult on an ongoing basis with all departmental members to identify and prioritize equipment needs.

As we currently do not have dedicated staff for the facility, training and maintenance of equipment will be a shared responsibility among all users. Some equipment will be overseen by department staff while other pieces will be assigned to specific expert faculty members. It is everyone's responsibility to respect scheduling, clean up after themselves, and use the equipment properly.

All decisions regarding the core facility will ultimately be made by the Chair of the Department in consultation with the Chair of the Physiology and Pharmacology Research Committee.