

Mount Sinai School of Medicine
Shared Resource Facilities
New Proposal and Review Criteria

Overview and Purpose:¹

The purpose of the Shared Resource (Research) Facilities (SRF) program is to bring state-of-the-art technologies or research support infrastructure to the Mount Sinai Medical Center (MSMC). These facilities are available to the MSMC faculty and their collaborators on a fee for service basis. This distinguishes the SRF from departmental or Institute cores which may be open to other faculty but have been established primarily to serve the members of a given department or Institute. SRF are governed by the school and overseen by the Dean's office under the Associate Dean for Research Resources (ADRR).

Mechanism of Financial Support:

The ideal SRF will be supported by a combination of user fees and school support. The current cost recovery model is 70% user fees and 30% school support.² At initial start up this fee recovery structure may be reversed such that school support is at a greater percentage. However, each SRF is expected to achieve the 70/30 split by the third full year of operation and sustain this level of financial performance throughout. Applicants are encouraged to seek start up funds from departmental or user accounts. If the users will contribute to the purchase of equipment the applicant must identify the source(s) of funds used. The SRF program, supplemented by school support (30%), provides ongoing support for equipment maintenance, technical personnel, equipment upgrades, and emergency repairs. Each SRF is expected to maintain service contracts on all major equipment in the resource.

I. Preparing an SRF Proposal:³

A proposal to establish a new SRF must have a written plan consisting of three parts: 1) Scientific Justification of Need, 2) Infrastructure Requirements and 3) Business Plan. The following is an example of the criteria that should be included in the proposal. Other approaches may be used that address these concerns, i.e., a funded Shared Instrumentation Grant (SIG) application.

Scientific Justification of Need:

The applicant must state clearly and succinctly why the proposed resource is critical to the conduct of research at the MSMC. The science that will be supported by the SRF will be a significant criteria of review and should be a major component of the justification of need. How will this SRF contribute to the MSMC mission of translational or basic science research? Take into consideration existing technologies on campus and why this technology/resource is considered state-of-the-art. When similar resources are available externally, particularly at neighboring institutions, state why the school should dedicate resources (funds and space) to the proposed SRF. When similar resources are available locally briefly describe how the proposed

¹ These criteria were developed using the NIH/NCRR mechanisms, (S10) for the Shared Equipment Grants, High End Instrumentation Grant Program and (C06) Research Facility Improvement Program, RFIP.

² The Dean's office may approve a different cost recover rate which can be negotiated on a case by case basis.

³ In some instances the Dean's Office will determine that a given resource is essential and should be an SRF. In these instances, a modified SRF proposal will be accepted.

SRF will be structured to be competitive (advanced equipment, greater expertise, lower pricing). When applicable, specific grant funding that will be supported by the proposed resource should be listed. In particular when an SRF will contribute to the support of multiple funded grants this should be prominently represented in the application and verified by letters of support including funding source, and funding dates (this information may be best presented in table format). Letters of support should be submitted from at least five (5) major users indicating how this resource is critical to their research and identifying which funds they will use to pay for the services. No more than two of the major users should be from the same department.

SRF Oversight:

The application must identify a designated faculty member, SRF (Scientific) Director, who will assume scientific oversight for the requested resource. The technical expertise of the proposed director should be clearly stated in the application. Include a copy of the most recent biosketch and at least three publications documenting this expertise. Each SRF applicant should nominate individuals to serve on their advisory committee. The ADRR in consultation with the faculty SRF director will appoint the SRF advisory committee. The application should include a plan for the day to day operation of the resource including designation of a qualified SRF manager/supervisor to oversee the equipment and provide technical expertise to the users. A resume or biosketch of this individual should be provided. If this individual is not supported 100% by the SRF identify the additional sources of funding, percent effort for each source, and how the individual(s) will be made available to the SRF users.

Infrastructure Considerations:

Equipment

For each piece of **major** equipment include manufacturer and model numbers. All equipment costs must be accompanied by vendor quotes. The model chosen should be justified by comparing its performance with other available instruments on the market. (note: equipment selection is primarily the provenance of the SRF director and cost alone should not be the primary selector). Briefly describe why this equipment represents state-of-the-art technology. In many cases equipment has been purchased to support a departmental core that is transitioning to an SRF. If this applies, please state this clearly in the application.

Infrastructure:

When considering major pieces of equipment (multinuclear spectroscopy, functional magnetic resonance, electron microscopes, etc) or dedicated facilities (behavioral suites) provide: 1) the proposed physical location, 2) infrastructure needs (electrical, ventilation, mechanical), 3) required construction or renovation. If biohazards will be used consideration of containment procedures must be addressed (biological containment hoods, directional air flow, facility design) in the application. Design standards must be in conformance with the NIH/CDC Biological and Microbiological Laboratories Manual (BMBL). ***Note: If major construction/renovation is required consultation with MSSM Facilities / Construction and/or Engineering must occur, before final approval, to assess the total costs of the proposal. A "rough" estimate of these costs must be included in the business plan.***

Human/Animal Subjects

If appropriate a plan to ensure that access to the SRF is limited to users whose projects have received approval by institutional human subjects, animal welfare or biosafety committees. Since these areas are also reviewed by designated MSMC oversight bodies the plan should focus on acknowledging the need for prior approval and cooperation with these established committees/boards. In some instances, prior review by the appropriate oversight body, i.e., Program for Protection of Human Subjects (PPHS), Institutional Animal Care and Use Committee (IACUC), Institutional Biosafety Committee (IBC) may be required before finalizing the SRF proposal to fully appreciate any regulatory, administrative, or cost implications to the school.

Business Plan

The business plan should address the costs of all major equipment. These should be supported by recent vendor quotes. Long term operation and maintenance of the equipment should be included in the fee structure. List all salaries with percent effort in support of the SRF operation. A market analysis comparing similar resources and their cost should be included with the explanation of the cost recovery structure. Applicants should work closely with the SRF administration in preparation of the business plan.

Each applicant is encouraged to review the SRF Review Criteria (New Proposals) below during the development of your proposals.

II. SRF Proposal Review Criteria (New Proposals) ⁴

Proposals should be submitted to the ADRR who will convene a meeting of the Dean's Executive Scientific Advisory Committee (ESAC). This committee is advisory to the Dean on issues of science and technology. The committee is composed of senior scientist, (Chairs, Institute Directors, and SRF Directors) who are recognized leaders in their fields. The members are appointed by the Dean's office. The ESAC members are listed below.

The Dean's SRF Executive Scientific Advisory Committee (ESAC) will conduct the initial review of proposed the SRF for scientific justification. The applicant will be asked to present the proposal at a convened meeting of the ESAC prior to the committee sending a recommendation to the Dean. If the proposal is deemed to have scientific justification by the ESAC the next level of review will be for infrastructure requirements. This review will be done in consultation with the MSSM Facilities and Construction program, as necessary. The recommendations of these two reviews, which may occur simultaneously, will be forwarded to the Dean's office. The final decision to fund a proposed SRF will be made by the Dean's office after consideration of the ESAC recommendations and review of the business plan.

Reviews should be written according to the application criteria (above). All comments should be in short narrative form listing strengths and weaknesses of the application. All reviewers are asked to provide a final score of each area and overall impact score of the entire application. The Impact Score should not be an average of the individual scores but rather an assessment of the effect this resource will have on the school's translational and/or basic science goals. Score using the NIH scale of 1-9, 1=best, 9= worse. Scores must be in whole numbers, no decimal points.

Review Criteria:

Scientific Justification of Need

Is the need for the instrument / facility clearly and adequately justified? Is the equipment requested essential and appropriate? Consider the impact of the proposed SRF on institutional plans for biomedical, behavioral, or translational research. Why is this resource considered state-of-the-art? Are there recent publications included to support this conclusion?

Technical Expertise

Does the application identify the high level of technical expertise and access to the necessary infrastructure to make effective use of the requested equipment? How well qualified is the proposed management team (SRF Director, facility manager, technical staff) to operate and maintain the instrument, conduct the projects, and evaluate the research results?

Infrastructure Considerations

Does the applicant address the adequacy of the MSSM infrastructure to support the major pieces of equipment? If renovations or construction are required has MSSM Facilities / Engineering been consulted during the preparation of the application? Has space been identified for housing the instrument / resource? For biohazards, does the applicant address containment requirements?

⁴ Some or all of these review criteria may be waived by the Dean's office.

Does the technical staff appear to have the necessary training or background to work with biohazardous agents (if applicable)?

Business Plan:

Are all major pieces of equipment listed and prices supported with vendor quotes? Is there a plan for maintenance of the equipment? The fee schedule presented should be based on a market analysis of similar SRF in comparable environments, i.e., academic medical centers. Are the suggested fees and associated financial projections realistic? The three year projection should move toward a cost recovery model of 70% user fees / 30% school support. If the business plan does not incorporate this requirement a justification should be included.

The business plan should clearly indicate all the operating costs for running the SRF as well as the revenue that will be generated to support those expenses.

The top portion of the business plan should outline the revenue stream, including school support and user fees (MSSM investigators and outside revenue). Benchmarking against other institution's user fees should be conducted and included with the explanation of the cost recovery structure.

The bottom portion should include the expenses, including but not limited to:

- All personnel salaries with percent effort in support of the SRF operation
- Fringe rate of 27.5%
- All major equipment supported by recent vendor quotes
- Service contract costs for long term operation and maintenance of equipment
- Administrative supplies
- Research expenses including supplies, animals and animal maintenance
- Travel
- Other

A sample business plan is included below.

SRF Sample Business Plan

Year 1 Year 2 Total

INCOME

Outside Services
From MSSM Investigators
School Support
Total Income

EXPENSES

Salaries

Scientific Director (\$x base: % Y1; %Y2)
Managing Director (\$x base: % Y1; %Y2)
Lab Technician (\$x base: % Y1; %Y2)
Other (\$x base: % Y1; %Y2)

Subtotal Salaries
Fringe Benefits (27.5%)

Salaries + Fringe Benefits

Other Expenses

Consultant Costs
Marketing
Equipment
Service Contract
Administrative Supplies
Research Supplies
Travel
Other

Other Expenses Total

Total Expenses

Please contact the Associate Dean for Research Resources, Reginald W. Miller, DVM, @ 212.241.3008, if you have any questions or need assistance with your proposal.

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