

GUIDELINES – MAY 2010
ISU MOLECULAR RESEARCH CORE FACILITY (MRCF)
<http://www.mrcf.isu.edu>

1. Background

The Idaho State University Molecular Research Core Facility (MRCF) was established in October 1994 with funding from the National Institutes of Health (NIH) as a common use molecular research laboratory for the benefit of the entire ISU research community, with its mission to support and promote molecular research. The initial funding period was for a period of two years with a three-year renewal. Since its establishment in 1994, the MRCF has undergone two expansions, which were funded by the NIH, the National Science Foundation (NSF), ISU Colleges, and the ISU Office of Research. The first major expansion occurred in the spring of 2002 to accommodate research functions of a National Institutes of Health Biomedical Research Infrastructure Network (NIH BRIN) grant. (For more about the Idaho BRIN grant, see <http://www.sci.uidaho.edu/brin>). The MRCF underwent a second major expansion during the spring of 2006 due to an NSF Major Research Instrumentation (MRI) grant. The MRCF website at <http://www.mrcf.isu.edu> provides a detailed description of the facility and its instrumentation.

2. Personnel

Dr. Christopher Daniels is the MRCF Director, Erin O’Leary-Jepsen is the Facility Director, and Christy Ryan is the Sequencing Technician. Please see the MRCF website “Personnel” page for contact information.

3. Access/Security

Please contact the Facility Director at oleaerin@isu.edu if you would like access to the MRCF. Bengal card access is assigned to faculty and students with prior faculty approval. All users are responsible for security of the MRCF. You are welcome to use the facility after regular business hours and on weekends, but please ensure that all doors to outside hallways are tightly latched before you leave.

4. Equipment usage

The majority of MRCF instrumentation is available for faculty, graduate, and undergraduate student research. If you wish to use MRCF equipment, your major professor/principal investigator must complete a “Training Request Form.” (See MRCF website <http://www.mrcf.isu.edu>). Those who have not been properly trained by MRCF staff are not authorized to use MRCF equipment. If others ask you for training, direct them to MRCF staff rather than providing training yourself. Please contact Dr. Shawn Bearden bearshaw@isu.edu for training or usage of the Leica DMRB fluorescence and DMRA deconvolution/3D imaging

microscopes, which are located in room 146 of the Gale Life Sciences Building. The Applied Biosystems automated DNA sequencer is accessible to MRCF staff only.

5. Training - Molecular techniques

The mission of the ISU MRCF is to support and promote molecular research. With this in mind, we have developed a policy restricting the use of MRCF instrumentation for training in molecular techniques. Although MRCF staff are happy to show new users how to program the thermal cyclers, for example, we are not able to teach users about molecular techniques such as PCR, data analysis, experimental design, etc. The role of the MRCF in fulfilling its mission is to generate high quality data for researchers. This role can be fulfilled if we offer training/teaching to previously arranged teaching laboratory/lecture courses only and limit one-on-one observation and training for individuals. (Please see item # 15 for additional information regarding facility tours). A virtual tour of the MRCF is available on our website at <http://www.mrcf.isu.edu>. We encourage individuals to contact us for training on the use of core facility equipment. However, anyone asking to use the facility must be properly trained in molecular techniques prior to using MRCF instrumentation.

6. Services

The ISU MRCF provides automated DNA sequencing and fragment analysis. We charge a nominal fee for MRCF services and equipment usage. Please see the Price List section of our website for additional information. Instructions for submitting sample requests can be found on our website at: <http://www.mrcf.isu.edu>.

7. Growth/Expansion Policy

We are enthusiastic about participating in new funding opportunities that fit within the vision and mission of the MRCF. We ask that Principal Investigators requesting funding that involves the MRCF would include the MRCF Director, Christopher Daniels, in the planning process, who will then consult with the MRCF Advisory Committee to determine if the MRCF's participation is logical and feasible.

8. Check-out lists

Check with MRCF staff before you borrow equipment or supplies. If you borrow something, please record your name, item, and date on the checkout list located in the MRCF.

9. Sign-up lists

Many MRCF instruments have sign-up lists so users can schedule in advance. As a courtesy to other faculty and students, please sign up only for the dates and times you know you will be using the equipment. If you must cancel, please inform MRCF staff so that others may be permitted to use the equipment.

10. **Equipment problems**
Please fill out and submit a Technical Problem/Damage Report immediately (copies are located in the plastic tray outside of door 461) if you notice problems with MRCF equipment or if damage occurs during usage. Please do not attempt to fix the problem yourself.
11. **Chemicals**
If you use chemicals in the MRCF, make sure they are properly labeled with chemical name, date, and your full name. Please provide a Material Safety Data Sheet (MSDS) to the Facility Director for all chemicals stored in the MRCF.
12. **MRCF Computers**
When working with MRCF computers, please do not change control panel settings. Please back-up and then delete your data to prevent excessive data storage on common-use MRCF computers. Gloves should be removed before using common use computers. One exception is the computer in room 445 because of the possibility of trace amounts of Ethidium Bromide contamination on that system. (See #14)
13. **Nanopure water**
To prevent overflows when dispensing Nanopure water, you must either watch as your carboy fills or set a timer and return before an overflow occurs. Do not start the water and leave without taking a timer with you. The flow rate will vary on a daily basis due to pressure and demand.
14. **Room 445-Imaging System**
Always wear gloves when using the imaging system, including the keyboard, computer, and printers. Although we periodically do a UV scan of room 445 and remove any contamination if detected, trace amounts of Ethidium Bromide could potentially be found on any of the system components. Remove contaminated gloves before you touch the outside doorknob of room 445. Many people entering that room are not wearing gloves – i.e. custodial staff, centrifuge users. Please do not save your images and other data to the hard drive/desk top. Back-up your data or send it to your personal computer electronically, as we will periodically delete any files saved to the computer. Please sign the user log in room 445 to track usage of the imaging system. The MRCF will charge your lab a small fee for prints and instrument usage, which helps to defray yearly maintenance and service contract costs.
15. **Facility Tours**
A virtual tour of the MRCF is available on our website at <http://www.mrcf.isu.edu>. Please contact the Facility Manager to schedule a live tour of the facility, which we will continue to offer when appropriate. We ask for your cooperation in scheduling tours at least 24 hours in advance. Advance scheduling will allow us to reserve appropriate time so that we are better able to offer our undivided attention and provide sufficient time for questions.

If you have questions, concerns, or suggestions, please feel free to contact Erin O’Leary-Jepsen or Christopher Daniels directly. We look forward to your input in helping us continue to make the MRCF a valued resource in your work.