

# Belle Isle Aquarium Field Research Laboratory

## A Great Place for Freshwater Science

### Research Opportunities for Faculty and Students at the Belle Isle Aquarium

Are you looking for a field laboratory in the Great Lakes region with opportunities for lake, river, and wetland environments, and also research university resources close-at-hand? With access to the Detroit River, interesting and diverse lagoons, a unique flat mesic wetland forest, and a relationship with nearby Wayne State University, the Belle Isle Aquarium may be just the place to meet your needs.

### Visiting researchers welcome

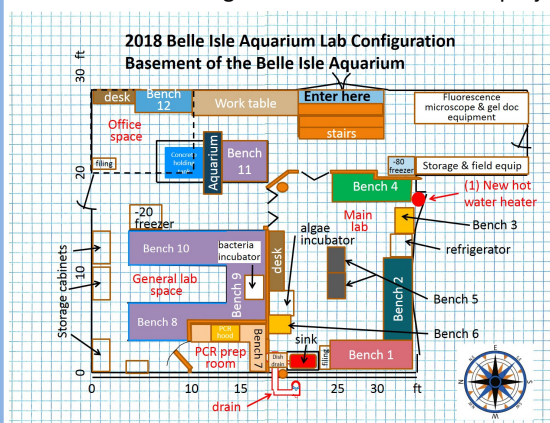
Arrangements to use the research facilities and organisms at the Aquarium can be made by qualified faculty and students. **Inquire to the Director of the Belle Isle Aquarium Field Research Laboratory, Dr. Jeffrey Ram, at [jeffram@wayne.edu](mailto:jeffram@wayne.edu) or (248) 200-9431.**

Bench space is available at nominal cost, as described below. Inquire about visiting scientist subsidies and small grants for on-site research projects, also described below.

### At a Glance

#### Research Assets

- Interesting organisms and environments
- Knowledgeable staff
- Interest in conservation, ecology, biology, and careers focusing on aquatic organisms
- Facilities for DNA extraction and real-time PCR.
- Fluorescence microscopy
- Field equipment



**See OVER for location and information about fees, subsidies, small grants, and classes**

### The Belle Isle Aquarium Field Research Laboratory

Configuration of the lab is shown in the schematic diagram. A total of approximately 1000 square feet is subdivided into a main lab, PCR prep room, fluorescence microscope area, general lab space/microbiological equipment space, general use aquariums, field equipment storage, and desks in main lab and a 90 square foot office space. Approximately 50 linear feet of bench space (numbered benches in the schematic) can potentially be reserved for your special applications.



**WSU professor Jeffrey Ram**  
Head, Belle Isle Aquarium  
Field Research Laboratory

### Equipment

Shared laboratory equipment includes

- -80 °C freezer
- -20 °C non-defrosting freezer
- Refrigerator-freezer
- Nikon Fluorescence microscope
- Evoqua nano-pure water system
- Temperature regulated light controlled algae incubator
- Bacteria growth incubator (for E. coli or other bacterial growth)
- PCR prep hood in PCR prep room
- Bio-Rad real-time thermocycler
- Agarose gel electrophoresis system

- pH meter, analytical balance
- Vortex mixers, stirring hot plates, centrifuges
- Various variable pipets, ranging from 2 ul to 1000 ul
- Field collection equipment, including chest waders, boots, sieves, nets, etc.
- Vacuum manifold and vacuum pump for filtering field water samples
- Quatitray 2000 sealer; UV light for examining Quantitrays
- Standard lab compound microscopes and stereo microscopes
- Field sample sorting trays
- Water baths

No boat; however, inquire, and we will facilitate rental.

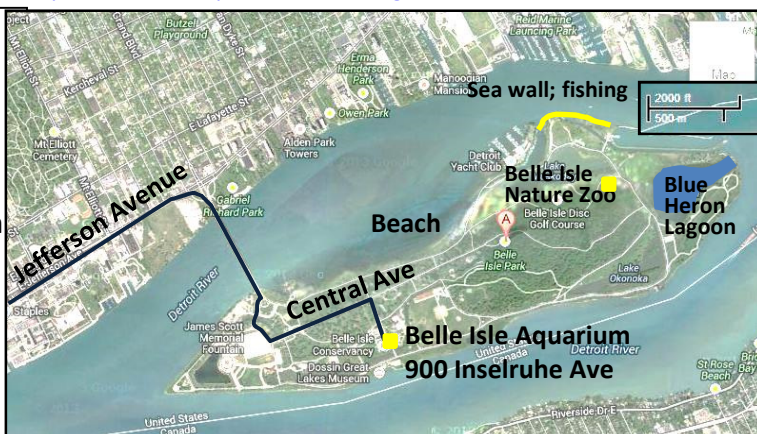


## Location and directions

Also found at <https://www.biaquariumstem.org/directions-to-wsu-bia-lab.html>

From any of the freeways (I-96, I-94, MI-10, or I-75/375, get to Jefferson Avenue East. About 2 miles from downtown Detroit, go right on Grand Blvd, onto the ramp to the bridge to Belle Isle Park. On the island go slight right, then left on Central Avenue. Go right at the equestrian statue (Inselruhe Ave). The Aquarium parking is at Google maps location 900 Inselruhe Avenue, Detroit 48207.

Entry to the BIA-LAB is through double doors on the left side (facing the building) near the back of the building.



## Fees

Arrangements to use research facilities and organisms at the BIA-Lab can be made by qualified faculty and students. Rental fees shown below are expected to be paid by users of bench space and lab equipment where institutional or grant funds are available and entitle the user access to all equipment. Fees will be waived for collaborative projects with Wayne State faculty and students and for visitors who participate in teaching BIO5180. Prospective users can apply for a travel subsidy from Healthy Urban Waters or a small grant for rental fees and research expenses (see below). The 2019 introductory rental fee schedule is as follows (minimum one week fee): (a) Per bench (5 – 10 linear feet; available benches are 1, 2, 4, 8, 10, & 11): \$20 per week; \$75 per month; (b) Office/bench space (bench 12 with adjacent desk & 4 drawer filing cabinet): \$40 per wk; \$150 per month. Rental fee entitles user to shared use of microscopes, PCR room & thermocycler, megOhm water, field equipment, etc. by arrangement with the lab director and other users.

See OVER for list of equipment

## Grants

Faculty and students who do research at the BIA-Lab can apply for grants of up to \$2,500 each from the Sharon L. Ram Aquatic Science Research Fund in support of their project. Please provide a one to two page summary of the proposed work, briefly describing background and rationale, relevance or need to do the research at the BIA-lab, methods, proposed experiments and dates of lab usage, and likelihood or plan for publication. Then provide a budget and budget justification, allocating expenses appropriately if part of the work will be done at the BIA-Lab and part at the applicant's home institution. At least 80% of the listed expense should be directly related to work at the BIA-Lab. Allowable expenses include BIA-Lab space rental, supplies by category, equipment rental (e.g., boat rental), external services such as sequencing, travel for sample collection, and small "equipment" such as pipets, filter manifold, sampling nets, etc. Not allowed: travel from home institution to Belle Isle, lodging and food, salary for applicant or assistants (however, ask if willing to hire a Wayne State student who may get independent funding to assist you), and indirect costs. Indicate if any funds from your home institution or another grant are available to support the work or to "match" the requested funds (a match is helpful but not necessary). Send inquiries or your proposed work and budget justification for review to Dr. Jeffrey Ram, [jeffram@gmail.com](mailto:jeffram@gmail.com), with "BIA-Lab grant request" in the subject line at least two months prior to the proposed work.

## Travel subsidies

For 2019, up to two \$500 travel subsidies, which can be used for transportation to Belle Isle from your home institution and for meals and lodging expenses, can be applied for. Minimum duration of research at Belle Isle must be at least one week. To apply, send a brief outline of the project (title and *brief* description), dates of travel, and expected travel expense to [jeffram@gmail.com](mailto:jeffram@gmail.com) with "BIA-Lab travel subsidy" in the subject line at least two months prior to the proposed travel.

**Classes** Bring your class to the BIA-Lab or recommend that your students take Wayne State's BIO5180, Molecular Aquatic Ecology in July 2019. For more information on BIO5180, see <http://sun.science.wayne.edu/~jram/bio5180/>