

## Facilities, Equipment and Other Resources

### (i) Laboratories

Johnson has ca. 610 ft<sup>2</sup> of laboratory space in the Marine Science Building (MSB) on the main campus of the University of Hawaii and access to shared-use space of ca. 1050 ft<sup>2</sup> in the basement of the adjacent POST building. The labs are equipped with chemical fume hoods, benches, cabinets, sinks, and the necessary utilities (DI water, gas, vacuum and electrical outlets).

Available equipment in Johnson's laboratory (MSB622) includes that for solution preparation (balances, stir plates, pH meters, etc.), agarose gel electrophoresis and documentation, a BioSpec beadbeater for nucleic acid extractions, forced-air cabinets with UV lights for PCR reaction set-up, refrigerated and standard microcentrifuges, a Percival incubator with grow lights, a Turner fluorometer, a Biospherical Light meter, a single turnover fluorometers (BIG-STf and FIRE), several sets of micropipettors and extensive glassware. A walk-in coldroom, a walk-in -20°C freezer, a liquid scintillation counter and an autoclave are located on the same floor as the PI's lab.

The shared-use molecular biology laboratory (POST 20) is currently equipped with a Beckman CEQ 2000 genetic analyzer, a near-infrared, two laser blot scanner (Li-Cor), three thermal cyclers, a UV-crosslinker, gel electrophoresis equipment including a pulse field system (BioRad Chef DR II), an autoclave, a high-speed benchtop centrifuge (Beckman Allegra 25), a microcentrifuge, a microtube shaker incubator, refrigerators (+4° C) and freezers (-40 and -80° C), and an epifluorescence microscope with a CCD camera and image analysis software.

Additional sequencing and fragment analysis (ABI 3730XL) and microarray equipment are available on campus at the Advanced Studies of Genomics, Proteomics and Bioinformatics Center located on campus. The Center also has experience in protein extraction and analysis, including using iTRAQ.

### (ii) Computer

Johnson has two PC computers (a 3.2GHz desktop and a 1.2GHz laptop for travel), 1 Macintosh computer and a Linux server. Software installed on these machines includes that needed for sequence analysis (Sequencher, BioEdit, Genedoc, ClustalX, phred, EMBOSS, t\_coffee, and more), phylogenetic analysis (Arb, Paup), database activities (Excel, Access), programming (Perl, MATLAB), graphing and plotting (SigmaPlot), graphic design (Photoshop, Canvas), publishing (Word, EndNote), and internet browsing (FireFox).

### (iii) Office

Johnson has 144 ft<sup>2</sup> of office space on the same floor as his laboratory (MSB 614). Desks are available for student daily use in the laboratory, and shared office space is provided by the Oceanography Department for graduate students.