DEPARTMENT OF BIOLOGICAL SCIENCES – SHARED RESEARCH RESOURCES

In June 2006, the Department of Biological Sciences moved into the newly constructed 77,000 square foot McNeil Science and Technology Center. The building also houses the Graduate Bioinformatics Program and the Department of Math, Physics and Computer Science. The building includes13 research laboratories of 200 to 600 square feet each, numerous shared equipment and specialty rooms, three computer classrooms, a computer workroom, eight teaching laboratories, a 400-seat auditorium, three smaller classrooms, and sufficient office and meeting space for the faculty members, research assistants, and graduate students anticipated for the programs. The building includes small core facilities focused on studies of proteins, protein-nucleic acid interactions, microscopy, and molecular biology.

Research groups within the department have shared access to a wide variety of equipment designed to promote their investigations. Most of the following equipment is housed in the McNeil Science and Technology Center (a few items are at other campus locations):

Equipment present in the Department of Biological Sciences:

- HPLC, LC-MS, and extraction equipment which includes Four HPLC Systems:
  - [Agilent 1100; Shimadzu LC-20A Prominence 2D-LC-MS; Perkin Elmer Series 200 (2)]
- Molecular Devices 96-well Spectrophotometer
- Bio-Rad Biotek SYN2 96-well Fluorimeter
- Secomam Uvikon Temperature-Controlled Spectrophotometer
- Nikon TE2000 C1+ Confocal Microscope
- Olympus BX60 Epifluorescence Microscope
- Biometra TGGE System
- Variety of PCR Thermocyclers
- Stratagene MX RT-PCR Thermocycler
- Sorvall Discovery M120 SE Microultracentrifuge
- Four Sorvall RC5B High-Speed Centrifuges
- Sorvall Evolution RC High Speed Centrifuge
- EmulsiFlex®-C3 High Pressure Homogenizer
- Infors Labfors 1 L and 5 L BIoreactors (temperature, mixing and aeration controlled)
- Two Labconco Freeze Dry Systems
- Three Savant Speed-Vac Concentrators
- Three Büchi Rotary Evaporators
- Virtek ChipReader Microarray Reader
- Beckman-Coulter LS6500 Scintillation Counter
- Two Digital Gel Documentation Systems
- Multiple Temperature-Controlled Shaking Incubators
- Two Walk-In Warm Rooms
- Three Walk-In Cold Rooms
- Three Walk-In Temperature/Lighting/Humidity-Controlled Growth Rooms
- Six Biological Safety Cabinets/CO_2 Incubators/Tissue Culture Suites
- Freezer Space (-20°C and -70°C/-80°C)
- Two Autoclaves
- Bench Top Media Clave and Media Jet System for microbiological media preparation
- Numerous Other Small Pieces of Equipment

Equipment shared with the Departments of Chemistry & Biochemistry; Pharmaceutical Sciences; Math, Physics & Statistics:

- Two Bruker 400 MHz NMR Spectrometers for NMR 1D and 2D chemical characterization experiments with a Protasis CapNMR capillary probe,
- Varian 1200L LC-MSn System
- Thermo Orbitrap Ion Trap Mass Spectrometer
- Two Gas Chromatography-Mass Spectroscopy Systems (Varian 3900 GC with SaturnT 2100 MS; Perkin Elmer Clarus 600 GC-MS)
- Perkin-Elmer Spectrum 1000 FT-IR
- Nikon Eclipse Ti microscope and a Veeco Atomic Force Microscope (shared with Department of Math, Physics & Statistics)
- *in vivo* animal imaging facility

USciences Department of Biological Sciences – Facilities and Equipment

Environmental Growth Room Exterior (1 of 3)

Sorvall Evolution RC

Autoclaves

Environmental Growth Room Interior

Storm 840 Phosphor Imaging System

Beckman LS6500 Liquid Scintillation Counter

USciences Department of Biological Sciences – Facilities and Equipment

EmulsiFlex®-C3 High Pressure Homogenizer

Freeze Dry and Speed Vac Equipment (1 of 2)

Shimadzu 2D-LC/MS

Sorvall RC5B High-Speed Centrifuge (1 of 4)

Low Temperature Freezers (2 of 6)

Agilent 1100 HPLC (1 of 3)

Tissue Culture Facility (1 of 5)

Olympus BX60 Fluorescence Microscope

Nikon TE2000 – C1+ Confocal Microscope

USciences Department of Biological Sciences – Facilities and Equipment

Infors Labfors 1L and 5L Bioreactor

Microbiological Media Library

Mediaclave and Media Jet

Tissue Culture Microscopes

Secomam Uvikon Temperature-controlled Spectrophotometer