Facilities & Resources

Laboratory:

The MRI Core Facility and the Center for NMR Research (CNMRR) have 6,500 sq. ft. of laboratory space, which includes: biochemical, electronic and surgical suites, and a fully equipped machine shop with Universal Laser System X2-600 computer-guided laser manufacturing system. The laser system cuts, drills and engraves plastics (delrin, polycarbonate, nylon) to an accuracy of 0.002 inches on a 32" x 18" work area.

Clinical:

The University Hospital has a complement of 500 beds which is situated on a 550 acre campus.

Animal:

The Animal Resource Facility includes central animal quarters in the Medical Sciences Building, an Animal Research Farm and a large dairy barn. The unit includes an experimental surgery area, holding area for most species, and full radiological, histopathological, chemical and microbiological supports.

Computer:

The Core facility include a 32-processor (3.0 GHz) cluster with 16 GB RAM and 1830 GB RAID storage, 8 Dell multi-processor workstations with an array of software for image processing and electromagnetic field calculation, a large format Mitsuibishi dye sublimation printer, 3 Lexmark Optra R printers, an Opal Digital Slide Maker, and an Encad Novajet III Plotter.

Office:

Office space and secretarial support are provided to the faculty by the Department of Radiology. Secretaries: The Center for NMR Research, Department of Radiology, has the support of one fulltime secretary.

Other:

In addition to the Center for NMR Research's machine shop, the Medical Center is equipped with both machine and electronic shops. Both are fully available to the project and operate on about a one week turnaround time.

Equipment

The MRI Core facility has three MRI systems dedicated for research: 1) a 3.0T Siemens Tim Trio equiped with 18-receiver / 8-transmit channels, latest hardware and software packages with full clinical capability, 2) a Bruker S-300, 90 cm bore, 3.0 Tesla whole body MR spectrometer/imager and 3) a 7.0 T Biospec 70/20as small animal imaging system. In addition, a Philips Achiva 3.0 T MRI with eight receiver channels located in the main hospital complex within 150 yards of the MRI Core facilty is also avalable for research activities.

Additional Equipment: An Eloquence™ System for functional MR imaging (fMRI) (Invivo Corp, FL, USA), which includes an LCD visual display, audio system, button response unit and software (E-Prim) for paradigm creation, patient management, protocol planning, precise delivery of brain stimulation and behavioral data analysis (BrainVoyager package). HP 4195A Network/Spectrum Analyzer, HP 8452A Diode Array Spectrophotometer, Orion EA920 pH/ion analyzer, balances, LeCroy 9450A 300 MHz dual digital oscilloscope, 2 analog oscilloscopes, two Morris Model 505 RF Sweepers and an HP 4263A LCR Meter, electronic test equipment, Evan's type Magnetic Susceptibility Meter, full machine shop and tools, surgical facilities and anesthesia equipment.