Overview

The Brain Imaging Center is located on the Anschutz Medical Campus of the University of Colorado in Aurora, Colorado. The core facility of the Center is a 3 Tesla whole-body MRI scanner manufactured by Siemens Medical. The MRI suite has a space of over 2,600 sq-ft. The primary focus of the Center is functional MRI studies. The core team of the Center consists of psychiatrists, psychologists, radiologists, physicists and MR technologists. The Brain Imaging Center has been fully operational since May, 2003.

Touring
Our staff would be pleased to show you the facility. Please contact us to schedule a tour.

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Physical Address
Brain Imaging Center
Anschutz Medical Campus
12469 East 17th Place, Room 112
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Hours of Operation
The regular hours are weekdays, Monday through Friday from 8am to 6pm

Magnet Time Costs
Grant funded studies $700 per subject per hour
Industry funded studies $1200 per hour
Equipment
3 Tesla Siemens Skyra Wide-Bore whole body scanner
70 cm bore opening
550 lb table limit
20-channel head/neck coil
Functional MRI
Spectroscopy: proton and multinuclear
Elastography
Arterial Spine Labeling 2D & 3D
Susceptibility Weighted Imaging
Diffusion Tensor Imaging
Cardiac Package
Quiet Suite
Presentation computer with E-Prime 2.0 professional
Resonance Technology Goggles, Headphones, and Joystick
Rear projection systems
Lumina response pads: 2-2 button system and 4-button system
NeuroScan (MRI compatible) EEG system
Power Edge RAID storage (12TB expandable)
Linux workstations
LC Model Spectroscopy analysis software
Medrad physiological monitoring system

Scheduling
MRI scanner time is a valuable and expensive resource. As such, efficient use of the instrument is an utmost importance. Scheduling is done online through ‘Webmail’ on a first come first serve basis. Blocking off time slots before subjects are actually recruited is discouraged as this practice accounts for many cancelled appointments. Frequent cancellations of the user’s assigned scan time may result in billing for future non-use.

For cancellations or add-on’s within 24 hours of the appointment time the investigators are asked to call the imaging center as soon as possible.

Safety
The MRI system is operated in strict adherence to existing guidelines from the FDA (Food and Drug Administration) for magnetic resonance diagnostic devices. There are potential hazards related to MR scanner usage. Therefore, we require all personnel to complete MR safety training before working in this environment. Hazards can include malfunctioning of internally implanted devices as well as non-MR equipment introduced into the scan room. Acoustic noise is also a concern so earplugs and/or headphones are required to be worn by research subjects.
**Standard Procedure**

1. Researchers are renting magnet time which includes an MR technologist to operate the scanner. A member of the research team must be present with every study and must be able to work in the presence of a magnetic field. The MR operator will not conduct the study alone unless the Technical Director provides an exemption. The researcher is responsible for scheduling appropriate time on the scanner, greeting their subject since there is not a receptionist, explaining the procedure, getting informed consents, setting up any special equipment and running their paradigm. Researchers must be familiar with the operation of any equipment needed for the experiment including the projector, goggles, headphones, and/or response pads. The technologist is responsible for screening the subjects for potential contraindications to the MRI, selecting the correct coils, monitoring equipment, scan parameters and positioning the subject in the magnet.

2. All subjects and research staff will be screened for metallic objects before entering the scanning area. Lockers are available for personal items.

3. No one is permitted to go beyond the waiting area unless they have completed the MR safety course or has been given clearance by the MR Technologist.

4. Each subject must be enrolled in a research study, sign an informed consent, fill out the MR screening form and change into scrubs prior to entering the MR scan room.

5. The door to the magnet room must be kept closed at all times.

6. All equipment necessary to conduct the study must be in place in the magnet room before the subject enters.

**Contrast Agents**

For studies requiring intravenous contrast agents, a physician or nurse certified in ACLS must be present.

**Emergency Procedures**

In the event of an emergency, there is a YELLOW EMERGENCY button located next to the MR scanning console. This is an internal alarm monitored 24/7 by UC Denver police dispatch. An operator will call the Brain Imaging Center and ask for details of the emergency as well as dispatch the police and ambulance, as necessary. If there is a medical emergency involving a research subject in the scan room, the subject must be moved out of the MR scan room immediately. Once outside the scan room, basic cardiac life support or appropriate medical attention can be administered.