

MRI FACILITY DIRECTORY

Name of Institution: **McConnell Brain Imaging Centre**
Institution's Address: Montreal Neurological Institute and Hospital
3801 University, Webster 3B
Montreal, Quebec H3A 2B4
CANADA

Web Site Address: www2.bic.mni.mcgill.ca

Can accommodate both Pre-Clinical and Clinical research projects.

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Below is a brief narrative of the institution's MRI capabilities. The following information was provided by the institution. BioPAL has compiled the MRI facility directory to aid researchers access MRI services. The listing is not an endorsement by BioPAL.

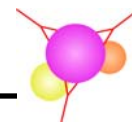
The McConnell Brain Imaging Centre (BIC) of Montreal Neurological Institute, McGill University.

The BIC is a multidisciplinary research center dedicated to advancing our understanding and treatment of neurological diseases by creating and using imaging methods to study the human nervous system. The McConnell Brain Imaging Centre (BIC) is one of the largest scientific communities in North America dedicated solely to research imaging of the human brain. Launched in 1984 by then Director of the MNI, Dr. William Feindel, the BIC now represents over 300 man years of experience in neuroimaging research and is widely regarded as one of the top brain imaging research centers in the world. In 1999, the BIC was acknowledged by the Smithsonian Institute for its contributions to medical research applications of high technology. We are founding partner of the International Consortium for Brain Mapping and the lead institution in a multi-institutional National Institutes of Health project to create an atlas of the developing child brain.

Today, the BIC consists of a core group of 16 faculty members, conducting independent research with high technology brain scanners and sophisticated computational analysis. It also houses approximately 70 graduate students and postdoctoral researchers and over 25 members from McGill and beyond who conduct their imaging research studies in collaboration with the core group. The centre emphasizes quantitative multi-modal 3-D investigation of brain structure and function. Brain structure is imaged using Positron Emission Tomography (PET), Magnetic Resonance Spectroscopy (MRS), functional MRI (fMRI), and magnetoencephalography (MEG). The BIC maintains strong linkages with the clinical, clinical research and basic research communities within the Montreal Neurological Institute (MNI). McGill University has collaborations across Quebec, Canada, USA and internationally.

BIC is a dynamic multi-disciplinary research environment where our faculty train graduate students and postdoctoral fellows from a range of McGill University departments including neuroscience, biomedical engineering, neurology, psychology, medical physics, computer science, chemistry and neurosurgery. Being housed within the "Neuro", consisting of the Montreal Neurological Institute and Hospital, and having strong partnerships with the Douglas Hospital and Jewish General Hospital, via the Montreal Consortium for Brain Imaging Research, we also benefit from deep interactions with our clinical colleagues that enable the investigation of most all major neurological and psychiatric diseases.

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BIC's world-class facilities include some of the most advanced MR, PET, and MEG imaging devices available. In addition to scanners used for human and primate studies, the BIC has high-tech scanners designed specifically for use with small animals. Imaging processing and other processor intensive tasks are completed using the BIC's first-class computing system.

The BIC houses two research dedicated human MRI scanners, a 1.5 Tesla Siemens Sonata and a 3 Tesla Siemens Trio.

The BIC has a 7T Bruker Pharmascan MRI scanner for use in small animal imaging studies.

The positron emission tomography scanning division operates two human PET scanners, including a very high resolution, brain-research dedicated scanner (one of only twenty such machines in the world).

The BIC utilizes a CTI Concorde microPET R4 scanner for PET imaging. Combined with our on-site cyclotron, radio chemistry, and HPLC facilities, we are well-equipped for functional and molecular imaging.

The BIC will soon install a 275 channel magnetoencephalography (MEG) unit. The MEG unit will be used for studies requiring a higher temporal resolution than that of fMRI. Although the spatial resolution of MEG is not as high as that fMRI, the spatial resolution is better than EEG. You can expect to see epilepsy and cognitive studies making use of our MEG technology.

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