

## MRI FACILITY DIRECTORY

Name of Institution: **National Research Council Canada's Institute for Biodiagnostics (Atlantic)**

Institution's Address: 1796 Summer Street, Suite 3900  
Halifax, Nova Scotia B3H 3A7  
CANADA

Web Site Address: <http://ibd.nrc-cnrc.gc.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.

Located in Halifax, Nova Scotia, the National Research Council Canada Institute for Biodiagnostics (Atlantic) (NRC-IBD (Atlantic)) is a satellite laboratory of the NRC Institute for Biodiagnostics in Winnipeg, Manitoba, Canada and is one of the pre-eminent sources of research in magnetic resonance imaging (MRI) technology and its application to human subjects. The Institute, with its highly-skilled staff and state-of-the-art facilities, develops noninvasive medical devices and techniques to increase prospects for prevention, earlier diagnosis, improved treatment, and prognosis of disease.

Research at NRC-IBD (Atlantic) is divided between two main laboratories: the Neuroimaging Research Laboratory (NRL) and the Biomedical MRI Research Laboratory (BMRL).

The NRL is located at Capital Health, the leading teaching hospital in Atlantic Canada. Researchers at the NRL specialize in functional magnetic resonance imaging (fMRI), a technique that maps areas of the brain in action, in order to better understand brain function and improve diagnosis and treatment of brain diseases. The facility includes a 4 Tesla (T) high-field MRI system, an electroencephalography (EEG) and transcranial magnetic stimulation (TMS). The 4T MRI is a whole body system and produces high, resolution anatomical, functional, and spectroscopic images. The EEG can be recorded during fMRI acquisition. The TMS is used to inhibit or activate different brain areas in order to study function and potential therapeutic effects.

The BMRL, located in the IWK Health Centre, enables researchers to link pre-clinical models to patient-centred diagnosis and treatment for a broad range of diseases. The lab focuses on cellular/molecular imaging to facilitate drug discovery, and drug development and delivery evaluation through the use of MRI systems. The BMRL includes a 7T vertical bore magnet and a 3T horizontal bore magnet, large enough to accommodate a range of in vivo animal model experiments. The 3T is used in imaging pre-clinical models of disease (i.e. imaging animal models). The 7T is used for micro-imaging studies primarily for in vitro work where image resolution requirements are at a premium.

Collaborations with universities, hospitals, industry, and other research partners have made NRC-IBD (Atlantic) a driving force in Atlantic Canada's growing neuroscience community. The labs are strategically located to take advantage of the existing community of neuroscientists, chemists, immunologists, virologists, and clinician researchers. Working together, these scientists are working to achieve breakthroughs in diagnosing brain malfunctions, understanding how the brain works, advancing medicine, and developing new methods for brain repair.

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