



◀ Strategically located at the QEII Health Sciences Centre and IWK Health Centre in Halifax, Canada, the Biomedical Translational Imaging Centre (BIOTIC) provides single-point access to the expertise, equipment, support services, clinicians, and patient populations you need to explore and validate potential new therapeutic and diagnostic technologies. We will work with you to advance and refine your ideas and move them along the path to commercialization, in a way that minimizes risk and maximizes the value of your products.



EXPAND YOUR RESEARCH TEAM

BIOTIC's team has expertise in fields including:

- medical physics and imaging
- cellular and molecular biology
- radiology, neurology and experimental psychology
- mechanical, electrical and computer engineering
- mathematics and computer science
- pre-clinical and clinical imaging
- project management and business development

We will help you develop your product with R&D support to:

- explore, refine, test and validate your agents
- plan and conduct imaging-related studies
- access and develop experimental models
- recruit participants
- gather and analyze data
- facilitate collaborations and partnerships



ACCESS ADVANCED IMAGING EQUIPMENT

BIOTIC's team works closely with collaborators and clients to help you explore and advance new pharmacological approaches. Our array of pre-clinical and clinical imaging equipment allows us to test targets and agents from every angle along the continuum—from proof-of-principle studies in model systems to clinical trials. Because our scientists and engineers are constantly extending the capabilities of our equipment, we use our IP to gather data that is not available through any other means.

BIOTIC's team facilitates imaging studies that will help you:

- shed light on disease progression and response to treatment over time
- identify and validate diagnostic and therapeutic targets
- explore mechanisms of action
- test efficacy and side effects
- trace drug metabolism and disposition
- assess modes of delivery and dosing
- explore potential new uses for existing compounds



CONDUCT PRE-CLINICAL RESEARCH

Pre-clinical PET/CT and SPECT—PET/CT allows for simultaneous evaluation of molecular, cellular, anatomical and metabolic information, while SPECT produces high-resolution 3-D images of radio-labelled molecules. It works with the PET/CT system to detect a wide range of biomarkers.

3T pre-clinical MRI/optional PET—The MRI renders exquisitely detailed images of soft tissues, including iron-oxide labelled cells and molecules. With the PET insert, both MRI and PET data (functional and anatomical) can be obtained rapidly and simultaneously for more comprehensive, accurate data. MRI anatomical images can also be overlaid with separate SPECT and PET images.

A fully equipped biological level 2 lab and onsite animal care facility with quarantine area provide researchers with a rare opportunity to conduct longitudinal studies in a wide range of animal models.



“ Our ongoing collaboration with Biotic has resulted in outstanding research for our company. It allows us to interact with excellent scientists and access world-class infrastructure right in our own backyard.” - Marianne Stanford, Director of Research, Immunovaccine Inc.

EXPLORE CLINICAL IMAGING

Our clinical imaging facilities provide access to non-invasive technologies for brain and body imaging in humans. Thanks to our location in research-intensive adult and pediatric hospitals, we can connect you to the clinicians and patient populations who will enable you to test, refine and validate your new technologies.



MRI—our 3T clinical MRI scanner provides detailed anatomic, functional and spectroscopic images. It is fully outfitted for studies of the brain, heart, abdomen and pelvis.



Magnetoencephalography (MEG)—our child-friendly 306-channel whole-head MEG passively and non-invasively detects magnetic signals generated by neural activity, revealing detailed information about participants’ brain function.



Electroencephalography (EEG)—the 128-channel EEG system records the electrical activity of the brain with high spatial accuracy. Its active electrode technology reduces set-up times and maximizes participants’ comfort.



Audiometry—An audiometer complements the EEG, enabling new research directions in hearing science and device development.

LEVERAGE OUR EXPERIENCE

We have a solid track record of successful fundamental and knowledge translation research. We work with scientists, clinicians, start-ups and multinationals to test their theories and develop their ideas from proof-of-principle to multi-site clinical trials. For example, we are working with companies and scientists to:

- assess changes in lymph nodes and tumour loads following treatment with a novel delivery system for cancer vaccines and adjuvants
- test the anti-cancer capabilities of novel combinations of drugs targeted to certain pathways in LKBI-negative/HER 2-positive breast cancer
- validate targets that could lead to the first technology for diagnosing Alzheimer’s disease in a living person’s brain

As scientists and engineers backed by a multidisciplinary team, advanced imaging equipment, and a specific mandate to collaborate with industry to translate early-stage technologies into health care advances, we will work with you to achieve your drug-development goals.

FOR MORE INFORMATION

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