

About the Maritime Brain Tissue Bank

- All proceeds of the 2014 Molly Appeal will go towards the expansion of the Maritime Brain Tissue Bank, a critical resource for neuroscience researchers at Dalhousie Medical School.
- Established in 1994 with a focus on Alzheimer's disease, the Maritime Brain Tissue Bank is one of only three well-established brain banks in Canada. It houses more than 800 brains from donors in the Maritimes, and has made immensely valuable brain tissues available to researchers locally, across Canada and around the world. As there is no truly accurate animal model of Alzheimer's disease, most of what scientists know about the disease, and all of the drugs that have been developed to fight it so far, come from studies in donated human brain tissues.
- Until recently, the Maritime Brain Tissue Bank has focused on collecting, cataloguing and storing brain tissues donated by people with Alzheimer's disease and other forms of dementia—as well as from people with no brain disease, as these normal tissues provide an all-important basis for comparison. Halifax, however, is home to a large and growing neuroscience community pursuing solutions to a wide range of brain and nervous system diseases. The brain bank therefore aims to expand its facilities to include more brain—and, in some cases, spinal cord—tissues from donors who lived with such diseases and conditions as ALS (amyotrophic lateral sclerosis), epilepsy, Parkinson's disease, multiple sclerosis, spinal cord injury, cerebral vascular disease, and schizophrenia.
- Research in human brain tissues is essential to understanding the nature and causes of neurologic and psychiatric diseases. How these tissues are prepared and stored has an enormous impact on what kind of research can be done. Currently, the Maritime Brain Tissue Bank is primarily equipped to store tissues preserved in formaldehyde. This tissue permits structural examinations of the brain. The planned expansion of the brain bank will provide facilities for frozen brain tissues, which allow researchers to investigate the brain at the molecular level (proteins, DNA, RNA, metabolites), revealing a wealth of crucial information about disease processes and how these could be influenced to stop the disease.
- The Molly Appeal-funded expansion of the Maritime Brain Tissue Bank will also include the development of a more detailed and powerful database for storing and retrieving anonymous demographic and clinical information about the donor of each specimen. This is crucial information for researchers, who need to understand how the molecular and structural condition of the brains relates to the age, health and ultimate fate of the donors.
- The expanded Maritime Brain Tissue Bank will strengthen Halifax's already vibrant neuroscience research community, opening the door to new kinds of studies, attracting new researchers and students, and bringing more research funding to the region. Most importantly, it will provide researchers with a powerful tool in their quest for diagnostic tests, treatments and cures for neurologic and psychiatric disease. This is particularly important in the Maritimes, where the aging population faces an ever-growing burden of brain and nervous system disease.

For more information about the Maritime Brain Tissue Bank, and how to plan to make a tissue donation, visit: <http://braintissuebank.dal.ca>