

## NEWS RELEASE

# One in three Canadians will be affected by a brain disease, disorder or injury

NeuroScience Canada calls for increased investment in neuroscience research

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**Montreal, March 15, 2006** – One in three Canadians (approximately 10 million people) will be afflicted by a disease, disorder or injury of the brain, spinal cord or nervous system (neurological or psychiatric) at some point in their lives. These brain disorders represent the leading cost to the Canadian healthcare system, surpassing the more publicized categories of cancer and cardiovascular disease.

In a report released today as part of Brain Awareness Week, *The Case for Canada's Increased Investment in Neuroscience Research (Case)*, NeuroScience Canada (NSC), a national non-profit organization that develops and supports Canadian neuroscience research programs, is calling for recognition of the real economic burden that all brain disorders together represent and for more research funding.

"The cost of brain disorders has been seriously underestimated and the situation will become even worse as the population ages," says Inez Jabalpurwala, President of NSC. "This report is an urgent call to governments and the public to recognize the grouping of brain disorders within the neuroscience umbrella, and increase their support for research to levels proportionate to the burden these diseases represent."

There are more than 1,000 diseases, disorders and injuries of the brain, spinal cord and nervous system. They include Alzheimer's disease, Parkinson's disease, stroke, multiple sclerosis, spinal cord injury, depression, schizophrenia, sense organ diseases, addictions, traumatic brain injury and chronic pain. Based on Health Canada data, the economic burden of these disorders is conservatively estimated at 14% of the total burden of disease, or \$22.7 billion annually.

"However these estimates of the economic cost fail to take into consideration suffering and disability that do not result in death or hospitalization," added Ms. Jabalpurwala. "Nor do they reflect lost productivity or the psychological costs to patients and caregivers. In fact, when morbidity and disability factors are combined, brain and nervous system disorders represent 38% of the total burden of disease in Canada."

### **Recommendations:**

Despite the magnitude of the problem, neuroscience research, with just \$100 million total in operating grants in Canada annually, is still greatly under funded in this country.

Furthermore, there is no single source of major funding from private donors or foundations for neuroscience research, and the combined research funding from neuroscience-focused voluntary health organizations is estimated at only \$15 million. This compares with cancer research, which is receiving in the order of \$64 million per year from the Canadian Cancer Society and the National Cancer Institute of Canada, or cardiovascular disease research, which is receiving \$51 million per year from the Heart and Stroke Foundation of Canada.

Considering the current lack of funds invested in Canada to support neuroscience research, NSC is recommending that the federal government immediately invest \$5 million per year for five years, for a total of \$25 million to support large-scale neuroscience research projects. These funds would be leveraged by NSC to attract and stimulate additional private funding, at a ratio of \$1 from private sources for every \$2 in government funding.

NSC is also recommending increasing the funding of the Institute of Neuroscience, Mental Health and Addiction (INMHA), to support both individual investigators and team grants, by increasing the overall budget of the Canadian Institutes of Health Research (CIHR).

To prepare the *Case*, NSC consolidated data from a variety of sources including Health Canada, the World Health Organization, and the CIHR.

“Over the past decade, researchers have made significant advances in understanding the complexity of the nervous system, protecting the brain against insult, repairing the brain when injury or disease occurs, and promoting recovery of function,” says Dr. David Kaplan, Head, Cancer Research at Toronto’s Hospital for Sick Children and Canada Research Chair in Cancer and Neuroscience. “Canada is a leader in neuroscience research, particularly in the areas of neurodegenerative disease, neurotrauma, neuroimaging, tissue engineering and biomaterials, regeneration, protection and functional recovery and genetics. With more funding, Canada will be able to expand its already important contribution to the global knowledge of the brain, giving hope to the millions of people suffering from brain disorders.”

### **Key facts from the Case:**

- Based on data from the 2000 World Health Organization *Global Burden of Disease* study, neurological and psychiatric conditions account for 38.3% of DALYs, (Disability Adjusted Life Year) compared with 12.7% for cancer and 11.8% for cardiovascular disease. The DALY is a measure of the burden of disease and reflects the total amount of healthy life lost to all causes, whether from premature mortality or from some degree of disability during a period of time.
- Neurological and psychiatric conditions are also the most important causes of non-fatal disability, accounting for over 37% of YLDs (Years Lived with Disability) among adults (age 15+). Seven of 10 (up from five of 10 in 1990) leading causes are related to neuropsychiatric conditions, with unipolar depressive disorders the leading cause.

The full report, as well as the executive summary, is available online at [www.neurosciencecanada.ca](http://www.neurosciencecanada.ca)

The following organizations have been involved in preparing and reviewing the *Case*: the Canadian Association for Neuroscience (CAN), Society for Neuroscience (SfN), Canadian

College of Neuropsychopharmacology, Canadian Congress of Neurological Sciences (CCNS), and Canadian Brain and Nerve Health Coalition (CBANHC). The SfN, through CAN, also provided funds to offset some of the costs of producing and disseminating the *Case*.

Founded in 1998, NeuroScience Canada (NSC) is a national non-profit organization that develops and supports collaborative, multidisciplinary, multi-institutional research across the neurosciences. NeuroScience Canada is Canada's umbrella organization and voice for the neurosciences. Through partnering with the public, private and voluntary sectors, NeuroScience Canada connects the knowledge and resources available in this area to accelerate neuroscience research and funding, and maximize the output of Canada's world-class scientists and researchers.

In 2003, NeuroScience Canada launched an \$8-million Brain Repair Program aimed at accelerating collaborative, multidisciplinary, multi-institutional brain repair research that links world-class Canadian researchers across the country with the goal of getting to treatments and cures for the range of diseases, disorders and injuries of the brain, spinal cord and nervous system. The mission of NeuroScience Canada's Brain Repair Program™ is to fast-track neuroscience research in order to develop treatments and therapies more quickly. Through the Brain Repair Program, NeuroScience Canada and its donors and partners have already committed \$4.5 million to research teams conducting breakthrough work in the area of brain repair.

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