



# Chapter Grant Awards Application

1.) Name of Chapter: Newfoundland

2.) Number of Current Chapter Members

Faculty Members: 20 Staff Members: 25 Postdoctoral Trainees: 3  
Graduate Students: 25 Undergraduate Students: 8

3.) Chapter Representative Contact Information:

Name: Michiru Hirasawa  
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4.) Chapter Treasurer Contact Information

Name: John McLean  
Address: 300 Prince Philip Drive  
St. John's, NL A1B 3V6 Canada  
Phone: 709-777-6367 Fax: 709-777-7010  
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5.) Checks Payable to: Memorial University

6.) Mailing Address for Checks: 300 Prince Philip Drive  
St. John's, NL A1B 3V6 Canada

**Please attach responses to the following questions in 10 point font or larger:**

- 1.) A **brief summary** of the proposal (no more than 150-200 words).
- 2.) **Specific goals** of the proposal and how it relates to the SfN Strategic Plan, Brain Awareness Week activities, or otherwise promotes increased chapter membership and activity (please do not exceed 750 words to 1 page). Please be sure to include an approximate date of the proposed activity or event.
- 3.) **Budget:** explanation and justification. Travel may be allowed only for visits to promote chapter membership, if part of a formal program. *Please note: requests for travel funds must be accompanied by a compelling justification.*
- 4.) Please list any **chapter-sponsored events** held during the past three years (please include event dates and titles).
- 5.) Chapter **web-page address**, if applicable

**Important note:**

All Chapter awardees are required to submit a final report including detailed budget expenditures within 30 days after the funded event or activity. *Any unused funds must be returned to SfN.*

## **Summary**

Over the past 10 years, the Newfoundland Chapter has been hosting a brain storm competition for high school students during the brain awareness week. Our goal is to raise public awareness of the brain and get high school students interested in neuroscience when they are thinking about future careers. In the past 2 years, we held province-wide competitions. Since Memorial University, home to the members of the Newfoundland Chapter, is the only university in Newfoundland and Labrador, it is our mission to reach out to the entire province. This year, the competition will have two rounds and questions will be based on the Brain Facts booklet. Following a preliminary 'in-school' competitions, final competition (3 stages) will be held at Memorial University. All participants will be also given a tour to neuroscience research labs. We are requesting funds to support the travel of high school students from rural areas. We believe that our program provides young bright minds an opportunity to perform and compete at provincial and national levels, which is not possible otherwise.

## Specific Goals

The Newfoundland Chapter represents the province of Newfoundland and Labrador, which is geographically divided into two parts - Newfoundland and Labrador - by the Atlantic Ocean. It is not easy to reach out to rural areas of Newfoundland, let alone Labrador, from Memorial University, home to the members of Newfoundland Chapter and the only university in the province situated in a city farthest from Labrador.

Over the past 10 years, the Newfoundland Chapter has been hosting a brain storm competition for high school students during brain awareness week. Our goal is to raise public awareness of the brain and get high school students interested in neuroscience when they are thinking about future careers. Furthermore, this annual event has been giving graduate students a chance to hone their leadership and organizational skills and to think about giving back to the community. Thus, this program has been vital for development of future neuroscientists. In 2007, we opened the competition to the entire province and hosted students from rural communities as well as St. John's. In 2008, a student from Labrador was a finalist who was selected to compete at the national brain bee competition. We believe that our program provides young bright minds an opportunity to perform and compete at provincial and national levels, which is not possible otherwise. In order to provide an opportunity to bright kids in remote areas again this year, we are requesting funds to support the travel costs for selected high school students.

The competition will take place in two stages as depicted below. Questions will be based on the Brain Facts booklet and prepared by members of the Newfoundland Chapter.

### 1) Preliminary 'In-School' component

A preliminary competition will include multiple choice questions which participating students will take at their school in a time-limited and supervised setting. The top 40 students will be invited to the final competition at the medical school at Memorial University in St. John's, hosted by members of the Newfoundland Chapter.

### 2) The St. John's component.

Stage 1. Questions will be asked to all students with 3 chances (3 cards) to get a wrong answer before elimination. Questions will be short verbal answers to verbal questions (ie. not multiple choice). 10 students will remain for the next stage.

Stage 2. All ten remaining students will write down answers to several questions at the same time. Questions will be verbal or visual clues and will mainly require one word answers. The top 3 students will then compete in the final stage.

Stage 3. Each student will write down a short answer after each verbal question. The student is eliminated with 3 incorrect answers. Prizes will be given to all contestants in the St. John's stage.

There will also be a tour for the students to visit neuroscience research labs in the university. This is a format that has been formulated over the years of our experience, thus we do not anticipate any setback in carrying out the plan. This event has been covered by the local media every year, in particular the last two years when we opened the competition to the province of Newfoundland and Labrador. Thus, we believe it serves well the purpose of raising public awareness of the Chapter activities. Overall, the feedback from participating students and high school teachers has been very positive.

**Approximate date of the proposed event**

March 21 or 28, 2009

**Budget**

Round-trip flight: Labrador – St. John's	\$750 x2 = \$1,500
Cost of gas for round-trip: Newfoundland rural communities – St. John's	\$100 x 5 = \$500

Budget total: \$2,000

**Budget justification:**

Inviting students not only from the city where we are situated but also across the province is our goal, as a part of our effort to raise public awareness of the brain and importance of neuroscience research. Without the requested funding, this will not be possible.

**Web-page address on Newfoundland Chapter Brain Storm Competition**

<http://www.med.mun.ca/brainstorm1/2008comp.htm>

## CHAPTER ACTIVITIES (past 3 years)

### BAW-related activities

The following activities have attracted interest of the public as faculty and graduate students have been interviewed on local media (radio, television, newspapers) about the competition and other brain related activities. The last two years, as we expanded to province-wide competitions, we have had substantial local television and radio coverage of the competition and competitors (NTV, Out of the Fog TV show, CBC radio).

#### **Brain Storm Competition**

This competition is hosted annually since 2000 by the Chapter members which is a live question-and-answer competition that tests high school students' knowledge of the brain and nervous system. When possible, we send the winner of the competition to represent our city/province to compete at the international or national Brain Bee competitions during the Brain Awareness Week. Furthermore, the students tour research labs to get a live feeling of neuroscience research.

#### **Brain Art Competition**

Another creative way to think about the brain is via art. Using their creative skills, many high school students take on the challenge to think about the brain through art. This competition has been held 4 times in the past 10 years.



### Public Outreach Programs

#### **Sundays at Fluvarium**

January 2006 (4-week series)

Members of our Chapter participated as lecturers and facilitators in this public outreach program organized by Memorial University.

#### **Visiting Speaker Program**

**Dr. Kazue Semba**, Dalhousie University

November 28, 2008

"Basal forebrain regulation of sleep-wake state"

**Dr. Nikolaus Plesnila**, University of Munich Medical Center

October 24, 2008

"Pathophysiology of neuronal cell death following acute brain damage"

**Dr. Ted Abel**, University of Pennsylvania **Grass Traveling Lecturer**

August 26, 2008

"Molecular mechanisms of long-term memory storage"

**Dr. Gregory Cox**, The Jackson Laboratory

June 6, 2008

"Mouse Models of Heritable Disease"

**Dr. Sheena Josselyn**, University of Toronto

February 29, 2008

"Neuronal selection during memory formation"

**Dr. James R. Stellar**, Northeastern University, Boston, MA

May 18, 2007

"Intracranial Self-Stimulation Reward, Cocaine Exposure, and the Nucleus Accumbens: Implications for Addiction"

**Dr. Bryan Kolb**, University of Lethbridge

November 10, 2006

"Brain plasticity and behaviour"

**Dr. Ken Lukowiak**, University of Calgary

September 29, 2006

"Modulation of long-term memory by environmental factors"

**Dr. Richard Brown**, Dalhousie University

September 15, 2006

"The importance of studying behaviour in mouse models of neurodegenerative disease"

**Dr. Richard Brown**, Dalhousie University

September 14, 2006

"The life and work of Donald O. Hebb (Canada's greatest psychologist): a biographical review"

**Dr. Michael Kawaja**, Queens University

August 7, 2006

"Using proteomics to define olfactory ensheathing cells, a potential cellular therapy for spinal cord injury"

**Dr. Richard Wassersug**, Dalhousie University

June 16, 2006

"Vertebrate Biology in Microgravity: What We Know (and Don't Know) About the Behavior and Development of Vertebrates in Weightlessness"

**Dr. Richard Wassersug**, Dalhousie University

June 16, 2006

"Modern Day Eunuchs: Who is Castrated in Modern Society and Why?"

**Dr. David Clarke**, Dalhousie University

June 6, 2006

"Hsp27's potential role in retinal ganglion cell survival and regeneration"

**Dr. Mary Olmstead**, Queen's University

June 6, 2006

"Modelling drug addiction in rats: the role of impulsivity"

**Dr. Patrick Whelan**, University of Calgary

June 2, 2006

"Vasopressin and oxytocin: An alternative fuel for spinal motor circuits?"

**Dr. Peter Nguyen**, University of Alberta

June 2, 2006

"Mechanisms for stabilizing synaptic plasticity"

**Dr. Steven Barnes**, Dalhousie University

March 24, 2006

"The eye on acid: Proton-mediated feedback inhibition of synaptic transmission from photoreceptors"

### **Neuroscience Seminar Series**

A weekly series where graduate students, postdoctoral fellows, faculty members and staffs participate in presenting and discussing research findings. Regular participants include neuroscientists at Faculty of Medicine and Department of Psychology (members of Newfoundland Chapter)

### **Psychology Department Colloquium Series**

A weekly series with main focus on psychology.

### **Neuroscience Research Forum (Golden Synapse Competition)**

An annual event for graduate students to compete in scientific presentation

### **Cellular/Molecular Neuroscience Journal Club**

Bi-weekly journal club to discuss high-impact journal articles