

'396' Undergraduate Research Project Application Form

Version: 200603

Office for Undergraduate Research in Science
Tel.: 514-398-5964 / Fax: 514-398-8102 / Dawson Hall, Room 211
Email: victor.chisholm@mcgill.ca Web: www.mcgill.ca/science/ours/

INSTRUCTIONS FOR STUDENTS

- **All fields are required, unless indicated otherwise.**
- Download and print this form. Complete Section C and sign.
- See "How students can apply" instructions in Section B.
- Your supervisor or department will tell you if you are selected for this project. If so, you will receive a code to register for a '396' course on MINERVA.

SECTION A: SUPERVISOR INFORMATION

Name: Ursula Stochaj **Email:** ursula.stochaj@mcgill.ca
Phone: 514-398-2949 **Website:** _____
Supervisor's **Course**
Department or **Number:** _____
Unit: Physiology PHGY396

SECTION B: PROJECT INFORMATION

Term: Fall 2006 / Winter 2007 **Project start & end dates:** September 11 - December 8, 2006

Project title: Protein transport in stressed cells.

Project description: Human health in Canada is primarily affected by heart disease or stroke, conditions which expose cells of the heart or brain to stress. This stress exposure causes damage and may ultimately lead to cell death. Prevention of and recovery from stress-induced injury require factors that repair damaged cells. Heat shock proteins, in particular hsc70s, are essential for these repair processes. In response to stress, hsc70s accumulate in nuclei to restore their function. Importantly, during stress recovery hsc70s transiently concentrate in nucleoli. At present, it is not understood how hsc70s are targeted to nucleoli. Specifically, the stress signalling pathways involved in hsc70 nucleolar accumulation have yet to be defined. The research project will address the molecular mechanisms that underlie hsc70 targeting to the nucleolar compartment. With these studies, we expect to gain a better understanding of hsc70 nuclear transport, reactions that are crucial to respond properly to physiological changes, such as stress.

Prerequisites: 1 term completed at McGill + CGPA ≥ 3.0; or permission of instructor.

Grading scheme: The final report will be worth 50% of final grade. 50% of the final grade will be based on the student's experimental work in the laboratory.

Other: Best way to reach me: e-mail (ursula.stochaj@mcgill.ca)

Status: Mark with an x. This project is...
 Open to applicants
 Already taken; no more positions available this term
 Taken, but contact me for other possible projects this term

Ethics, safety, and training Which of the following, if any, is involved? Mark with an x.
 Animal subjects
 Human subjects
 Biohazardous substances
 Radioactive materials
 Handling chemicals
 Using lasers

For undergraduate students, ethics and safety compliance is the supervisor's responsibility.

How students can apply: Bring this application form and your advising transcript to me during office hours. Contact supervisor first by e-mail.

SECTION C: STUDENT INFORMATION. (1) PRINT LEGIBLY AND SIGN. (2) SEE "HOW STUDENTS CAN APPLY" IN SECTION B.

Name: _____ **McGill ID:** _____
Email: _____@mail.mcgill.ca **Phone:** _____
Program: _____ (e.g., B.Sc. Maj. Chem. Minor Biology) **Level:** _____
I have not applied for another 396 course in this term. **(circle one)** U0 / U1 / U2 / U3
Student signature: _____ **Date:** _____

SECTION D: APPROVALS. (1) PRINT NAMES & SIGN. (2) NOTIFY OFFICE FOR UNDERGRADUATE RESEARCH IN SCIENCE. (3) GIVE STUDENT CODE TO REGISTER FOR COURSE ON MINERVA.

Supervisor: _____ **Date:** _____
Unit Chair, Director, or designate - I certify that this project conforms to departmental requirements for 396 courses. _____ **Date:** _____