

May 3, 2012

Re: NSERC MRS and RTI programs

To: The Honourable Christian Paradis, MP, Minister of Industry
Dr. Suzanne Fortier and the members of NSERC Council
Prof. James Blatz and the members of the NSERC Committee on Grants and Scholarships

cc: The Right Honourable Stephen Harper, MP, Prime Minister
The Honourable Gary Goodyear, MP, Minister of State (Science and Technology)
The Honourable Thomas Mulcair, MP, Leader of Her Majesty's Official Opposition
The Honourable Bob Rae, MP, Leader of the Liberal Party of Canada
The Honourable Kennedy Stewart, MP, NDP critic for Science and Technology
The Honourable H el ene LeBlanc, MP, NDP critic for Industry
The Honourable Ted Hsu, MP, Liberal critic for Science and Technology
Dr. Gilles G. Patry, President and CEO of the Canada Foundation for Innovation

In her recent statement on *Economic Action Plan 2012*, Natural Sciences and Engineering Research Council (NSERC) president Dr. Suzanne Fortier "welcome[d] continued dialogue and exchange with the research community as we move forward". As researchers in many fields of natural sciences and engineering, we are writing to express our deep concern over the elimination of both the Major Resources Support (MRS) and the Research Tools and Instrument (RTI) programs of NSERC. This action will have drastic and irreversible effects on fundamental science and engineering research across Canada and internationally.

MRS and RTI are broad-based programs that support unique national (and international based in Canada) research facilities and the purchase of equipment critical to the discovery, innovation, and training capability of Canadian researchers. They are crucial to the support of research in many areas ranging from theoretical astrophysics, through polar research, through DNA barcoding, to materials research: in short, the full gamut of the research and innovation enterprise. These are programs so foundational to research in Canada that one would think that eliminating them was inconceivable. The funding provided enhances the training of thousands of highly qualified personnel in science and engineering.

The federal government and NSERC, through cuts to Tri-Council funding, have now killed these programs. Along with NSERC's Discovery Grant, these are the programs which supported fundamental research. There are now no funding streams dedicated to the purchase of scientific equipment or to operate nationally and internationally unique resources. The loss of the MRS program in particular means that resources built up over many years could be lost or made inaccessible due to loss of personnel needed to sustain the resource. As well, millions of dollars of equipment purchased through taxpayers' money will sit idle and gather dust due to a lack of

operating funds. The negative impact on the training of the future generation of scientists cannot be overstated.

NSERC suggests that the Canada Foundation for Innovation (CFI) may pick up the slack in these two areas. However, the reality is that CFI is a different organization with different objectives and application requirements. CFI programs do not compensate for the loss of two core programs at NSERC.

Similarly, investments by the government in industrial and/or targeted research programs at NSERC do not compensate for the loss of the two core programs which enable a broad spectrum of research.

The loss of these programs is nothing short of a disaster for science in Canada. It continues the selective reduction and elimination of programs that support fundamental and discovery-driven research. This will drag down the entire research enterprise as the fundamental research of today produces the applied knowledge of tomorrow. We urge you to reconsider this direction and reaffirm NSERC's commitment to these vital programs.

Sincerely,



Prof. David L. Bryce
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MRS funding: National Ultrahigh-Field NMR Facility for Solids
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On behalf of:

Judy Acreman
Canadian Psychological Culture Centre, University of Waterloo

Prof. Bradley R. Anholt, CRC
Department of Biology, University of Victoria
MRS funding: Bamfield Marine Sciences Centre

Prof. Michèle Auger
Département de chimie, Université Laval
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Benoit Beauchamp
Department of Geoscience, University of Calgary
MRS funding: Kluane Lake Research Station

Prof. Jules Blais
Biology and Environmental Toxicology, University of Ottawa
MRS funding: Laboratory for the Analysis of Natural and Synthetic Environmental Toxicants

Prof. Michael Brett
Electrical and Computer Engineering, University of Alberta
MRS funding: Nanofabrication facility support

Prof. David R. Bundle, FRSC
Department of Chemistry, University of Alberta
MRS funding: NANUC: a national facility for high field NMR resource for applications in chemistry

Prof. Michael D. Buschmann, Canada Research Chair
Department of Chemical Engineering and Institute for Biomedical Engineering, Ecole Polytechnique
Member of MRS Selection Committee

Prof. Ian D. Clark
Department of Earth Sciences, University of Ottawa
MRS funding: IsoTrace AMS Facility
MRS funding: Hatch lab: isotope and noble gas geochemistry for earth and environmental sciences

Prof. Brian Colman
Emeritus Professor of Biology, York University
MRS funding: Canadian Phycological Culture Centre: a facility supporting research on algae and cyanobacteria

Prof. Christian Detellier
Department of Chemistry, University of Ottawa
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Anne de Vernal
GEOTOP & Département des sciences de la Terre et de l'atmosphère, Université du Québec à Montréal
MRS funding: Canadian participation in the integrated ocean drilling program

Prof. James R. Drummond, FRSC
Department of Physics & Atmospheric Science, Dalhousie University
MRS funding: Polar Environment Atmospheric Research Laboratory (PEARL)

Prof. Marc Ekker
Department of Biology, University of Ottawa
MRS funding: Canadian resource center for zebrafish genetics

Prof. Pierre Francus
Centre Eau Terre et Environnement, Institut National de la Recherche Scientifique
MRS funding: Canadian Participation in the International Continental Drilling Program

Mark Gallerneault, PhD, PEng
Member of MRS Selection Committee

Prof. Kalle Gehring
Department of Biochemistry, McGill University
MRS funding: Quebec/Eastern Canada high field NMR facility

Prof. Gillian Goward
Department of Chemistry, McMaster University
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Elizabeth Hampson
Department of Psychology, University of Western Ontario
MRS funding: A neuroendocrinology assay laboratory at the University of Western Ontario

Prof. Larry M. Heaman
Department of Earth & Atmospheric Sciences, University of Alberta
MRS funding: Infrastructure support for the Canadian Center for Innovative Geochronology

Prof. Paul Hebert, FRSC
Biodiversity Institute of Ontario, University of Guelph
MRS funding: Canadian centre for DNA barcoding

Prof. Hani Henein
Department of Chemical and Materials Engineering, University of Alberta
MRS funding: Resource for the Innovation of Engineering Materials

Prof. Yining Huang
Department of Chemistry, University of Western Ontario
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Edward A. Johnson
Department of Biological Sciences, University of Calgary
MRS funding: Biogeoscience Institute

Prof. Kim Juniper
School of Earth and Ocean Sciences, University of Victoria
MRS funding: Access to the Canadian Scientific Submersible Facility

Prof. William E. Kieser
Department of Physics, University of Ottawa
MRS funding: IsoTrace AMS Facility

Prof. Scott Kroeker
Department of Chemistry, University of Manitoba
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Albert E. Litherland, FRSC, FRS
University Professor Emeritus, Department of Physics, University of Toronto
MRS funding: IsoTrace AMS Laboratory

Prof. Scott MacDougall-Shackleton
Departments of Psychology and Biology, University of Western Ontario
Advanced Facility for Avian Research

Prof. Sylvain Moineau
Département de biochimie, de microbiologie et de bio-informatique, Université Laval
MRS funding: Félix d'Hérelle reference center for bacterial viruses

Prof. Dariush Motazedian
Department of Earth Sciences, Carleton University
Portable Observatories for Lithospheric Analysis and Research Investigating (POLARIS)

Prof. John Preston
Engineering Physics, McMaster University
MRS funding: Brockhouse Institute for Materials Research

Prof. Robin W. Renault
Department of Geological Sciences, University of Saskatchewan
Chair, MRS Grant Selection Committee, 2009-2010

Prof. John A. Ripmeester, FRSC
Adjunct in Department of Chemistry, Carleton University
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Heather Roshon, M. Sc.
Technical Curator, Canadian Phycological Culture Centre, University of Waterloo

Prof. Dominic Ryan
Physics Department, McGill University
MRS funding: Canadian Neutron Beam Centre

Prof. Robert Schurko
Department of Chemistry and Biochemistry, University of Windsor
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Simon Sharpe
Molecular Structure and Function, Hospital for Sick Children
Department of Biochemistry, University of Toronto
MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Robert Sheath
Department of Biological Sciences, California State University San Marcos
Member of MRS Selection Committee

Prof. Lynne Sigler
Devonian Botanic Garden, University of Alberta
MRS funding: University of Alberta microfungus collection and herbarium (UAMH)

Prof. Brian D. Sykes, FRSC
Department of Biochemistry, University of Alberta
MRS funding: NANUC: a national facility for high field NMR resource for applications in chemistry

Prof. George J. Sofko
Institute of Space and Atmospheric Studies, Department of Physics and Engineering Physics,
University of Saskatchewan

MRS funding: The Canadian SuperDARN/PolarDARN facility

Prof. John Vederas, FRSC

Department of Chemistry, University of Alberta

MRS funding: NANUC: a national facility for high field NMR resource for applications in chemistry

Prof. Roderick E. Wasylshen, CRC, FRSC (Member of MRS Committee, 2007-2010)

Department of Chemistry, University of Alberta

MRS funding: National Ultrahigh-Field NMR Facility for Solids

Prof. Dominique Weis, CRC

Department of Earth and Ocean Sciences, University of British Columbia

MRS funding: Pacific Centre for Isotopic and Geochemical Research

Prof. Mary Anne White

University Research Professor of Chemistry and Physics, Dalhousie University

MRS funding: Atlantic Regional Facilities for Materials Characterization

Prof. Gang Wu

Department of Chemistry

MRS funding: National Ultrahigh-Field NMR Facility for Solids

Appendix: List of MRS-funded projects (2010-2011) listed by province where the principal investigator is located

Ontario

Fields Institute for Research in Mathematical Sciences
Laboratory for the Analysis of Natural and Synthetic Environmental Toxicants
National ultrahigh-field NMR facility for solids
Hatch lab: isotope and noble gas geochemistry for earth and environmental sciences
IsoTrace AMS facility
Canadian Phycological Culture Centre: a facility supporting research on algae and cyanobacteria
Polar Environment Atmospheric Research Laboratory (PEARL)
Canadian resource center for zebrafish genetics
A neuroendocrinology assay laboratory at the University of Western Ontario
Canadian centre for DNA barcoding
Portable Observatories for Lithospheric Analysis and Research Investigating (POLARIS)
Canadian Institute for Theoretical Astrophysics/Institut Canadian d'astrophysique theorique
Brockhouse institute for materials research
St. John's centrifuge modelling facility

Quebec

Canadian participation in the integrated ocean drilling program
The canadian research icebreaker Amundsen: a national resource with an international mandate
Canadian participation in the international continental drilling program
Quebec/Eastern Canada high field NMR facility
Félix d'Hérelle reference center for bacterial viruses
CRM's major 5-year plan: Investing in people and intellectual capacities, supporting cutting edge mathematical research, exceptional new opportunities, partnerships and synergies
Canadian Neutron Beam Centre
The Compute/Calcul Canada (CC)
Access to the national advanced laser light source (ALLS) facility
Station de recherche de Whapmagoostui-Kuujuarapik

Alberta

Kluane Lake Research Station
Nanofabrication facility support
NANUC: a national facility for high field NMR resource for applications in chemistry
Infrastructure support for the Canadian Center for Innovative Geochronology
Resource for the Innovation of Engineering Materials
Biogeoscience Institute
University of Alberta microfungus collection and herbarium (UAMH)

British Columbia

Pacific Institute for the Mathematical Sciences

Bamfield marine sciences centre

PNCSRF Pacific Northwest Consortium Synchrotron Radiation Facility

Access to the Canadian Scientific Submersible Facility

Centre for molecular and materials science at TRIUMF

Pacific Centre for Isotopic and Geochemical Research

Nova Scotia

Canadian cosmogenic nuclide exposure dating facility

Major resources support for the aquatron laboratory

Atlantic Regional Facilities for Materials Characterization

Saskatchewan

Canadian light source inc.

Canadian Light Source Inc. - Additional Support

The Canadian SuperDARN/PolarDARN facility