

**REPORT OF THE  
2008 RENEWAL NCE SELECTION COMMITTEE**

**October 2007**

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## **Remarks from the Chair**

### **Introduction**

The 2008 Networks of Centres of Excellence Renewal Competition was designed to evaluate four Networks applying for a second NCE funding cycle. The NCE Selection Committee was composed of seven members from Canada and abroad who, in total, were able to represent areas covered by all competing networks. Each member of the Selection Committee evaluated the extensive material provided for each of the networks, so as to be able to discuss each application and ultimately provide a recommendation to the NCE Steering Committee.

Throughout the deliberations, each Network was assessed against the five requirements of excellence established for the NCE program: excellence of the research program, development of highly qualified personnel, networking and partnerships, knowledge and technology exchange and exploitation, and the management of the network. A renewing network compared to a proposal for a new network had to demonstrate tangible achievements, and a higher level of maturity, efficiency and excellence in relation to each of the program criterion.

The members of the Committee made individual evaluations of each application followed by several rounds of group discussions before making their recommendations.

### **Recommendations for networks applying for a second NCE funding cycle**

The Selection Committee recognized the national importance of the research areas represented by the four renewing applications. It was clear that the networks were composed of many high quality researchers who proposed innovative research programs for each application. Overall, the Committee was impressed by the large number of researchers and partners from different sectors involved in each Network. It was also impressed by the quality of the training activities and the efforts made by the networks to retain highly-skilled individuals in Canada.

The Selection Committee had access to the networks' progress reports and future strategic plans, past Expert Panel reviews, and the reports of international Expert Panels that met each network. The Chair of each Expert Panel was consulted during deliberations to answer additional questions from the Selection Committee about the network.

Following review by individual committee members and extensive committee discussions, the Selection Committee recommended that three Networks be funded for up to seven years. It is understood that the amounts recommended in years 5 to 7 are subject to successful reviews in year 4 and will be the subject of a future submission. The fourth Network is not recommended for a 2nd funding cycle.

To capitalize on the first cycle of funding investment and to maintain the networking momentum created during the first 7 years, the Committee encourages all researchers and partners involved in the successful networks to continue seeking funding for their research program through the appropriate granting agencies and other sources of funds.

## **Conclusion**

The recommendations from the Committee reflect the commitment of all members to the principle of Excellence that is trademark of the NCE program. As Chair, I would like to thank all members of the Selection Committee for their dedication and commitment ensuring that the goals of the NCE program are met through the recommended network. I would also like to thank all members of the international Expert Panels for their contributions and the NCE Directorate for their support for the entire process. Finally, I would like to thank all the Network members for the good results they obtained so far and for the effort they put into preparing their renewal application.

Denis Faubert,

Chair, NCE Selection Committee 2008

## **Background**

The Networks of Centres of Excellence (NCE) program seeks to mobilize Canada's best research talent in the university, private and public sectors, and to apply it to the task of developing the economy and improving the quality of life of Canadians. Networks are selected on the basis of their excellence in research, their inclusion of the best cross-country talents, the extent of their partnerships with the receptor community, and their potential for socio-economic benefits. Industry Canada and the three granting agencies (the Natural Sciences and Engineering Research Council, the Canadian Institutes for Health Research, and the Social Sciences and Humanities Research Council) jointly manage the program.

Since its inception in 1989, the NCE program has been linking Canadian researchers from the university, public and private sectors to work collaboratively on the advancement of research on the development of new technologies. Networks provide opportunities to develop innovative research approaches that cross traditional disciplinary and sectoral boundaries, and promote collaborations among social, physical and medical scientists and engineers. These collaborations have contributed significantly to accelerating the uptake of new knowledge and technologies by the industry and other receptor communities, and they have led to important socio-economic benefits.

The invitation to the four networks to submit a Full Application for an NCE second funding cycle in the 2008 Renewal Competition was issued in July 2007. As an alternative, the three Networks could also apply to the Research Management Funds (RMF). Networks could not apply for RMF and the NCE second funding cycle at the same time. All three networks chose to apply for the 2008 Renewal Competition.

The NCE program follows a rigorous peer-review process to evaluate the full proposals against the five criteria of the program:

- ◆ Excellence of the Research Program
- ◆ Development of Highly Qualified Personnel
- ◆ Networking and Partnerships
- ◆ Knowledge and Technology Exchange and Exploitation
- ◆ Management of the Network

Criteria are detailed in Appendix I.

Both the progress to date and the strategic plan for a NCE second funding cycle will be evaluated against the five NCE program criteria. Networks seeking funding for a second cycle, as compared to an application for a new network, were expected to demonstrate tangible achievements, and a higher level of maturity, efficiency and excellence in relation to each of the five NCE program criteria. Integrated strategies in research, training, networking and partnerships taking into account the needs of partners and the broader receptor capacity in Canada were expected to be presented in the network application. Processes to accelerate and optimize knowledge and technology transfer to society and the user sectors must have been implemented and continue to be developed by the network. All of the elements described should have been present at the time of the application for a second funding cycle to ensure that continued NCE investment maximizes benefits during the second and final funding cycle.

The Committee's mandate and membership are provided in appendices 3 and 4.

Each proposal was also subjected to a review by an Expert Panel responsible for performing an in-depth evaluation of the strengths and weaknesses of the proposed network. Face-to-face visits by Expert Panels were conducted in September 2007. Full applications and individual Expert Panel reports were submitted to the Selection Committee and were used in elaborating on the final recommendation to the NCE Steering Committee.

## **NCE 2008 Renewal - Competition process and timelines**

|                                |   |
|--------------------------------|---|
| <b>July 14, 2006</b>           | Instructions and application forms available to the applicants.   |
| <b>September 1, 2006</b>       | Inform the NCE Directorate of the network's intention to apply for RMF or to 2 <sup>nd</sup> funding cycle.                                     |
| <b>July 10, 2007</b>           | Deadline for submission of the application including the network progress report and future strategic plan.                                     |
| <b>September 2007</b>          | Expert Panel Reviews of each renewing group.  |
| <b>October 15 and 16, 2007</b> | Meeting of the NCE Selection Committee to review the full applications and make final recommendations on funding to the NCE Steering Committee. |
| <b>October 29, 2007</b>        | Meeting of the NCE Steering Committee to review funding recommendations of the NCE Selection Committee and make a final decision.               |
| <b>December 2007</b>           | Public announcement of awarded second funding cycle network.  |

## **Renewal 2008 NCE Selection Committee Funding Recommendations**

The 2008 NCE Renewal Selection Committee identified three proposals that exceed the threshold of excellence for the NCE Program. The NCE Selection Committee recommended support for the three following Networks for four years (2008-09 until 2011-12) at the following funding level:

- Auto21 led by the Scientific Director, Dr. Peter Frise, and hosted at the University of Windsor : \$5.8 million per year.
- Canadian Water Network (CWN) led by the Scientific Director, Dr. Mark Servos, and hosted at the University of Waterloo: \$5 million \$ per year.
- Stem Cell Network (SCN) led by the Scientific Director, Dr. Michael Rudnicki, and hosted at the University of Ottawa Health Research Institute: \$6.4 million per year.

These Networks are recommended for funding through the point of mid-term review during year 4 (2011-12). Amounts recommended in years 5 to 7 are subject to successful review in year 4 and will be the subject of a future submission.

## **SUMMARY OF NETWORKS RECOMMENDED FOR RENEWAL**

### **Auto21**

Auto21 was formed to focus Canadian research expertise on the task of improving and enhancing the global competitiveness of the Canadian automotive industry. The Network brings together more than 110 industry, government and institutional partners. It supports over 265 top researchers working at more than 42 academic institutions, government research facilities and private sector research labs across Canada and around the world.

### **Vision**

AUTO21 will create a dynamic Canadian research and development community contributing to a sustainable, globally competitive Canadian automotive sector resulting in enhanced quality of life for Canadians.

### **Mission**

AUTO21 will help build a stronger automotive sector in Canada through excellence in public/private sector collaborative research and the development of human and social capital.

For more information:

[www.nce.gc.ca/nces-rces/auto21\\_e.htm](http://www.nce.gc.ca/nces-rces/auto21_e.htm)

[www.auto21.ca](http://www.auto21.ca)

## **Canadian Water Network (CWN)**

The Canadian Water Network (CWN) was formed to identify and address critical issues facing our nation in connection with the provision of clean water and to provide the foundation for development of a national vision for Canada's role in the effective management and use of our water resources.

### **Vision**

A future with an abundant, sustainable supply of clean water, supporting healthy, prosperous communities throughout Canada, achieved through the creation and application of knowledge.

### **Mission**

To create a national partnership in innovation that promotes environmentally responsible stewardship and opportunities with respect to Canada's water resources resulting in sustained prosperity and improved quality of life for Canadians.

CWN will achieve its mission through:

- providing credible and trusted sources of expert knowledge on water issues,
- building scientific and human resource capacity to address water issues and,
- building a network that serves as a connector and catalyst to capitalize on opportunities, leverage resources and translate scientific research and knowledge into action

For more information:

[www.nce.gc.ca/nces-rces/cwn\\_e.htm](http://www.nce.gc.ca/nces-rces/cwn_e.htm)

[www.cwn-rce.ca](http://www.cwn-rce.ca)

## **Stem Cell Network (SCN)**

Stem cell research offers the hope to cure or alleviate many of today's most devastating diseases, reducing Canada's health care burden, and creating new economic opportunity. However, to derive the most benefit from the advances coming from stem cell research, Canadian researchers must address the pre-clinical issues that are generally too advanced for traditional academic grants but too premature for industry sponsorship. The role of the Stem Cell Network (SCN) is to address this gap with targeted research funding, strong program management, the engagement of industry and not-for-profit partners, and keen attention to regulatory, ethical, legal and social issues.

### **Mission:**

The mission of the Stem Cell Network (SCN) is to be a catalyst for enabling translation of stem cell research into clinical applications, commercial products or public policy.

For more information:

[www.nce.gc.ca/nces-rces/stemcell\\_e.htm](http://www.nce.gc.ca/nces-rces/stemcell_e.htm)

[www.stemcellnetwork.ca/](http://www.stemcellnetwork.ca/)

## **APPENDIX I -**

### **NCE PROGRAM CRITERIA**

To ensure that the program objectives are met, proposals are assessed against the five criteria outlined below. A renewing network, as compared to a proposal for a new network, must demonstrate tangible achievements, and a higher level of maturity, efficiency and excellence in relation to each of the five NCE program criteria. Networks are also evaluated on an ongoing basis during the tenure of a grant against these same criteria. **A threshold of excellence must be exceeded for each criterion.** Research excellence is a necessary condition for the initial or continued funding of an NCE. It is not the sufficient condition, because the goals of the program are also reflected in the four additional criteria. The five program criteria are described below :

#### **Excellence of the Research Program**

- The excellence, focus and coherence of the research program;
- The achievements of the researchers and their ability to contribute to the research program;
- The value added by the network approach, in terms of the quality of the research and achievement of the goals that can be pursued;
- The extent to which the program will contribute to Canada's ability to lead in areas of research with a high economic and/or social impact;
- The extent to which new and emerging social and ethical issues, where relevant, will be addressed in the research program;
- The relationship of the research program to similar work conducted in Canada and abroad.

#### **Development of Highly Qualified Personnel**

- The ability to train and retain outstanding researchers in research areas and technologies critical to Canadian productivity, economic growth, public policy and quality of life;
- Training strategies that promote multidisciplinary and multisectoral research approaches and encourage trainees to consider the economic, social and ethical implications of their work.

#### **Networking and Partnerships**

- Effective research and technology development links between academic institutions, federal and provincial agencies, and private sector participants;
- Multidisciplinary, multisectoral approaches in the research program;
- Evidence that an effort has been made to include all suitably qualified groups;
- Optimization of resources through the sharing of equipment and research facilities, databases and personnel;
- Presence, nature and extent of contributions from the private sector and federal and provincial agencies, and prospects for increasing commitments as the work progresses.

#### **Knowledge and Technology Exchange and Exploitation**

- Likelihood that new products, processes or services can be commercialized by firms operating in Canada and that these will strengthen the Canadian industrial base, enhance productivity, and contribute to long-term economic growth and social benefits;
- Prospect for social innovation and the implementation of effective public policy through collaboration with the public sector;

- Effective collaboration with the private and public sectors in technology, market development and public policy development;
- The impact, or potential impact, on the partners' science and technology capabilities and practices;
- Effective management and protection of intellectual property resulting from network-funded research.

### **Management of the Network**

Each network must possess an organizational structure appropriate for the management of the research and business functions of a complex multidisciplinary, multi-institutional program. These elements must include:

- a board and committee structure to ensure that appropriate policy and financial decisions are made and implemented;
- the presence of effective leadership and expertise in the research and the business management functions;
- effective research planning and budgeting mechanisms;
- effective internal and external communications strategies.

**APPENDIX II -  
2008 RENEWAL  
NCE SELECTION COMMITTEE TERMS OF REFERENCE**

The Selection Committee is responsible for:

- Reviewing full applications and Expert Panel reports;
- Drafting confidential evaluation reports for all full applications submitted in the 2008 Renewal Competition;
- Transmitting to the NCE Steering Committee a list of network(s) recommended for funding;
- Drafting the Chair's remarks and NCE Selection Committee recommendations to be included in the NCE Selection Committee's Public Report that provides the rationale for the recommendations along with a summary analysis of each application.

**APPENDIX III  
2008 RENEWAL  
NCE SELECTION COMMITTEE MEMBERSHIP**

**CHAIR :**

**Denis Faubert**

Institut de recherches d'Hydro Québec  
Varennes, Quebec, Canada

**COMMITTEE MEMBERS:**

**Michael Gibbons**

Honorary Professor , University of Sussex  
Wilmslow, U.K.

**Hugh Ilyine**

Stem Cell Sciences plc  
Edinburgh, U.K.

**Alex Keen**

The Altech Group  
Toronto, Ontario, Canada

**Robert Le Salver**

Consultant  
Chanteloup Les Vignes, France

**Twila Liggett**

Marymount Manhattan College  
New York, New York, USA

**Stuart Smith**

Consultant  
Toronto, Ontario, Canada

**APPENDIX IV  
2008 NCE RENEWAL  
SELECTION COMMITTEE MEMBERS BIOGRAPHICAL NOTES**

**Denis Faubert - Chair**

Dr. Denis Faubert is the General Manager of Hydro-Québec's Research Institute, where he is responsible for the planning and the delivery of the R&D program. He was previously the Director General, Research and Development Programs at Defence R&D Canada, an agency of the Department of National Defence. From 1998- 2005, Dr. Faubert was at the helm of Defence R&D Canada-Valcartier. Dr. Faubert began his career as a Canadian Forces telecommunications officer and military scientist. In 1984, as a civilian, he went to work at DRDC Ottawa's Radar Division, where he did research on space-based and airborne radar systems. In 1991 he became head of the Passive Electro-Optical Systems Section at Valcartier. In 2001, Dr. Faubert received the Head of the Public Service Award for Valuing and Supporting People. In 2005, he received the Deputy Minister and Chief of the Defence Staff award for Innovation. Dr. Faubert has a Bachelor's degree in physics and mathematics from the Collège militaire royal de Saint-Jean, a Master's degree in Science and a PhD in physics from Université Laval. He has written over 50 technical works on lasers and radar.

**Hugh Ilyine**

Hugh Ilyine is Vice-President and CEO of Stem Cell Ltd, Edinburgh. He lead the development of the company from start-up status to a public company with operations and R&D facilities in Australia and the U.K., an associate company in Japan and a U.S. office. He represents the company within the UK National Stem Cell Network and the Scottish Stem Cell Network. He has extensive national and international experience gained through company leadership, general management and product management roles. He has occupied managing director positions in companies developing, registering, manufacturing, marketing and distributing products with intellectual property attributes in Asia, Australia and New Zealand. He has also worked as general manager, bioscience division, Bonlac Foods Ltd., in Melbourne, and as managing director at Rhône-Poulenc in Australia, Indonesia and France.

**Robert Le Salver**

Robert Le Salver is a graduate of France's Institut national des sciences appliquées in Mechanical Engineering. From 1967-2004, he worked for Automobiles Peugeot and P.S.A. Peugeot Citroen and was responsible for design and tests in acoustics and vibrations. He has filed numerous international patents in automobile design. He has represented P.S.A on several European research projects such as SALOME ( Structural Acoustics of Light weight components in Medium frequency range),ONDROVE (Overall Interior Noise Design Tool for Road Vehicles), and TINO ( Tire-Road Interaction Noise-Emission). He also served as an acoustics expert with the A.C.E.A. (Association des constructeurs européens d'automobile), and represented France with the O.I.C.A. (Organisation internationale des constructeurs d'automobile) and ISO (International Standard Organisation) for the revision of international standards in exterior noise. He has organized some 25 conferences on comfort, acoustics and car dynamics. He has been widely published and has spoken at numerous conferences. He teaches in the area of car acoustics in several French engineering schools

### **Alex Keen**

Mr. Keen is President of The ALTECH Group, a Toronto-based company that conducts R&D and commercialization of innovative and patented solutions to pollution problems. ALTECH relates good business principles to good environmental principles in developing cost effective, practical solutions. Mr. Keen has worked for government, industry, and in consulting, where his experience positions him as an expert on environmental affairs, management techniques and environmental auditing. He is a key player in the development and refinement of a number of environmental science and engineering technology development projects.

### **Twila Liggett**

As an educator and author, Dr. Liggett has published widely on issues ranging from literacy to human potential. She co-authored the Reading Rainbow Guide To Children's Books: The 101 Best Titles, (Citadel Press, Revised 1996). Dr. Liggett also wrote entries for A Handbook for Literacy Educators: Research on Teaching the Communicative and Visual Arts "Voices from the Field," (Macmillan, 1998) and The Continuum Encyclopedia of Children's Literature (K.S. Giniger Company, Inc., 2001), among other publications. From 1997-2000, was Senior Vice-President of JuniorNet, an online service for kids. Dr. Liggett joined the faculty of Marymount Manhattan College in 2006 as an Assistant Professor of Teacher Education with a specialty of Literacy. Dr. Liggett holds a Ph.D. in Curriculum, Instruction and Administration, a MA in Elementary Education (both from the University of Nebraska) and a BS in Secondary and Music Education (Union College, Nebraska).

### **Stuart Lyon Smith,**

Dr. Stuart Lyon Smith is Chairman of the Board of Ensyn Technologies Inc., a firm that upgrades petroleum fuels and produces chemicals and clean energy from biomass. Until July 1997, he was President of Philip Utilities Management Corporation, a firm he founded and directed , which became Canada's largest water and wastewater services company. Dr. Smith is also President of RockCliffe Research and Technology Inc., a company he founded in 1987 to privately manage government laboratories. He serves as Vice-Chair of Humber College's Board of Governors and is a member of the Advisory Committee of the McGill School of Environment and the Liu Centre for the study of Global Issues at UBC. Dr. Smith graduated in Medicine from McGill University. He was for eight years a professor in the Department of Psychiatry at McMaster University Medical School in Hamilton, Ontario. He won the leadership of the Ontario Liberal Party in 1976 and a year later became Leader of the Opposition. From 1982-1987, Dr. Smith was Chairman of the Science Council of Canada. In 1989, he chaired both the peer review and the implementation of the Federal Centres of Excellence competition. In 1990-1991 he chaired the AUCC Commission of Inquiry on Canadian University Education. Stuart Smith was Chair of the National Round Table on the Environment and the Economy from 1995-2002.

### **Michael Gibbons**

In 2007, Michael Gibbons was appointed Chair of the Board of Governors of Quest University, Canada's first private, not-for-profit university. He recently completed his second term as Acting Director of the Science and Technology Policy Research at the University of Sussex in the United Kingdom, a position he took up in 2004 after his retirement as Secretary General of the Association of Commonwealth Universities. From 2000 to 2003, he was a member of the Council of UK

Economic and Social Research Council and Chair of its Research Priorities Board. In 2004, he was appointed a Member of the British Empire for services to Higher Education. The same year, he received the Queen's Golden Jubilee Medal for excellence in research by the Government of Canada. Professor Gibbons is interested in science and technology policy. He has carried out research in the process of technological innovation in industry and the evaluation of research. He co-authored two major books on the nature of contemporary science: "New Modes of Knowledge Production" and "Re-thinking Science".