

**REPORT OF THE
2006 Networks of Centres of Excellence
International Partnership Initiative
SELECTION COMMITTEE**

November 2006

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Remarks from the Chair

Introduction

The 2006 Networks of Centres of Excellence (NCE) International Partnership Initiative (IPI) Competition was designed to provide the NCEs with additional support to develop and enhance linkages with the best centres of excellence around the world. The IPI Selection Committee was composed of 8 members from Canada and abroad who, in total, represented broadly the areas covered by all competing networks. In addition, the members of the IPI Committee all had experience in international collaborations. The IPI applications were reviewed by the Committee members in advance of the meeting. At the meeting, each application was extensively discussed and evaluated before making a final recommendation. Throughout the deliberations, each IPI proposal was assessed against the five requirements of excellence established for the NCE IPI:

1. Enhancement to the excellence of the research program
2. Development of highly qualified personnel
3. Networking and partnerships
4. Knowledge and technology exchange and exploitation
5. Management of the IPI

The list of IPI proposals recommended for funding to the NCE Steering Committee, represents consensus.

Recommendations for networks applying for an IPI NCE funding

Overall, the Committee was impressed by the quality of all of the proposals, despite the relatively short response timeline. This would seem to indicate that the networks recognize the importance, need and benefit from the IPI. The IPI Selection Committee recognized the national importance of international linkages in the domains represented by IPI applications.

As required, each proposal was evaluated against each of the five NCE IPI program criteria. Given that these networks were applying for additional funds for incremental international activity, the Committee also examined how each IPI added value to the network's vision and strategic plan. The recommendations represent the Committee's judgment of the relative merits of each case against the established criteria and the potential social or economic impact to network and Canada.

Reviewing the applications against the very demanding criteria of the NCE program, the Selection Committee identified a total of seven IPI proposals to be funded in this pilot. The Committee, recognized that these Networks will create new synergies and partnership activities, and have a potential to generate significant new knowledge and impact, through international partnership activity. They further recommended that the successful IPI recipients undergo a progress review and that progress reports be reviewed by the members of the Selection Committee.

The Committee members were unanimous in their emphasis that the IPI program is an important and essential initiative and all members were outspoken in their encouragement that the NCE continues the IPI beyond the initial pilot. The Committee also noted the partnership with Canada's International Development Research Centre (IDRC) as a great tool to foster scientific excellence of mutual benefit to both the developing world and Canada. Overall, the IPI is seen by the Committee members as a critical instrument in the assertion of Canadian research leadership in key fields, the adding of value to domestic research and the exposure of Canadian research excellence in an increasingly global environment.

Conclusion

The recommendations from the Committee reflect the commitment of all members to the principle of Excellence that is a trademark of the NCE program. As Chair, I would like to thank all members of the Selection Committee for their timely dedication and commitment to ensuring that the goals of the new NCE pilot IPI were met.

Grant Thomas
Chair, NCE IPI Selection Committee 2006

Background

The goal of the Networks of Centres of Excellence (NCE) Program is to mobilize Canada's research talent in the academic, private and public sectors and apply it to the task of developing the economy and improving the quality of life of Canadians.

Networks develop nation-wide, multidisciplinary and multi-sectoral partnerships in their area which result in a high level of functionality and an effective mechanism for communication within the national sphere. In order to build on these successes and in view of the current and evolving global context and the possible mutual benefits of international collaboration, it is timely to increase the international focus and reach of the NCE Networks.

To this end, the NCE has developed the International Partnership Initiative (IPI).

The goal of the IPI is to provide the Canadian NCE networks with additional support to develop and enhance linkages with the best centres of excellence in the rest of the world.

The NCE IPI will enable Canadian networks to be at the forefront of international cutting-edge initiatives. The initiative will support the partnering of Canadian NCEs with foreign organizations to address critical issues of scientific, intellectual, social, economic and/or cultural significance in areas of mutual strategic importance. The partnerships are expected to be at the organization level and not at the individual level.

To encourage the participation of networks from low and middle income countries (LMIC), the International Development Research Centre (IDRC) will support the research and networking costs of their participation.

The objectives of the IPI are to enable the networks to:

- Raise Canada's profile on the world stage and ensure that Canada is part of international cutting-edge initiatives
- Provide a richer training environment to develop highly qualified people with skills and awareness critical to Canadian productivity, economic growth, public policy and quality of life
- Stimulate or reinforce partnerships with foreign organizations to develop large coordinated and concerted efforts leading to economic and social impact
- Enhance the sharing and dissemination of knowledge, resources and technology to Canada.

A Selection Committee was created to evaluate the proposals. The Committee was composed of multi-sectoral experts with broad expertise representing the domains of the three granting agencies as well as international experience (see Annex II) . The IPI applications were evaluated against the five criteria of the initiative, detailed in Annex I:

- Enhancement to the Excellence of the Research Program
- Development of Highly Qualified Personnel
- Networking and Partnerships
- Knowledge and Technology Exchange and Exploitation
- Management of the initiative

2006 NCE IPI Competition Timeline

The 2006 NCE IPI competition followed the timeline below:

July 19, 2006	Instructions and application forms available to the applicants.
October 16, 2006	Deadline for submission of the IPI application
November 17, 2006	Meeting of the NCE Selection Committee to review the full applications and make final recommendations on funding to the NCE Steering Committee.
November 24, 2006	Meeting of the NCE Steering Committee to review funding recommendations of the NCE Selection Committee.
December 2006 to February 2007	Additional information submitted by applicants
March 2007	Final award by the NCE Steering Committee
May 2007	Public announcement of awarded IPI

NCE- IPI Selection Committee Funding Recommendations

The 2006 NCE Renewal Selection Committee identified the proposal that exceeds the threshold of excellence for the NCE Program. The NCE Selection Committee recommended support for the following IPI:

1. **AllerGen**, McMaster University
2. **ArcticNet**, Université Laval
3. **Canadian Arthritis Network (CAN)**, University of Toronto
4. **Mathematics of Information Technology and Complex Systems (MITACS)**, Simon Frasier University
5. **National Initiative for the Care of the Elderly (NICE)**, University of Toronto
6. **PrioNet Canada**, University of British Columbia
7. **Stem Cell Network (SCN)**, University of Ottawa

Funding to these proposals will help the NCE achieve the goals and objectives of the IPI and has the potential to result in tangible impact for the network and Canada.

Summary of the Networks' International Partnership Initiatives

AllerGen (www.allergen-nce.ca)

AllerGen is comprised 31 universities, 46 industries and 99 government and other organizations and will act as primary liaison, technical expert or co-leader in projects with five world-class organizations in Belgium, India, France, Sweden, and Switzerland.

NCE: \$828,000
IDRC: \$262,000

ArcticNet (www.arcticnet.ulaval.ca)

ArcticNet is comprised of 48 universities, 17 industries and 89 government and other organizations. The international activities proposed in ArcticNet's IPI proposal aim at enhancing further the development of a pan-arctic network that draws from the expertise found at centres of excellence in Russia, Norway, France, the United States, and Denmark.

NCE: \$815,000

Canadian Arthritis Network (CAN) (www.arthritisnetwork.ca)

CAN is comprised of 34 universities, 81 industries, and 84 government and other organizations. CAN 's partnership with five foreign organizations in Switzerland, the United Kingdom, Japan, and the United States aims to bring Canadian arthritis excellence and knowledge to the world scene..

NCE: \$700,136

MITACS – Mathematics of Information Technologies and Complex Systems

(www.mitacs.ca)

MITACS is comprised of 65 universities, 148 industries, and 86 government and other organizations. MITACS IPI is aimed at developing linkages with six leading research centres and networks in the European Union, the United States, Mexico, Australia, Germany, and China.

NCE: \$900,000

IDRC: \$209,000

National Initiative for the Care of the Elderly (NICE) (nicenet.aging.utoronto.ca)

NICE is comprised of 15 universities, 5 industries, and 6 government and other organizations. The NICE IPI support will enable network researchers to develop linkages with nine foreign organizations in Israel, South Africa, China, India, Germany, Switzerland, Australia, and the United Kingdom.

NCE: \$160,000

IDRC: \$240,000

PrioNet Canada (www.prionetcanada.ca)

The Network is comprised of 7 universities, 1 industry, and 9 government and other organizations. PrioNet Canada's IPI aim to advance technological exchange, innovation and training in transmissible spongiform encephalopathies with two leading organizations in the European Union and the United States.

NCE: \$1,068,000

Stem Cell Network (www.stemcellnetwork.ca)

The Stem Cell network is comprised of 29 universities, 37 industries, and 65 government and other organizations. The IPI funding will enable the establishment of a consortium involving the following centres of excellence in Australia, Israel, the United States, Germany, the United Kingdom, Japan, and India.

NCE: \$995,000

APPENDIX I - OBJECTIVES OF THE NCE IPI

The objectives of the IPI are to enable the networks to:

- Raise Canada's profile on the world stage and ensure that Canada is part of international cutting-edge initiatives
- Provide a richer training environment to develop highly qualified people with skills and awareness critical to Canadian productivity, economic growth, public policy and quality of life
- Stimulate or reinforce partnerships with foreign organizations to develop large coordinated and concerted efforts leading to economic and social impact
- Enhance the sharing and dissemination of knowledge, resources and technology to Canada

SELECTION CRITERIA OF THE NCE-IPI

1) Enhancement to the Excellence of the Research Program

- Integration and coherence of the initiative within the network's strategic plan and value added in terms of the achievement of the network's goals and impact
- Stature and achievements of the partner organisations and their ability to contribute to the network's program
- Extent to which the initiative will help increase the network's and Canada's international visibility and reputation

2) Development of Highly Qualified Personnel (HQP)

- Involvement and development of HQP and value added for their training through the network
- Attraction of researchers and HQP critical to Canadian productivity, economic growth, public policy and quality of life
- Extent to which access is gained to new knowledge and information

3) Networking and Partnerships

- Extent of partnership development with foreign centres of excellence and organizations leading to the optimization of resources and concerted efforts
- Multidisciplinary, multi-sectoral approaches to the initiative and evidence that an effort has been made to include suitably qualified groups
- Commitment, nature and extent of involvement and leveraged contributions from foreign partners and stakeholders
- Access to additional/complementary expertise

4) Knowledge and Technology Exchange and Exploitation

- Extent to which the relationship will enhance knowledge and technology exchange
- Additional/complementary knowledge, and/or technology the foreign counterpart is contributing to Canada
- Anticipated impact, on Canada's and the partners' science and technology capabilities and practices.
- Potential for downstream economic and social benefits, such as technology, market development, and public policy development

5) Management of the Initiative

- Extent to which the initiative will be managed in a cost effective and accountable manner
- Effective processes for selection, monitoring and reporting
- Demonstration of internal and external communication strategies
- Effective management of IP and knowledge transfer in the context of the Benefit to Canada Policy
- Plans for sustainability/ legacy of the initiative

APPENDIX II - NCE IPI SELECTION COMMITTEE

TERMS OF REFERENCE

The Selection Committee will:

- Review the proposal according to the IPI evaluation criteria
- Recommend initiatives to be funded and funding levels
- Provide a confidential report to each applicant underlining the strengths and weaknesses of the proposal

MEMBERSHIP

Chair:

Mr. Grant Thomas, Consultant, Ottawa, ON, Canada

Members:

Dr. Tammy Bray, College of health and Human Science
Oregon Sate University, Oregon, USA

Dr. John Clement, iCo Therapeutics Inc., BC , Canada

Dr. Richard Collin, International Centre for Collective Efficiency, France

Dr. Cathy Garner, Boweham House, Lancaster, England

Dr. Scott MacNight, Land & Sea Environmental Consultants Ltd., NS, Canada

Dr. Tiago Pereira, Centre for Social Studies (CES), Portugal

Dr. Ian Smith, Institute for Structural Engineering and Mechanics, Federal Institute of
Technology, Switzerland

APPENDIX III - BIOGRAPHICAL NOTES OF THE IPI SELECTION COMMITTEE MEMBERS

Grant Thomas (Chair)

Mr. Thomas has extensive experience in international development, corporate management and the IT, education and environment sectors. He has functioned as an executive in several start-up situations and as a manager of large-scale projects. He is a former partner in PriceWaterhouse Canada. He is currently VP of Precarn Inc. and was on the Board of the Institute for Robotics and Intelligent Systems and Precarn for many years. He is past-Chairman of the Board of TeKnoWave Inc., a national education initiative to build capacity in Canada's Aboriginal communities. His engagements have been in Canada, United States, Europe, Africa, the Caribbean, Mexico, India, Japan and the former Soviet Union. He has been involved in strategic planning at the national level in Canada, France, South Africa, Uganda, Senegal and the South Caucasus countries.

He has put in place public/private sector partnerships with Canadian entities in France in the knowledge management sector, In Africa with the IDRC, in Armenia with the IT sector, in the R&D sector with NSERC and the NCE programs, in Azerbaijan in the environment sector and in the Aboriginal community.

He has served as president of a leading artificial intelligence consulting company and as a senior advisor to the Caribbean Development Bank and CIDA. He has participated on education and technology trade missions and he sits on federal research granting panels.

He was one of the founding managers of Neuropo Lab in France - a European multinational "think tank" focused on knowledge management and learning technology. He served a five year engagement with the International Development Research Centre (IDRC) where he co-managed the Acacia Initiative - Communities and the Information Society in Africa. In 2002, he undertook a mission to the countries of the South Caucasus to assist the Canadian International Development Agency (CIDA) in the development of program priorities.

Mr. Thomas has served on numerous NSERC and NCE expert panels and committees. He is currently engaged by the Canadian Bureau for International Education and the Public Policy Knowledge Network project in the former Soviet republics of the South Caucasus. He is also engaged by the Enterprise Incubator Foundation in Yerevan and the World Bank to manage the Armenian Canadian IT Industry Promotion Initiative.

Tammy Bray

Dr. Tammy M. Bray is the dean of College of Health and Human Sciences and a professor of Nutrition and Medical Biochemistry. She came to Oregon State University in September 2002 from Ohio State University.

Dean Bray's research interest is on the understanding of how antioxidant nutrients and nutraceuticals reduce oxidative stress and prevent free-radical mediated diseases. At Ohio State, she was professor of nutrition and associate dean for research and international studies.

A native of Taiwan, she is a 1967 graduate of Fu-Jen University in Taipei. She has a master's degree in nutrition and a Ph.D. in nutrition, both from the University of Washington.

John Clement

Dr. Clement has founded iCo Therapeutics Inc. in February 2005, an ocular drug development company. He was previously Director of Business Development at QLT Inc. QLT Inc. is a global biopharmaceutical company dedicated to the discovery, development and commercialization of innovative therapies to treat cancer, eye diseases, dermatology and niche areas for which treatments can be marketed by a specialty sales force. Prior to joining QLT Inc, Dr. Clement worked for BioChem Pharma in Montreal as the Associate Director of Pharmacology and Toxicology and then the Director of Extramural Research, responsible for the external research program. He was also employed at Medical Countermeasures section of Defense Research and Development Canada and for Ciba-Geigy. His expertise includes pharmacology, toxicology and animal physiology. Dr. Clement has served as member of the 2003 and 2005 NCE Selection Committee.

Richard D. Collin

Recognized as one of the European leaders and experts in the e-transformation of organization, collaborative work and KM domains, Richard D. Collin is an authority within the community of knowledge economy people and senior executives which support the innovation and value creation toward knowledge based and learning organization through CWE (collaborative working environment).

Founder and CEO of ICCE (International Centre for Collective Efficiency) a consulting firm involved in assisting and coaching companies and institutions in their strategy for change and e-transformation toward the emerging knowledge and networked society, Richard Collin's clients are organizations like Microsoft, France Telecom, Orange, IBM, and several Governmental Agencies and Regions. From 1995 to 2000 , CEO, co-founder and member of the board of Trivium, a French software company specialized and leader in software for the management of Intellectual and Human Capital, Knowledge and Intangible Assets of organization. From 1990 to 1995, Founder and Executive Director of Neurope Lab, European Research Centre for the Knowledge Age, an innovative international services and applied research organization in the domain of high technology and knowledge management.

Established and financed as a consortium of major companies at European or corporate level (e.g. DEC, IBM, HP,...), with academic authorities, Neurope Lab worked to integrate all together the information technologies, the cognitive and social sciences to make effective and productive the identification, capitalization and transmission of knowledge within organization. Neurope Lab was contracted to manage and to host the Lotus Institute Europe. From 1979 to 1990, Richard Collin holds various senior executive position in Business Development, Sales and Software at Digital Corporation (DEC) European HeadQuarter in Geneva.

He holds degree as Electro-mechanical engineer, ESME Paris, MBA IAE Grenoble, DESS Social Sciences, Paris Sorbonne - Fellow Western Behavioral Sciences Institute, UCSD La Jolla , INSEAD IAMP Fontainebleau Richard Collin is currently Visiting Professor holding the Chaire "Collective Efficiency, Networked and innovative organizations" at Grenoble Business School. At the head of EIKE (European Institute for the Knowledge Economy) he is also Vice President International Affairs) of AFNET (French Association of the Net Users and e-business).

Cathy Garner

Dr. Garner is currently Managing Director of Manchester: Knowledge Capital, which is a partnership initiative focused on maximising Manchester's position at the centre of the UK and global knowledge economy. Dr. Garner has a background in university-business links and academic technology transfer and extensive experience of urban regeneration, education and knowledge-based business development. Dr. Garner is a Board Trustee of MIHR (The Centre for the Management of Intellectual Property in Health Research and Development) and was the founding CEO of MIHR until 2004. The charity worked in promoting access to improved health in developing countries. Dr. Garner has extensive international experience of intellectual property management, technology transfer and the university-business interface having established and run the Research and Enterprise Office at the University of Glasgow in Scotland. She led the establishment of the Scottish Institute for Enterprise and was a founder director of the Scottish North American Business Council. She is a member of the Association of University Technology Managers (AUTM) in the USA and served as a Board Member for three years as their inaugural Vice President for International Relations. Her career includes eight years of policy and research management in the public sector. She has held senior management roles at the Housing Corporation in London and at Scottish Homes in Edinburgh where she established research and innovative policy initiatives. Her academic career focused on educational attainment, school effectiveness and the impact of deprivation on young people's life chances. Dr. Garner has acted as an advisor to the UK, Canada, Japan and South Africa on intellectual property matters and served on Ministerial reviews of Enterprise in Scotland. She has held numerous Board positions including voluntary service on the Glasgow Housing Association and the Irwell Valley Gold Service Evaluation Panel. She is a Fellow of the Royal Statistical Society of the UK. Dr. Garner has served on the 2002 and 2005 NCE Selection Committees.

Scott MacKnight

Dr. MacKnight is president and senior partner of OCL Group, formerly OceanChem Limited. He has a BSc and MSc in physical chemistry and a PhD in oceanography. For the past 30 years, he has specialized in the environmental assessment and environmental management of development and infrastructure projects, both in Canada and in several foreign countries. Projects have ranged from the assessment and management of dredging of sediments contaminated by PCB from a small fishing harbour in Nova Scotia, Canada to development of a pesticides/hazardous materials program for the Government of the Commonwealth of Dominica and evaluation of the environmental impact assessments of major waterway projects in China for the World Bank.

In addition to his consulting practice, Scott was an adjunct professor with the Dept. of Chemical Engineering, Dalhousie University, Halifax, NS, where he taught environmental science to chemical, mining and industrial engineering students and was lead trainer for the Certificate in Environmental Management program of the Dept. of Continuing Technical Education. Since 1984, Scott has served on several NSERC review committees, most recently the Research Networks Selection Committee.

Dr. MacKnight has been an invited speaker to numerous international workshops, speaking on the topic of environmental management of ports and waterways. He is also co-author of several technical books and publications. Dr. MacKnight has served on numerous NSERC Committees and on NCE Experts Panels.

Tiago Santos Pereira

Tiago Santos Pereira is a Research Fellow at the Centre for Social Studies (CES) of the University of Coimbra. He is currently its Executive Director. He is co-coordinator the new Doctoral Programme on 'Governance, Knowledge and Innovation', in partnership between the Centre for Social Studies and the School of Economics, where he lectures on 'Policies for Science and Knowledge'.

He received a DPhil in Science and Technology Policy Studies from the University of Sussex, in 2001. In his doctoral research at SPRU – Science and Technology Policy Research – he studied European research collaborations and their impact in knowledge exchange and the development of scientific capabilities of Portuguese and other European research groups.

Dr. Santos Pereira's research agenda focuses on science policy-making and the governance of science. Within this broad area he is currently Principal Investigator of a research project on 'Science in Parliament: A study of the boundary between science and politics', and deeply involved in a large European project 'ResIST - Researching Inequality in/through Science and Technology', which involves 11 partner organisations in Europe, Africa and the United States. He is a member of the PRIME - *Policies for Research and Innovation the Move towards the ERA* - Network of Excellence, funded by the 6th Framework Programme of the European Commission. He is also a member of the 'Science and Democracy Network'. He is currently a member of the European Expert Group on Regional Research Intensive Clusters and Science Parks.

Previously to his current position he held post-doctoral positions at the School of Economics of the Technical University of Lisbon, he was a Fulbright Visiting Associate at Harvard University, Kennedy School of Government, with Prof. Sheila Jasanoff, at the Belfer Centre for Science and International Affairs, and he collaborated with ICCTI, a Portuguese policy institution on international scientific and technological cooperation.

He has published on European research policy and cohesion, IPR, small countries and international collaboration in science and technology, science policy-making and democracy, science and technology indicators, has contributed as reviewer to international journals, and has provided policy advice to national and international organisations.

Ian Smith

Ian F.C. Smith received his BAsC in 1978 from the University of Waterloo, Canada and his PhD from the University of Cambridge, England in 1982. A Professor of Structural Engineering at the Ecole Polytechnique Fédérale de Lausanne (EPFL) in Lausanne Switzerland, he is Head of the Applied Computing and Mechanics Laboratory (20 staff) and Former Chair of the Structural Engineering Institute (100 staff).

Research activities include creation of new sensors, development of original computing applications and building active structures. Many current projects lie on the interfaces between these topics. Teaching activities include structural dynamics and a new computer aided engineering fundamentals course that has been adopted by other universities in North America, Europe and Asia. He has also been active in providing consulting services to industry for more than twenty years.

In addition to sitting on four editorial boards of international scientific journals he is Co-Editor-in-Chief of *Advanced Engineering Informatics* (Elsevier) and Associate Editor of *Artificial Intelligence for Engineering, Design, Analysis and Manufacturing* (Cambridge). He is the founder and Past Chair of the European Group for Intelligent Computing in Engineering and Past Chair of the Information Technology Committee of the International Association for Bridge and Structural Engineering.

In 2003, he co-authored the text book *Fundamentals of Computer Aided Engineering* (Wiley). He sits on several technical committees of the American Society of Civil Engineers (ASCE) including the Executive Committee of the Technical Council for Computing and Information Technology. He is a Fellow of ASCE and in 2004, he was elected to the Swiss Academy of Engineering Sciences. In 2005, he received the annual Computing in Civil Engineering Award from the ASCE (140,000 members). This is the only time this award has been given to someone outside of the USA. Dr. Smith has served on NCE Expert panels.