

**STRATEGIC INITIATIVE ANNOUNCEMENT**

**Canadian Institutes of Health Research<sup>1</sup>**

**Canadian Cancer Society**

**National Cancer Institute of Canada**

**Heart and Stroke Foundation**

**Health Canada**

**Canadian Lung Association**

**Under the Coordination of the Canadian Tobacco Control Research Initiative**

*are pleased to announce a strategic initiative in*

**“Advancing the Science to Reduce Tobacco Abuse and Nicotine Addiction”**

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<sup>1</sup> Institute of Neurosciences, Mental Health and Addiction; Institute of Cancer Research; Institute of Aboriginal Peoples' Health; Institute of Circulatory and Respiratory Health; Institute of Gender and Health; Institute of Human Development, Child and Youth Health.

## **Strategic Initiative Background**

This Strategic Initiative marks the launch of an innovative program aimed at supporting new research which will accelerate understanding of and action around the measures, causes, consequences, prevention, treatment, and control of tobacco abuse and nicotine addiction. A new partnership – consisting of the Canadian Institutes of Health Research (CIHR), Canadian Cancer Society (CCS), the National Cancer Institute of Canada (NCIC) and Canadian Cancer Society (CCS), the Heart and Stroke Foundation (HSF), and Health Canada – is taking the lead in implementing a comprehensive and collaborative strategy for tobacco-related research in Canada. A central and critical component of the strategy is this Strategic Initiative.

The present strategy and partnership grew out of the 2002 [Canadian Tobacco Control Research Summit](#) (CTCRS), at which leading scientists, practitioners and decision-makers in Canada identified an innovative, multi-faceted agenda for high quality research, spanning multiple disciplines and research themes (“pillars”). In addition to highlighting priority populations and research topic areas, the agenda calls for attention to fostering new research methods, increasing research capacity and excellence, facilitating knowledge translation, managing research data, and building national and international collaborations (Strachan-Tomlinson 2002).

To facilitate effective partnership and long-term management of the strategy, the agencies supporting this Initiative will work together through a new restructured Canadian Tobacco Control Research Initiative, which provides strategic leadership to catalyze, coordinate and sustain research that has a direct impact on programs and policies aimed at reducing tobacco abuse and nicotine addiction.

## **Partners**

The [Canadian Institutes of Health Research](#) (Institutes of: [Neurosciences, Mental Health and Addiction](#); [Cancer Research](#); [Aboriginal Peoples’ Health](#); [Circulatory and Respiratory Health](#); [Gender and Health](#); [Human Development, Child and Youth Health](#)), the [National Cancer Institute of Canada](#) and [Canadian Cancer Society](#), the [Heart and Stroke Foundation](#), [Health Canada](#) and the [Canadian Lung Association](#) in partnership with the [Association pulmonaire du Québec](#) are pleased to support the Strategic Initiative, *Advancing the Science to Reduce Tobacco Abuse and Nicotine Addiction*. Further information on the funding partners and their priority research areas can be found in Appendix 1.

## **Introduction**

This announcement has a focus on nicotine addiction, tobacco abuse and tobacco intervention research, and in particular, topics and issues described in the report of the Canadian Tobacco Control Research Summit (Strachan-Tomlinson 2002). The breadth of programs offered under this announcement signals the partners’ intent to build capacity and strengthen Canadian research in this area (see Appendix 1 for background). This initiative will support multidisciplinary research from across all of CIHR’s research themes: 1) biomedical, 2) clinical, 3) health systems and services, and 4) the health of populations, the societal and cultural dimensions of health and environmental influences on health. To help facilitate the building of capacity, this announcement includes a wide range of mechanisms including: Interdisciplinary Capacity Enhancement (ICE) teams, Policy Research Grants, and Knowledge Synthesis grants. In addition, Research Planning Grants, Idea Grants and others are offered to help build capacity by supporting researchers to develop excellent research projects.

## **Eligibility**

Principal Applicants/Investigators must be citizens or legal residents of Canada affiliated with eligible host institutions. Co-applicants and collaborators are not subject to this restriction.

The variables of sex and gender are important in investigation across all areas of tobacco research. It is expected that all research projects supported under this strategic initiative will include sex/gender analysis, unless it can be demonstrated that this is not appropriate or possible.

Other specific eligibility criteria apply to individual funding programs. Please see specific RFAs for details.

## **Timeline**

Application and funding dates vary. Please check the details for each specific RFA.

## **Funds Available**

At present, the maximum funds available for all programs under this strategic initiative are approximately \$2M per annum. However, it is anticipated that through the development of partnerships, there may be increases in the funds available for research aimed at understanding tobacco abuse, nicotine addiction and interventions to control tobacco use.

## **Objectives of the Strategic Initiative**

Through this strategic initiative, the sponsoring organizations hope to challenge researchers working across a host of disciplines representing the full spectrum of health research to undertake work which will contribute to our understanding of the mechanisms of tobacco abuse and nicotine addiction in order to inform the intervention strategies of addiction professionals, policy makers, and the Canadian public health community in the tobacco control effort.

The objectives of this Strategic Initiative, *Advancing the Science to Reduce Tobacco Abuse and Nicotine Addiction*, are to:

- Increase excellence of and capacity for research in the areas of tobacco abuse, nicotine addiction, and tobacco control interventions;
- Focus research efforts on priority research gaps identified by leaders in research and practice related to tobacco abuse and nicotine addiction through the Canadian Tobacco Control Research Summit (see description under “Eligible Research Areas”);
- Fund excellent research aimed at understanding the determinants of tobacco abuse and nicotine addiction, and at improving the effectiveness of tobacco control interventions.
- Advance the use of a range of research methodologies as appropriate to the tobacco abuse and nicotine addiction topics of investigation, including behavioural studies, program evaluation, participatory action research, genetic and population level analyses, etc.
- Foster translation of knowledge to applications in prevention, treatment and other interventions to control tobacco abuse and nicotine addiction.

## Eligible Research Areas

Research proposals must demonstrate that they contribute to the goals of increasing understanding of and action around the measures, causes, consequences, prevention, treatment and control of tobacco abuse and nicotine addiction. Applicants should read carefully the report of the Canadian Tobacco Control Research Summit (Strachan-Tomlinson 2002) to understand current and new research questions, challenges, and associated methods. **Applications should explain how the proposed research will address one or more of the *challenges* and/or *topics* identified below** in order to generate and translate new knowledge about tobacco abuse and nicotine addiction, leading to improvements in the health of Canadians and strengthening of the health system of Canada. Research projects that involve secondary analysis of existing data, as well as those which generate new evidence, will be supported through this initiative.

Applicants should refer to Appendix 1, which details the specific priority funding areas of the participating partners.

Research within and across multiple disciplines and research themes will be required to address the problems of tobacco abuse and nicotine addiction and, ultimately, to achieve the goal of improving the health of Canadians. It is anticipated that individuals working in a wide variety of health-related disciplines such as economics, policy, epidemiology, sociology, psychology, bio-medicine, chemistry, genetics, political science, nursing, and cross disciplines, e.g., addiction and many others, may be interested in this initiative.

## Challenges

This strategic initiative is committed to addressing, directly and indirectly, several **major challenges** cutting across multiple areas of tobacco abuse and nicotine addiction research, identified through the *Canadian Tobacco Control Research Summit*:

- **Developing capacity to conduct excellent tobacco-related research** (e.g., sustainability, interdisciplinarity, training and retraining of researchers in topics and methods)
- **Addressing gaps in research data** (e.g., lack of access to and sharing of collected data, inconsistency of indicators, need for primary and secondary data analysis as well as methods for and researchers who are trained in these methods, quality and validity of data, etc.)
- **Stimulating knowledge translation** (e.g., cultural appropriateness, tools and mechanisms, research on, best practices reviews, national structures to support, involvement of policy makers)
- **Enhancing research methods** (e.g., natural experiments, need for models and tools for comprehensive program evaluation, qualitative and case studies, strength/quality of participatory research and its role in contributing to knowledge translation and behaviour change, need for behavioural research models, valid tools and instruments, multi-level analysis)
- **Fostering national coordination** (e.g., coordination of research initiatives, oversight of integrated research agenda implementation, creation of Canadian advantage, oversight of dissemination, creation of linkages between/among disciplines, leading action around privacy legislation and drug testing policies)
- **Building international collaboration:** tobacco use is a global epidemic, and global coordination will be required to combat it successfully; many research questions about population wide initiatives, such as policy and mass media interventions, benefit from international comparisons.<sup>2</sup>

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<sup>2</sup> This complements the focus of the Global Health Research Initiative of CIHR, the Canadian International Development Agency, Health Canada, and the International Development Research Centre, which is focused on development of global health research. For more information visit [http://www.cihr-irsc.gc.ca/services/initiatives/global\\_health/index\\_e.shtml](http://www.cihr-irsc.gc.ca/services/initiatives/global_health/index_e.shtml).

## **Topics**

Specifically, this program announcement will support research which will advance knowledge related to the above challenges and/or to any of the eight **priority research topic areas** articulated by delegates to the *Canadian Tobacco Control Research Summit*:

- ◆ **Addiction:** Public health interventions to reduce the prevalence of smoking need to take into account the strong relationship between smoking and mental disorders, especially affective disorders, schizophrenia and panic disorders. Examples of research relevant to this topic include but are not limited to studies of:
  - Natural history of tobacco use; predisposition to and protection from addiction
  - Gene identification, gene expression, phenotyping
  - Neural mechanisms of addiction: mRNA expression, signalling pathways
  - Epidemiological monitoring of population health consequences of tobacco abuse and nicotine addiction, including estimation of tobacco attributable mortality and morbidity
  - Co-morbidity between cigarette smoking and alcohol consumption, other substance use and/or risk-taking behaviours
  - Association between nicotine addiction, mental illness and other addictive behaviours
  
- ◆ **Determinants of Use:** Tobacco abuse and nicotine addiction is recognized to be a part of a complex set of behaviours influenced by environmental and social forces, especially among certain subgroups of the population such as women, adolescents, and those living in disadvantaged circumstances. Behavioural research is a particular need in this area; examples of research relevant to this topic include but are not limited to studies of:
  - Patterns of onset of use (primarily in teens and children) and addiction trajectories; protective factors and resilience to tobacco, and role of determinants of health
  - Interaction of tobacco abuse and nicotine addiction with other determinants (e.g., ethnicity, income, education, safe living and working conditions)
  - Tailoring of interventions to various health determinants, characteristics, and impact on outcomes; interventions that address the impacts of physical and social environments on tobacco abuse and nicotine addiction
  - Effects of pre- and post-natal exposure, and physical and social exposure throughout childhood and adolescence
  - Other substance use in conjunction with tobacco
  
- ◆ **Aboriginal Peoples:** Aboriginal Canadians of all ages show the highest rates of use of both cigarettes and smokeless tobacco products in Canada, with smoking rates far above the national average. Examples of research relevant to this topic include but are not limited to studies of:
  - Biomedical knowledge: genetics, relative morbidity and mortality related to tobacco
  - Tobacco use in the context of other addictions, and health providers' and systems' perspectives on tobacco use
  - Ethical and community-based approaches to reducing tobacco abuse and addiction
  - Integration of traditional practices, spirituality
  - Resilience, maternal and child health

- ◆ **Sex Differences and Gender Influences:** Trends in tobacco use among men and women, particularly adolescent girls, differ across socio-economic circumstances and reflect, in part, gender differences in social pressures that promote tobacco use. There is a need for research on a full range of issues relevant to sex<sup>3</sup> differences and gender<sup>4</sup> influences on tobacco use and nicotine addiction. Potential examples of research relevant to this topic include but are not limited to studies of:
  - Biological (sex) differences between females and males (e.g., physiological effects of tobacco use/exposure on hormonal and metabolic processes, addiction, disease outcomes)
  - Gender influences on onset, use and quitting behaviours and response to tobacco control policies
  - Sex differences in and gender influences on harm reduction strategies and nicotine withdrawal
  - Social context of smoking by males compared to females, and the role of tobacco use in girls', women's, boys' and men's lives
  - Gender appropriate interventions to promote reduction and/or cessation (e.g., integration in peri-natal and family care, occupational and ETS exposure)
  - Access to appropriate supports, services, and programs for vulnerable groups including those facing gender inequalities
  
- ◆ **Integrated Policy and Program Interventions:** In order to effectively address the problem of tobacco abuse and nicotine addiction, tobacco control efforts are necessary on all levels and must be comprehensive, of sufficient intensity and duration, and adequately resourced. Examples of research relevant to this topic include but are not limited to studies of:
  - Community characteristics and models for development of capacity
  - Optimal combinations of and exposures to interventions in populations
  - Population characteristics and effects of macro level changes
  - Models for systems integration and evaluation
  - Interventions addressing psychological, physiological, social and cultural determinants
  
- ◆ **Harm Reduction** (cessation, protection from environmental tobacco smoke, and product modification): Harm reduction involves complex and dynamic components such as sociobehavioural considerations, social norms, mass communication, public policy and an understanding of the inter-relationships between tobacco abuse and other addictions. Examples of research relevant to this topic include but are not limited to studies of:
  - Assessment of new products and technologies supporting harm reduction
  - Mechanisms of harm reduction at all levels, from basic genetics to full populations
  - Interactions with other substance use, risk-taking behaviours
  
- ◆ **Economics of Tobacco Control:** Economic arguments may be an effective way of reaching policy makers and raising awareness of the attributable costs of tobacco exposure, the value of interventions, and the importance of taxation strategies. Examples of research relevant to this topic include but are not limited to studies of:
  - Longitudinal impacts of policies
  - Industry responses and behaviours regarding policies
  - International and comprehensive impacts of policies (e.g., taxation)
  - Estimation of economic costs and other economic ramifications from tobacco abuse and nicotine addiction

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<sup>3</sup> "Sex" refers to "biological trait".

<sup>4</sup> "Gender" refers to "the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis".

- ◆ **Tobacco Industry Practices:** The tobacco industry uses numerous tactics to legitimize its global expansion and marketing of its products, largely by creating a social environment that indirectly condones the use of tobacco. Examples of research relevant to this topic include but are not limited to studies of:
  - Trends in and monitoring of industry tactics; information from litigation
  - Content of industry documents
  - Product modification and marketing
  - Global issues (e.g., international sale of tobacco, promotion and use in low and middle income countries)
  - Public opinion of industry

## Oversight and Peer Review Process

The coordinating body for this Strategic Initiative will be the CTCRI, comprised of former and new partners including CIHR, NCIC and CCS, HSFC, Health Canada and CLA. The Board of Directors of CTCRI will be responsible for the general oversight of the Initiative, the Requests for Applications and the associated review processes. Letters of Intent, where applicable, will be reviewed by all partners. Full proposals submitted in response to all RFAs – with the exception of capacity building grants – will be reviewed by an expert peer review panel convened by the participating partners. Capacity building grants are reviewed under the supervision of the CTCRI Board.

## Mechanisms of Support

For instructions on how to apply to the strategic initiative *Advancing the Science to Reduce Tobacco Abuse and Nicotine Addiction* please refer to the specific Request for Applications:

### Regular Grants and Team Support

Request for Applications	Funding	Timelines
<p><b>Interdisciplinary Capacity Enhancement (ICE) Team</b> grants are to provide support for new or existing groups who can demonstrate that they are committed to engendering a trans-disciplinary research culture</p>	<p>Up to \$300,000/year for up to 5 years</p> <p>Funding is available to support at least 3 grants under this PA</p> <p>\$5,000 awarded for successful Letters of Intent</p>	<p>Letter of Intent: September 22, 2003</p> <p>Applicants are notified of the results of the letter of intent review by November 1, 2003.</p> <p>Full Proposal: April 1, 2004</p>
<p><b>Policy Research Grants</b> are intended to stimulate research that will influence and guide policy decisions in tobacco control, or have a direct impact on policy decisions in tobacco control.</p>	<p>Up to \$65,000/year for up to 3 years</p> <p>Funding is available to support at least 6 grants under this PA</p>	<p>Full proposals: October 1, 2003 April 1, 2004</p>
<p><b>Synthesis (formerly Better Practices) Grants</b> are intended to support interdisciplinary teams of researchers and practitioners/decision-makers to conduct collaborative reviews of evidence for particular tobacco control interventions. Outcomes of the reviews are expected to be: (1) guidelines for practice in the relevant area(s); (2) priorities for further research; and (3) feedback on use of the best practices model associated with the RFA.</p>	<p>Up to \$80,000 for 1 year</p> <p>Funding is available to support 3-4 grants under this PA</p> <p>\$5,000 awarded for successful Letters of Intent</p>	<p>Letter of Intent: September 22, 2003</p> <p>Applicants are notified of the results of the letter of intent review by November 1, 2003.</p> <p>Full Proposal: April 1, 2004</p>

### Regular Grants and Team Support, cont.

Request for Applications	Funding	Timelines
<p><b>Idea grants</b> are designed to encourage unique or original research that has the potential to advance knowledge in this area. Grants will allow investigators with novel ideas and observations to conduct pilot studies, perform secondary analysis of data sets, or gather new evidence necessary to determine the viability of novel research directions or hypotheses.</p>	<p>Up to \$50,000, one-time grants for 1 year</p> <p>Funding is available to support at least 6 grants under this PA</p>	<p>Full proposals: October 1, 2003 April 1, 2004</p>

### Capacity Building Grants

Request for Applications	Funding	Timelines
<p><b>Student Research Grants</b> provide grants to support students or trainees to conduct research in connection with that of the student's supervisor</p>	<p>Up to \$10,000</p> <p>Funding is available to support at least 2 grants/competition</p>	<p>Four competitions per year: March 30 June 30 September 30 December 30</p>
<p><b>Research Planning Grants</b> are offered for the purpose of bringing together new, interdisciplinary research teams to construct research proposals for submission to traditional open funding competitions. Planning Grants are intended to defray the costs of preparing quality proposals that will score high in both relevance and scientific merit.</p>	<p>Up to \$15,000.</p> <p>Funding is available to support at least 2 grants/competition</p>	<p>Four competitions per year: February 28 May 30 August 30 November 30</p>
<p><b>Researcher Travel Grants</b> are offered to individuals to present results of his/her research at relevant scientific meetings.</p>	<p>Up to \$3000; more in the case of certain international events.</p> <p>Funding is available to support at least 6 grants/quarter</p>	<p>Specific deadlines apply to certain national or international events. Otherwise, there is a rolling deadline for this program, but applications must be received at least 30 days in advance of the event.</p>

## **Contacts for Further Information**

*All applications should be submitted to:*

### **Canadian Tobacco Control Research Initiative**

CCS/NCIC National Office  
10 Alcorn Avenue, Suite 200  
Toronto, Ontario M4V 3B1

Tel: 416 961-7223  
Fax: 416 961-4189  
E-mail: [info@ctcri.ca](mailto:info@ctcri.ca)

Inquiries regarding this Strategic Initiative, the RFAs associated with it, eligibility requirements, and so on may be directed to the CTCRI (above) or to the CIHR:

### **Canadian Institutes of Health Research**

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## Appendix 1: Partners and Priority Areas for Funding

The [Canadian Institutes of Health Research](#) (CIHR) is Canada's major federal funding agency for health research. Its objective is to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products, and a strengthened Canadian health system. Participating institutes are: Neurosciences, Mental Health and Addiction; Cancer Research; Aboriginal Peoples' Health; Circulatory and Respiratory Health; Gender and Health; Human Development, Child and Youth Health.

INMHA: The [CIHR Institute of Neurosciences, Mental Health and Addiction](#) mission is to foster excellence in innovative, ethically responsible research in Canada that aims to increase our knowledge of the functioning and disorders of the brain and the mind, the spinal cord, the sensory and motor systems, as well as mental health, mental illness, and all forms of addiction. The INMHA seeks to translate this new knowledge into a better quality of life for all Canadians through improved health outcomes, health promotion and health care services. For this Strategic Initiative, INMHA is particularly interested to fund excellent research on all aspects of nicotine addiction, and how they relate to tobacco abuse as well as other forms of addictive behaviours.

ICR: The CIHR [Institute of Cancer Research](#) supports research to reduce the burden of cancer on individuals and families through prevention strategies, screening, diagnosis, effective treatment, psycho-social support systems, and palliation. For this Strategic Initiative, ICR will support the full range of research topics and funding mechanisms.

IAPH: The goal of the CIHR [Institute of Aboriginal Peoples' Health](#) is to lead a national advanced research agenda in the area of aboriginal health, and to promote innovative research in this field. The longer-term outcome of this research will lead to improvements in the health of aboriginal people in Canada. The IAPH will play a lead role in building research capacity in the First Nations, Inuit and Metis communities, and will support partnerships and alliances between aboriginal communities and non-aboriginal health research organizations/institutes at the local, regional national and international levels. -IAPH will support health research that respects aboriginal cultures, while generating new knowledge to improve the health and well-being of aboriginal people.

ICRH: The CIHR [Institute of Circulatory and Respiratory Health](#) supports research into causes, prevention, screening, diagnosis, treatment, support systems, and palliation for a wide range of conditions associated with the heart, lung, brain, blood and blood vessels. ICRH funds will be directed toward Interdisciplinary Capacity Enhancement (ICE) grants, which respond to the ICRH mandate. ICRH is particularly interested in applications which address five priority areas: Aboriginal Peoples', determinants of use, harm reduction, integrated policy and program interventions, sex differences and gender influences as they relate to circulatory and respiratory health.

IGH: The [Institute of Gender and Health](#) supports research that addresses how sex (biological-genetic dimensions) and gender (social-cultural dimensions) interact with other socio-cultural, bio-physical, and political-economic factors to influence health and create conditions that differ with respect to risk factors or effective interventions for males and females throughout the lifespan. The objectives of the Institute of Gender and Health are (1) to generate evidence

regarding the impact of sex and gender on health status, health behaviour, and health services use throughout the life span; (2) to enhance understanding of how gender and sex interact with other health determinants; (3) to provide evidence to inform the design of programs, policies and practices; (4) to build the capacity of gender and health researchers in Canada; and (5) to advance the gender and health perspective nationally and internationally.

Five research priorities were identified following extensive national consultations. This Strategic Initiative is relevant to the research priority ‘Promoting Positive Health Behaviours and Preventing Addictions’. The IGH encourages applications that emphasize sex differences in and/or gender influences on tobacco abuse and nicotine addiction, including implications for gender-sensitive interventions. The IGH will contribute funds (up to \$200,000) to successful applications relevant to the gender, sex and health priority theme in this Strategic Initiative. The IGH is particularly interested in supporting Idea Grants, Research Planning Grants, Knowledge Synthesis Grants, and Student Research grants, but will consider other types of grants.

IHDCYD: The CIHR [Institute of Human Development, Child and Youth Health](#) supports research to enhance maternal, child, and youth health and to address causes, prevention, screening, diagnosis, treatment, short- and long-term support systems, and palliation for a wide range of health concerns associated with reproduction, early development, childhood, and adolescence.

The [National Cancer Institute of Canada](#) (NCIC), which receives its funds from the [Canadian Cancer Society](#) and [Terry Fox Foundation](#), is Canada’s leading funder of cancer research. Its mission is to undertake and support cancer research and related programs in Canada that will lead to the reduction of the incidence, morbidity and mortality from cancer. The NCIC works toward this mission by undertaking the following objectives: initiating and supporting cancer research through grants and other mechanisms; offering a program for the training, development and support of personnel in cancer research; providing information related to cancer research and cancer control; facilitating and actively participating in the coordination of activities sponsored by related agencies, both national and international; acting in concert with its partner the Canadian Cancer Society. The NCIC has historically supported a broad spectrum of research related to tobacco, given the number of tobacco-related deaths in Canada and the impact of tobacco use on cancer. For this Strategic Initiative, the NCIC will consider all excellent proposals, through any of the funding mechanisms available, and especially research that is likely to impact tobacco control policies and programs in Canada.

The [Heart and Stroke Foundation of Canada](#) (HSFC) is one of Canada’s largest health charities and funds the majority of heart disease and stroke related research in Canada. The mission of HSFC is to improve the health of Canadians by preventing and reducing disability and death from heart disease and stroke through research, health promotion and advocacy. The Heart and Stroke Foundation of Canada is very active on tobacco control issues, working in partnership with a number of organizations and coalitions, at both domestic and international levels. Funds for this initiative are available through the Heart and Stroke Foundation (HSF) Research Fund – a strategic fund comprising contributions from all 10 provincial Heart and Stroke Foundations and the HSF.

The HSF is particularly interested in projects related to Aboriginal Peoples’ health, determinants of use, harm reduction (cessation), integrated policy and program interventions, and sex differences and gender influences as they relate to cardiovascular disease and stroke. Applications for Interdisciplinary Capacity Enhancement (ICE) Team Grants and Policy Research Grants will be given priority.

[Health Canada](#) is the federal department responsible for helping the people of Canada maintain and improve their health. Health Canada strives to improve the health of all Canada's people, while respecting individual choices and circumstances, and therefore seeks to put Canada among the countries with the healthiest people in the world. In partnership with provincial and territorial governments, Health Canada provides national leadership to develop health policy, enforce health regulations, promote disease prevention and enhance healthy living for all Canadians. Health Canada ensures that health services are available and accessible to First Nations and Inuit communities. It also works closely with other federal departments, agencies and health stakeholders to reduce health and safety risks to Canadians.

The mission of [The Lung Association](#) is to lead national and international lung health initiatives in preventing lung disease; helping people manage lung disease and promoting lung health. A unique partnership of 10 provincial Lung Associations from coast to coast, the Canadian Lung Association acts to strengthen the work of the provincial associations through support of research, advocacy of improved respiratory health, communications and coordination of services.

## Appendix 2: Performance Outcomes and Measures

Partners in the CTCRI assume responsibility for assessing the performance of this initiative through ongoing monitoring and periodic evaluation. The partners are committed to informing Canadians about the progress of work related to the recommendations of the Canadian Tobacco Control Research Summit and the results that are produced.

The following table is intended to further clarify objectives by linking them to expected outcomes and measures. All funded applicants will be expected to participate in the evaluation strategy, contributing advice, data and reports as required for assessment purposes.

Program Objectives	Expected Outcomes	Measures/Indicators
Increase excellence and capacity for research on tobacco abuse, nicotine addiction, and tobacco control interventions	<p>Increased number of investigators and teams engaged in work in identified areas of focus</p> <p>Increase the diversity of disciplines represented by teams conducting tobacco-related research</p>	<p>New investigators integrated into new and established teams working in identified areas</p> <p>Established investigators undertaking new work in identified areas</p> <p>Trainees integrated within research teams working in identified areas</p>
Focus research efforts on priority research gaps identified by leaders in tobacco control in Canada through the CTCRS	Increased knowledge in the areas of research identified as priorities.	<p>Number of proposals funded in each of the identified themes/areas</p> <p>Amount of funding dedicated to identified areas</p> <p>Number of researchers engaged in work in identified areas</p>
Fund excellent research aimed at understanding the measures, causes, prevention, treatment, consequences and control of tobacco abuse and nicotine addiction	Increase of high quality research in identified areas throughout Canada	<p>Quality of proposals submitted, reviewed and recommended for funding</p> <p>Capacity of research teams to carry out proposed work</p> <p>Funding available and allocated to support accepted proposals</p>
Advance the use of a range of research methodologies as appropriate to the topics of tobacco abuse and nicotine addiction investigation	Increase in research projects employing alternative, appropriate, high quality research methods	<p>Increase in number of high quality applications using alternative research methods</p> <p>Increase in funding awarded to projects using alternative methods</p>

<p>Foster translation of knowledge to applications in prevention, treatment and control of tobacco abuse and nicotine addiction</p>	<p>Knowledge generation, dissemination and uptake. New or enhanced mechanisms for translating research.</p>	<p>Increased awareness of current knowledge available in identified areas among policy- and decision-makers, and professionals in health care, addiction treatment, education, etc.</p> <p>Increased utilization of evidence-based interventions in identified areas</p> <p>Participation in regional, national and international meetings/conferences by researchers conducting work in identified areas</p> <p>Publication of research papers describing scientific results in identified areas</p>
<p>Increase coordination of research and its applications</p>	<p>New and strengthened networks and support tools for research and its translation in identified areas</p>	<p>Partners collaborating to carry out CTCRS recommendations, through CTCRI</p> <p>Tools developed and implemented by partners to support research field and tobacco control professionals</p> <p>Regional, national and international networks</p>

### **Appendix 3. Tobacco Abuse and Nicotine Addiction Background**

On April 19-21, 2002, 80 researchers and decision-makers gathered in Ottawa, Ontario, to develop a strategic research agenda for Canada aimed at reducing tobacco use and its associated harm. The Canadian Tobacco Control Research Summit (CTCRS) was a joint initiative of the Canadian Tobacco Control Research Initiative (CTCRI), the Canadian Institutes of Health Research (CIHR) – led by the Institute of Neurosciences, Mental Health and Addiction – and the Heart and Stroke Foundation of Canada. The CTCRS sought input from a broad range of researchers and stakeholders to establish themes for research topic areas and methodologies, and a process for reviewing and updating these between 2002 and 2012.

The World Health Organization (WHO) has described tobacco dependence as a foremost public health disaster which warrants serious attention if the epidemic of tobacco-related mortality and morbidity is to be reduced (WHO 2001). According to WHO estimates, there are approximately 1.1 billion smokers in the world - about one-third of the global population aged 15 years and over; globally, approximately 47% of men and 12% of women smoke. Tobacco use is the major cause of preventable death and disease in Canada; over 45,000 Canadians die prematurely each year due to tobacco-related causes. In 2001, about 5.4 million Canadians were smokers. This represents 22% of the population aged 15 years and older. Of these, about 4.8 million – or 18% of the population – smoked everyday. Of all age groups, it is those aged 20-22 that have the highest percentage of smokers (33.5%). These percentages nevertheless represent the lowest in Canada since the 1960s (CCTC, 2003).

Tobacco use is implicated in cancer, heart disease and stroke, lung diseases, diabetes, miscarriages, sudden infant death syndrome, retarded recovery from illness, and more. It is harmful whether smoked, chewed, or inhaled as snuff. Second hand smoke also causes diseases. Children regularly exposed to second-hand smoke (SHS) are at least 50% more likely to suffer damage to their lungs and to have breathing problems such as asthma. In 2001, an estimated 800,000 children under the age of 12 were regularly exposed to SHS in the home. In non-smokers, exposure to SHS increases the risk of getting either lung cancer or heart disease by 20% (Health Canada, 2003). Prevention of smoking among young people is critical. The younger the age at which individuals begin smoking, the more likely they are to become strongly addicted to nicotine. Among young people, the short-term health consequences of smoking include respiratory and non-respiratory effects, addiction to nicotine, and the associated risk of other drug use (CDC, 2003). According to the US Centers for Disease Control and Prevention, high school seniors who are regular smokers and began smoking by grade nine are more than twice as likely than their non-smoking peers to report poorer overall health, shortness of breath when not exercising, and wheezing or gasping. Smoking at an early age reduces the rate of lung growth, hampers the level of maximum lung function, and increases the risk of lung cancer (Health Canada, 2003).

Reversal of risk at quitting is substantial at any age, even in long term smokers. The WHO estimates that one year after quitting, the risk of coronary heart disease (CHD) decreases by 50%, and within 15 years, the relative risk of dying from CHD for an ex-smoker approaches that of a lifetime non-smoker. The relative risks of developing lung cancer, chronic obstructive lung diseases, and stroke also decrease. Ten to fourteen years after smoking cessation, the risk of mortality from cancer decreases to nearly that of those who have never smoked. Smoking cessation shows a beneficial effect on pulmonary function, particularly in younger subjects, and the rate of decline among former smokers returns to that of never-smokers. Recent evidence shows that ceasing before the age of 35 is of greater

benefit than ceasing at a later time, but there are still substantial benefits, no matter at what age one quits tobacco use (WHO, 2001).

In order to effectively address the problem of tobacco abuse and nicotine addiction, tobacco control efforts are necessary on all levels, i.e., locally, nationally, and internationally. Policies and programmes on all levels serve to complement each other. In many cases, national programs and policies have come about because of the efforts begun at the local level. These include providing protection from SHS, enforcement of restrictions on sales of tobacco products to minors, provision of anti-smoking health education programs, and provision of smoking cessation programs or materials (WHO, 2001). Comprehensive, sustained, and adequately funded interventions have been shown to decrease tobacco use in some U.S. states. What is not yet known, however, is the effectiveness and cost-effectiveness of specific interventions within a comprehensive mix. Research must advance knowledge that would contribute to understanding of the most effective combinations of interventions, as well as the ideal “dosages” of particular programs or policies.

Over the past two decades a wealth of research findings have pointed to nicotine as the key pharmacological factor underlying tobacco use. The brain responds to nicotine with a wide range of changes at the gene, protein, cell and systems level. Study of adaptations to chronic nicotine exposure may help to understand the physiology underlying long-term tobacco addiction, sex-differences in smoking-related behaviours, and difficulty in quitting smoking. Furthermore, recent epidemiological studies in Australia, Germany and the U.S.A. have reported an association between smoking and mental disorders. Persons with mental illness are about twice as likely to smoke as other persons, comprising, e.g., 44% of the U.S. tobacco market.

Environmental and social forces undoubtedly play a role in tobacco use, especially among certain sub-groups of the population. Women, for example, are equally, if not more, affected by tobacco than men. The risk of female smoking is dramatically increasing around the world especially among women of reproductive age. . In their early teens, girls are smoking at higher rates than boys, but by the late teens/early 20s, boys are smoking more, and the gap widens with time, although both groups smoking rates have continued to decline since 1998 (Stephens, 2002). Francophone and Aboriginal women are smoking more than the general female population. Women’s risk of lung cancer is higher than men’s at every level of smoking and for both low and high tar cigarettes. Further, aggressive small cell cancers are more common amongst women, and more women than men with lung cancer are non-smokers.

Sex and gender differences have been reported in the engagement of both negative and positive health behaviours. Negative health behaviours such as smoking have been linked with gender-related responses to stress, and gender role performance. Intervention strategies are differentially effective for women and men. For women, there are key factors, such as child care responsibilities, income adequacy and the nature of women’s work that cause women to experience the effects of broad tobacco policies differently. For example, health warnings on cigarette packages such as “tobacco smoke can harm your children”, while informative, may carry additional emotional messages for women who, in general, spend more time at home with children. Taxation to increase cigarette prices may cause economic hardship to some sub-groups who may be faced with reducing expenditures on food in order to finance cigarettes or other tobacco products on which they are dependent. Given the increasing rates of young women’s smoking, and the demographics of low-income, Francophone and Aboriginal women smoking more than the general female population, there is a need for consistent gender analysis of tobacco policy, a need for biomedical research to understand the effect of smoking on females, and a need for more research into the role of smoking in women’s lives (Greaves 2003). Researchers must

delve further into sex-specific physiological effects of tobacco, alcohol, illegal drugs and the pharmaceutical preparations used to curb addictions to these substances. Gender differences that influence the motivation to engage in positive or negative health behaviours and to participate in interventions focused on health behaviours deserve attention.

Aboriginal Canadians of all ages have the highest rates of use in Canada of both cigarettes and smokeless tobacco products, and they tend to initiate tobacco use at very young ages. Smoking rates among the Aboriginal population are far above the national average; a Health Canada survey found that in 1994 the national rate of smoking in Canada was 31%, while 57% of Aboriginal adults and 54% of Aboriginal teenagers were smokers. The survey also found that 53% of Aboriginal mothers smoked while pregnant compared to just 26% of non-Aboriginal mothers. Aboriginal men living on reserves have a 40% higher death rate from tobacco-related illness than other Canadians; Aboriginal women on reserves have a 62% higher rate of heart disease. Non-smokers who live with smokers have a 30% higher risk of death from heart attack and lung cancer. Aboriginal babies die from sudden infant death syndrome at a rate three times higher than the Canadian average. Smoking was a major factor in all of these statistics. The associated economic, social, cultural, political and health care consequences associated with premature death are a serious concern (AMMSA 2003). Synthesis of new and existing data around the determinants of health is needed to understand why Aboriginal Canadians appear to be more prone to tobacco abuse and nicotine addiction. Specifically, research is needed to understand the contribution of poverty, unemployment, and low income on smoking rates among the Aboriginal population. For further information on tobacco use among the Aboriginal population, see “Eating Smoke: A Review of Non-Traditional Use of Tobacco Among Aboriginal People” (Reading 1996).

Not only is tobacco highly addictive, tobacco use is also perceived by many smokers as having social and psychological utility: to relieve stress, anger, and depression; to show defiance, rebellion, and transition to adulthood; to demonstrate membership in social groups, and so on. Despite dramatic shifts in public opinion, tobacco use is still acceptable, especially in economically disadvantaged populations or in certain geographical or cultural areas. But even where health education campaigns have had successes in informing the public, and particularly children, about the dangers of tobacco, it is not enough.

It is still the case that tobacco products are permitted to be sold on the Canadian market. These products are promoted by a wealthy, aggressive industry. The three major Canadian manufacturers of tobacco products earned about 3 billion dollars in net sales in 1999-2000 alone (CCTC, 2003). Manufacturing of non-tobacco goods contributed to this revenue. These companies are partially if not totally owned by multi-national tobacco companies; these companies have holdings on every continent and continue aggressive global expansion into new markets. The Canadian tobacco industry has used numerous promotional and public relations tactics both to glamorize its products and to resist regulatory pressures by implying that legislative measures are not necessary: glamorizing tobacco products to make the products seem more acceptable; advertising by means of sponsorship promotion, thereby influencing the arts and culture to defend what are in reality cigarette marketing practices; donations to political parties and universities; and labelling products with descriptors such as “light and mild”. These are all strategies used by the tobacco industry to promote its product and resist government and health advocacy-led efforts to denormalize tobacco products and their use. Research to help understand and minimize tobacco industry behaviour and tactics is therefore needed.

**For further information on tobacco control in Canada please go to:**

Health Canada: [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)

Canadian Council for Tobacco Control: [www.cctc.ca](http://www.cctc.ca)

National Clearinghouse on Tobacco Control: [www.ncth.ca](http://www.ncth.ca)

Physicians for a Smoke-free Canada: [www.smoke-free.ca](http://www.smoke-free.ca)

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