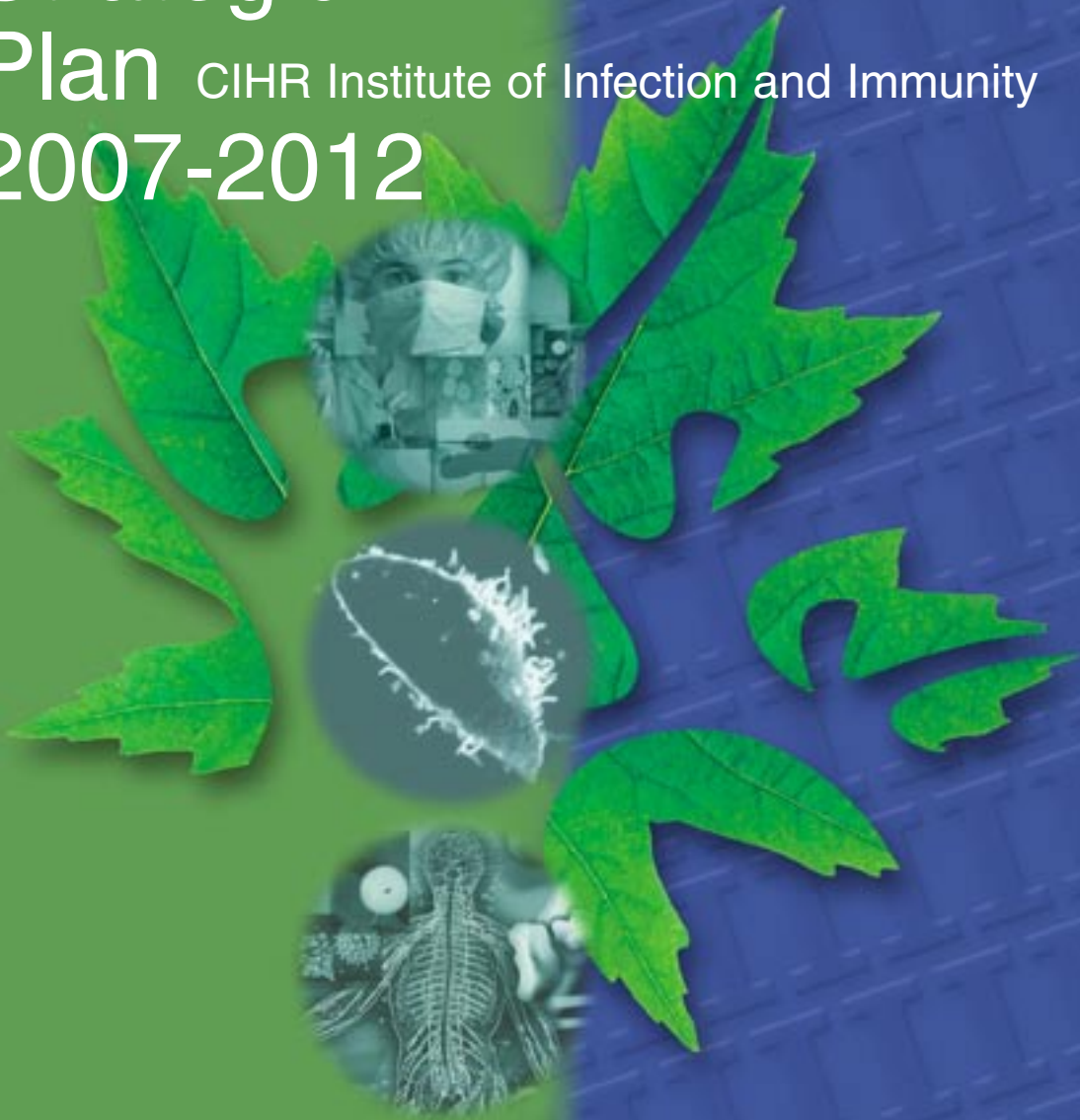




Leadership, Innovation, Impact

Strategic Plan CIHR Institute of Infection and Immunity 2007-2012



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Message from the Scientific Director



Since the establishment of the Institute of Infection and Immunity by the Canadian Institutes of Health Research (CIHR) in 2000, outbreaks of the SARS virus, Bovine Spongiform Encephalopathy (BSE) and West Nile virus have impressed upon Canadians the importance

of infection and immunity research. These outbreaks, combined with an increased prevalence of *Clostridium difficile* (*C. difficile*), *E. coli* in water and food and the threat of pandemic flu have raised awareness of the central role that a robust infection and immunity research community plays in protecting the health of Canadians and preventing the global spread of disease.

Institute leadership in establishing and directing the Canadian SARS Research Consortium (2003), and the catalytic role of the Institute in the creation of both a national Network of Centres of Excellence in prion research (2005) and the pandemic preparedness research agenda (2006), illustrate the ability of the Institute to leverage Canadian research capacity and facilitate rapid and effective responses to national crises and emerging challenges.

Canada has a strong tradition of innovation and excellence in infection and immunity research with over \$200 million in research funding from CIHR in this

area. Currently the Institute invests approximately \$8 million in basic and applied research projects each year related to infectious diseases and immune response in the host. This support complements existing Canadian research strengths and facilitates partner engagement in key initiatives and has led to the following research outcomes, including research:

- Leading to new technologies and health services in antimicrobial resistance and immunity;
- Addressing microbial contamination of food and water and the disinfection of Canada's drinking water;
- Developing research capacity in social and behavioural aspects of HIV/AIDS and hepatitis C;
- Designing pandemic and inter-pandemic influenza prevention and control strategies;
- Assessing predisposing risk factors, treatment and prevention strategies for asthma, and the impacts of asthma on Canada's health services and systems;
- Using stem cell technologies to treat autoimmune diseases such as diabetes;
- Developing new approaches to host susceptibility, resistance to pathogens and vaccine delivery;
- Designing innovative approaches in regenerative medicine and transplantation; and
- Building and maintaining capacity across Canada through Institute support of 14 innovative strategic training programs in health research.

On behalf of CIHR, the Institute also manages special federal funding envelopes which support the HIV/AIDS and Pandemic Influenza Preparedness

research agendas, in the amount of approximately \$20 million annually. The Institute is the CIHR lead for the *Federal Initiative to Address HIV/AIDS in Canada*, working in partnership with Health Canada, the Public Health Agency of Canada and Correctional Services Canada. The Institute's HIV/AIDS research program is concurrently undertaking a separate strategic planning process, which will be aligned and integrated with the Institute's overarching strategic plan.

The Institute's impact to date has been highlighted in the international review of CIHR and it must continue to focus on the many challenges faced by the global community in the area of infectious disease and disorders of the immune system. However, future support for infection and immunity research in Canada will derive from multiple sources of which the Institute is but one.

In developing its strategic plan over the past year, the Institute engaged stakeholders in a national dialogue – seeking advice and listening carefully for emphasis and direction. Above all, stakeholders recommended that the Institute strategically focus its investments and provide national and international leadership to infection and immunity research. It was also recommended that the Institute continue to catalyze new research in priority areas and align and balance its investments with CIHR open competition support for infection and immunity research.

This strategic plan will be a key resource to inform the Institute's activities and operations, 2007 to 2012. Over the next five years the Institute will direct its small strategic research investments towards a limited number of priority research themes in a manner consistent with the comprehensive goals and objectives outlined in this plan. The Institute's long-term goal is to set a course that promotes innovative infection and immunity research which will benefit Canadians and the international community, consistent with the overall vision and role of CIHR as it evolves. At the same time, the Institute will continue to advocate on behalf

of the whole of the infection and immunity research community.

I appreciate the time and energy that infection and immunity researchers and stakeholder organizations have invested in developing this plan and recognize in particular the contributions of the Institute Advisory Board under the leadership of Dr. Lorne Babiuk. With the continued support of the Advisory Board, our aim is to transform Canadian infection and immunity research investments into enduring and beneficial impacts for those who fund research, those who carry it out and those who use its results. In the years ahead, Canadian scientists have an extraordinary opportunity to deliver on expectations that improved health and social and economic value will be forthcoming from public investments in research. Meeting these expectations will require an ongoing commitment to research excellence, collaboration and partnership, as well as knowledge translation and communication of research outcomes. With the ongoing support of the broader infection and immunity research community, I am confident that the goals articulated in this strategic plan can be achieved.

Finally, I would like to thank Diana Royce and Bruce Moor for their significant contributions to the development of this strategic plan.



Bhagirath Singh, Ph.D.
Scientific Director
Institute of Infection and Immunity
June, 2007

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Executive Summary

Since 2000, the Institute of Infection and Immunity has had a mandate to develop and coordinate infection and immunity research on behalf of CIHR and ensure that research results are translated and applied to improving the health and quality of life of Canadians. This strategic plan envisions the Institute as a catalyst for the development of infection and immunity research areas that have long-term potential for significant social and economic impact.

The mission of the Institute is to provide national leadership, priorities and programs that promote novel infection and immunity research.

The vision of the Institute is to be an internationally-recognized innovator in support of infection and immunity research and a catalyst for the translation of new knowledge for global impact.

The values that guide Institute decisions, strategies and actions are excellence, innovation, collaboration, transparency and accountability.

Consistent with its mission, vision and values, the Institute will focus investments from 2007 to 2012, in five areas:

- Emerging Infections and Microbial Resistance: *Solutions from innovation in tools and technologies*
- HIV/AIDS: *From prevention and therapy to addressing global health challenges*
- Immunotherapy: *New approaches through systems biology*
- Pandemic Influenza Preparedness: *Prevention,*

therapy and public health challenges

- Vaccines of the 21st Century: *Integrating innate and adaptive immunity and novel vaccine technologies*

In the context of its investments in these research areas, the Institute will pursue the following strategic goals:

- Encourage and support high quality research in infection and immunity that contributes important knowledge and new insights relevant to human health.
- Foster and sustain innovative environments to attract, train and retain high quality research personnel across the spectrum of disciplines contributing to the achievement of the Institute research mandate.
- Encourage and facilitate knowledge translation in all fields and sectors related to the Institute mandate.
- Develop and maintain effective partnerships that benefit research domains of the Institute.
- Maintain and enhance organizational excellence through effective planning, communication and collaboration.

Over the next five years, the Institute aims to provide national leadership in enabling research excellence, leverage relationships and partnerships to promote innovation, and facilitate national and international research impacts through knowledge translation and communication. Through these actions and consistent with its mission, the Institute ultimately seeks to improve and sustain the health of Canadians and contribute to reducing the global burden of disease.





About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research is the primary federal agency responsible for health research leadership and funding in Canada. The *CIHR Act* (June 7, 2000) established CIHR as a Departmental Corporation under Schedule II of the Financial Administration Act. As an arm's length agency of government, CIHR is accountable to Parliament through the Minister of Health.

The CIHR mandate 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 care system”* (Bill C-13, April 13, 2000).

The CIHR vision is *to position Canada as a world leader in the creation and use of knowledge through health research that benefits Canadians and the global community.*

2 CIHR is organized around 13 Institutes that are mandated to support health research across four domains: biomedical, clinical, health systems and services, and population and public health. Each Institute is led by a Scientific Director, who is an internationally recognized leader in their field. The Scientific Director receives guidance from an Institute Advisory Board (IAB) composed of volunteers from all areas of the health research community, including those who fund research, those who carry it out and those who use its results. Institutes are formally accountable to the President of CIHR, and, through the Minister of Health, to Parliament.

The thirteen Institutes share responsibility for achieving the CIHR mandate. The development of the Institutes has been guided by strategic priorities outlined in *CIHR's Blueprint for Health Research and Innovation, 2004*. These are:

- Strengthen Canada's health research communities.
- Address emerging health challenges and develop national research platforms and initiatives.
- Develop and support a balanced research agenda that includes research on disease mechanisms, disease prevention and cure, and health promotion.
- Harness research to improve the health status of vulnerable populations.
- Support health innovations that contribute to a more productive health system and prosperous economy.

In pursuit of its mandate and vision, CIHR has articulated five key outcomes, three of which are strategic and two that are enabling. The strategic outcomes are:

- **Outstanding research** – to advance health knowledge, through excellent and ethical research, across disciplines, sectors, and geography.
- **Outstanding researchers in innovative environments** – to develop and sustain Canada's health researchers in vibrant, innovative and stable research environments.
- **Transforming health research into action** – to catalyze health innovation in order to strengthen the health system and contribute to the growth of Canada's economy.



These strategic outcomes will be enabled through:

- **Effective partnerships and public engagement** – to engage with the public through meaningful dialogue and establish effective partnerships with key stakeholders.
- **Organizational excellence** – to achieve its mandate through excellence in staff, service delivery, systems, and management.

The CIHR approach to supporting health research is broad, inclusive and unique worldwide.



The Institute of Infection and Immunity

The Institute of Infection and Immunity is based at the University of Western Ontario in London, Ontario. Staff members supporting the work of the Institute are located in London and at CIHR headquarters in Ottawa.

The Institute has a mandate to develop and coordinate research in infection and immunity and ensure that research results are translated and applied toward improving the health and quality of life of Canadians.

Two strategic research priorities, *Infectious Disease* and *Host Response*, developed through extensive consultation with partners and stakeholders, guided the Institute's research investments from 2001 to 2006. Sub-themes in *Infectious Disease* included antimicrobial resistance, emerging infectious diseases, HIV/AIDS, Hepatitis C, and microbiologically safe food and water. Sub-themes in *Host Response* were asthma and allergy, autoimmune diseases, innate immunity, and organ transplantation and tissue regeneration. An overarching priority has been the enhancement of research capacity in all areas of the Institute mandate.

The Institute's initial five-year strategic plan plotted a course into the future that anticipated a continuous and iterative process of feedback guiding the Institute's development. The results of the *CIHR Mid-Term Evaluation of the Institute of Infection and Immunity (III)* (December 2005) confirmed that the Institute should continue to:

- Pursue its research excellence, capacity development and strategic approach;

- Maintain the current governance structure;
- Sustain current efforts in collaboration and the development of partnerships;
- Sustain knowledge creation with an increased focus on the immunology research community;
- Sustain its current knowledge translation activities; and
- Sustain its contributions in the area of ethics.

Specific measures to enhance Institute performance recommended in the Mid-Term Evaluation included the following actions:

- Strengthen communications, with the support of CIHR headquarters, by assessing mechanisms to raise the profile of the Institute within its community and the general public and by more effectively communicating the transformative benefits and funding impacts of CIHR.
- Seek active and effective researcher and stakeholder input into planning processes through broadly based engagement strategies.
- Raise the profile of Institute knowledge translation (KT) efforts, evaluate KT impacts, and effectively leverage partnerships and collaborative relationships in support of the achievement of KT objectives.
- Define performance targets and systematically monitor and report on results.

The strategic plan for 2007-2012 endeavours to build on existing research strengths of the Institute's mandate and address areas identified in the mid-term evaluation. It also attempts to anticipate future social and economic needs for scientific excellence in research



and development. Finally, it strives to take into account changes in the environment within which the infection and immunity research community operates.

In June 2006, CIHR published its *Year 5 - International Review Panel Report, 2000-2005*, the first external review of CIHR. The *Report* endorsed the CIHR model, citing the significant progress made towards an enhanced capacity to fund research across all health related disciplines and the strengthening of multidisciplinary research and training through strategic initiatives. The *Report* also made recommendations for the continued development of CIHR. Of particular relevance to the Institutes was recognition that

Scientific Directors should be more actively involved in the research-related decision-making within CIHR, with a role in determining allocation of the research budget and oversight of peer review panels. New structures enabling these changes will depend on a clear vision for the mandate of each Institute coupled with strong linkages with the research community represented by the Institute.

The Institute's long-term goal is to set a course for innovative research in infection and immunity that will benefit Canadians and the global community, consistent with the overall vision and role of CIHR as it evolves. This plan maps a route to that goal.



Institute Mandate, Mission, Vision and Values

The **mandate** of the Institute of Infection and Immunity is to support research to enhance immune-mediated health and to reduce the burden of infectious disease, immune-mediated disease, and allergy through prevention strategies, screening, diagnosis, treatment, support systems and palliation.

The Institute's **mission** is to provide national leadership, priorities and programs that promote novel infection and immunity research.

The Institute's **vision** is to be an internationally-recognized innovator in support of infection and immunity research and a catalyst for the translation of new knowledge for global impact.

The **values** that guide Institute decisions, strategies and actions are:

Excellence:

Strive for excellence in advancing the mission of the Institute.

Innovation:

Encourage and facilitate the introduction of new ideas, approaches, opportunities and practices.

Collaboration:

Demonstrate positive, responsible, ethical and mutually respectful relationships with researchers, trainees, partners and stakeholders.

Transparency and accountability:

Ensure that decision-making processes are fair, open, and grounded in sound ethical principles, that conflicts of interest are disclosed and managed appropriately, and that straightforward accountability mechanisms and performance indicators are implemented for all activities.



Strategic Research Priorities

Defining research priorities is a key responsibility for all CIHR Institutes. The criteria used to select Institute of Infection and Immunity research priorities for 2007 – 2012 were developed following:

- A review of the research priorities identified for the Institute’s strategic plan 2002-2007;
- Solicitation of opinions, suggestions and recommendations of leading Canadian and international infection and immunity researchers, Canadian and international research agency directors and infection and immunity stakeholders across a range of sectors;
- In-depth consideration, analysis and reflection on the part of the IAB, the Scientific Director and Institute staff.

The following eight criteria were used to guide the selection of Institute research priorities 2007 – 2012:

- The research opportunity identified has the potential for significant impact that can be quantified based on assessments of potential social, economic, or commercial impact, and for reducing the burden of disease and/or improving health.
- The research proposed is feasible.
- The research community has the capacity to respond to the research opportunity.
- The research opportunity represents an important investment in anticipation of future needs for a “made in Canada” solution with potential for global health impact.
- The research opportunity addresses a strategic knowledge gap or complements and builds upon previous investments in areas where the availability

of alternative sources of support are limited.

- The research opportunity is a response to an immediate public health threat.
- The research opportunity serves to sustain, maintain and/or expand infection and immunity research capacity in Canada.
- Opportunities exist for partnership in funding research, in research collaboration and in knowledge translation and exchange.

All research funded by the Institute must, as a threshold condition, be of high quality as determined through a process of peer review.

The Institute’s ongoing support of HIV/AIDS and Pandemic Influenza Preparedness coincides with federal government priorities, and specific funding envelopes are directed to research in these areas. The Institute is mandated to manage strategic research initiatives within these two areas on behalf of all of CIHR.

The other three priority areas are core areas of the Institute’s mandate, and have been developed with a view to enhancing the use of new knowledge and technologies in immunology and infectious disease. In these areas, Institute research initiatives will be funded through the Institute strategic budget, which is currently set at approximately 1% of the overall CIHR annual budget.

From 2007 to 2012, the Institute will continue to pursue research excellence and capacity development, focusing its investments strategically across the



following **five priority research themes**, and will seek to engage partners to augment Institute resources directed to these five areas.

Emerging Infections and Microbial Resistance: *Solutions from innovation in tools and technologies*

In the past, the Institute has supported a number of research initiatives in this area, and the problems of emerging infections and resistance of infectious agents to conventional therapeutic strategies continue to be serious healthcare issues for the foreseeable future. The Institute envisions that the development and application of technologies for rapid identification and specific targeting of infectious disease agents will lead to significant improvements in combating infections, along with a reduced requirement for resistance-enhancing broad spectrum therapies. Selected areas of focus may include:

- High throughput, multi-organism screening mechanisms for the specific detection and monitoring of infectious agents
- Identification of resistance mechanism sources, evolution and modes of transmission in microbial infectious organism communities
- Strategies for the evaluation and introduction of effective practice change in the use of antimicrobials in the health system
- Proteomic profiling strategies to analyze surface proteins present in drug-resistant infectious organisms
- Synthetic peptides or small molecules designed to enhance antimicrobials, interfere with the growth

of infectious organisms or biofilm formation or inhibit toxin production.

HIV/AIDS: *From prevention and therapy to addressing global health challenges*

The Institute of Infection and Immunity is committed to supporting HIV/AIDS research, capacity building and knowledge translation initiatives across all CIHR themes for health research. The CIHR HIV/AIDS Research Initiative has a dedicated budget from the *Federal Initiative to Address HIV/AIDS in Canada* which will plateau at \$22.6 million annually by 2008-9. In creating the *Federal Initiative*, the Government of Canada made a commitment to develop population-specific responses to the HIV/AIDS epidemic. In addition, the Institute is a partner in the Canadian HIV Vaccine Initiative (CHVI), a collaboration of the Government of Canada and the Bill and Melinda Gates Foundation to support a Canadian HIV vaccine program.

With the guidance of the CIHR HIV/AIDS Research Advisory Committee and through consultation with a wide range of stakeholders, the six priority areas below have been established. A more complete description of these areas is available on the Institute website – <http://www.cihr-irsc.gc.ca/e/32890.html> .

- Health systems, services and policy
- Resilience, vulnerability and determinants of health
- Drug development, toxicities and resistance
- Prevention technologies and interventions
- Pathogenesis of HIV
- Issues of co-infection.



Immunotherapy: *New approaches through systems biology*

Immunotherapy has proven difficult because of the complexity of interacting biological systems in the immune response, starting from the non-specific responses of the innate immune system and extending to antigen capture, processing and epitope-specific responses within the adaptive immune system. The various levels at which these interactions can be examined with the emerging tools of “immunomics” have created opportunities which may ultimately result in therapies tailored to the individual. The advent of high-throughput functional genomic and proteomic technologies have provided platforms aimed at achieving a system-wide understanding of biological systems in terms of their complete biological assets. Development and refinement of sophisticated tools to facilitate these “systems” approaches will be supported under this priority, along with research that advances the understanding of the biology of the immune response and explores the sociological and ethical impacts of new immunotherapy approaches. Research under this priority may include:

- Novel targets for immunotherapy using systems biology, genomics and proteomics tools
- Cell- and mechanism-based approaches to modulate immune responses in vivo
- Development of immune monitoring assays to assess efficacy of immunotherapy and immunization with vaccines
- Understanding genetic susceptibility to human infections using the tools of systems biology

- Modeling of immune cell receptor signal transduction
- Identification of biomarkers of innate immune status
- Mapping immune regulatory networks using computational biology
- Social, cultural and ethical factors that may impact immunotherapy and its use in specific populations.

Pandemic Influenza Preparedness: *Prevention, therapy and public health challenges*

The Institute of Infection and Immunity established the Pandemic Preparedness Research Initiative (PPRI) to support research and capacity building that will leverage international efforts and improve Canada’s ability to prevent and/or respond to an influenza pandemic. The PPRI has a defined federal budget of \$21.5 million over five years from 2006 to 2011. It aims to build a network of researchers in Canada to address issues unique to this country so that local experts and knowledge will be available in the event of a pandemic. In addition, Canada’s healthcare system and expertise make researchers in this country ideally suited to address specific research questions concerning pandemic influenza. The research priorities for this theme are:

- Vaccines and immunization programs: Optimal use and efficiency of existing vaccines and development of new pandemic vaccines
- The virus: Biology of the influenza virus and rapid diagnostics



- Prevention and treatment: Modes of transmission, use of antivirals and alternate strategies for prevention
- Ethics, legal and social issues: Research in risk communication, prioritization and regulatory approval processes.

Vaccines of the 21st Century: *Integrating innate and adaptive immunity and novel vaccine technologies*

Realizing the potential of new vaccine technologies requires advances in the measurement of immune responses to immunization, such as the simultaneous measurement of multiple serologic, cellular and cytokine parameters. Similarly, much is being learned about polymorphisms in key host defense genes that increase the risk of specific infections and will need to be considered when evaluating vaccines against

infections. Understanding how these immune system factors interact when challenged is fundamental to the design and delivery of effective vaccines. Accordingly, priorities for research in this area may include:

- Activation of innate immune responses to enhance vaccine efficacy
- Preventive and therapeutic vaccine strategies incorporating novel adjuvants, engineered microbes and viruses
- Vaccine strategies that employ unique approaches to antigen identification, development, production and utilization
- Development of non-invasive routes of vaccine administration
- Comprehensive measurement of relevant immune responses, including the roles of host differences
- Cultural, legal and economic issues that may affect vaccine utilization and delivery.



Strategic Goals, Objectives and Activities

The Institute has identified five strategic goals to be pursued to 2012. These strategic goals align with CIHR “key outcome areas” and have been assembled with the long-term development of Canada’s infection and immunity research community in mind.

Strategic objectives to be achieved and key actions, initiatives and programs that **may** be implemented in relation to the strategic goals are listed below. Many of the objectives and implementation tactics are interdependent, and achievements in one area will facilitate progress in other areas.

OUTSTANDING RESEARCH

Strategic Goal:

Encourage and support high quality research in infection and immunity that contributes important knowledge and new insights relevant to human health.

Objective:

Stimulate and support research that addresses Institute priorities in infectious and immune disease.

- Launch requests for applications (RFA) that stimulate high quality research.
- Encourage research that challenges conventional wisdom and involves calculated risk taking.
- Promote national awareness and accessibility to RFA by disseminating Institute research funding opportunities widely and initiating application development mechanisms when appropriate.

- Encourage multidisciplinary, team-based approaches to complex research challenges while continuing to foster the creative innovation of independent investigator-initiated research programs.
- Support initiatives to facilitate access of infection and immunity investigators to national research infrastructures.
- Assist in the development of realistic support mechanisms for essential longitudinal investigations.
- Support priority setting exercises and consensus building workshops to address specific research issues.

Objective:

Support research that addresses emerging human health challenges.

- In collaboration with government departments, health agencies and health organizations, monitor emerging health challenges relevant to the mandate of the Institute and direct strategic research support to areas of need.
- Facilitate and support the formation of multi-disciplinary and multi-sectoral collaborations and teams to enable comprehensive research responses to emerging challenges.

Objective:

Leverage CIHR and other research funding sources in Canada and abroad in support of Institute research priorities.

- Facilitate infection and immunity researcher participation in CIHR open competitions and international funding programs aligned with





Institute research priorities through proposal development support mechanisms.

- Monitor significant national and international research funding opportunities relevant to Institute research priorities and disseminate information about key opportunities to Canadian infection and immunity researchers.

Objective:

Monitor the full breadth of CIHR activities and investments to ensure that the broader infection and immunity research agenda is encouraged and supported.

- Provide oversight and input to CIHR policies, programs and investments on behalf of the broader infection and immunity research community to ensure that the interests of this community are recognized and responded to in all that CIHR does.

OUTSTANDING RESEARCHERS IN INNOVATIVE ENVIRONMENTS

Strategic Goal:

Foster and sustain innovative environments to attract, train and retain high quality research personnel across the spectrum of disciplines contributing to the achievement of the Institute research mandate.

Objective:

Stimulate the development of an interdisciplinary community of investigators and research trainees conducting research in priority areas.

- Identify specific needs for research capacity

development and create programs to enhance research expertise in areas of strategic importance.

- Develop programs that attract and retain clinician scientists in critical areas of the Institute's mandate.
- Design and implement mechanisms to encourage capacity development in sub-disciplines of priority areas where there has not been a strong tradition of infection and immunity research.
- Create strategies to attract and retain researchers from diverse disciplines and international settings to the health research domains supported by the Institute.
- Facilitate the recruitment to Canada of outstanding infection and immunity researchers from abroad and their deployment to global areas of high need.

Objective:

Support and invest in infection and immunity investigators in all phases of their careers.

- Raise the profile and public awareness of CIHR training programs and opportunities that assist in the retention of trainees in academic career paths related to the Institute research mandate.
- Assist new investigators through the identification and strategic application of career development tools and resources.
- Assist in the re-tooling, re-engagement or re-entry of investigators that experience difficulty obtaining research funding.



Objective:

Create opportunities for international collaboration and promote Canadian research achievements in international settings.

- Facilitate collaborations between Canadian research teams and international research centres that provide Canadian researchers with international leadership opportunities and utilize Canadian expertise to develop research capacity in international settings.
- Expand successful international research exchange programs.
- Facilitate Canadian input and direction to international infection and immunity research strategic planning processes and investment priorities through involvement, and assumption of leadership roles in international research organizations and events.
- Provide guidance and assistance to investigators interested in accessing Canadian funding opportunities for international collaborations in infection and immunity.

TRANSFORMING HEALTH RESEARCH INTO ACTION

Strategic Goal:

Encourage and facilitate knowledge translation (KT) to all fields and sectors related to the Institute mandate.

Objective:

Build capacity and provide support to assist in translating and communicating new infection and immunity research knowledge.

- Establish user groups or advisory committees to advise Institute researchers on the opportunities for translation of results.
- Stimulate development of KT capacity through the inclusion of funding for knowledge translation planning and activities in Institute strategic initiative grants where appropriate.
- Recruit and retain KT expertise on the Institute Advisory Board (IAB).

Objective:

Support KT initiatives for improved human health outcomes.

- Support projects and processes leading to the development of tools and programs that bridge gaps between research findings and health policy and practice.
- Support systematic reviews, meta-analysis and other forms of research synthesis to facilitate use of research findings by policy advisors and decision-makers.
- Link Institute researchers, policy makers, healthcare providers, consumers, non-governmental organizations and advocacy groups in a network to ensure that they are aware of and have access to Institute research that supports decision-making.
- Develop information-sharing agreements and processes between the Institute and organizations that have a mandate for knowledge translation and exchange to healthcare providers, policy makers and the public.



- Support translation and dissemination strategies that make Institute research results accessible to the public.

Objective:

Increase opportunities to enhance the international recognition of Canadian infection and immunity research

- Support translation and sharing of Institute-related research at international research events and with international research groups, agencies and health organizations that make policy and program decisions.
- Encourage Institute researcher representation in national and international strategic planning processes and advisory bodies.

collaborations in priority areas.

- Identify and exploit opportunities for leveraging the non-financial resources (personnel, expertise, national and international contacts) within partner organizations.
- Evaluate research partnerships and use the outcomes to refine partnership strategies and tactics.

Objective:

Increase public and non-profit organization partnership and support for Institute activities.

- Develop strategies to facilitate research funding partnerships between the Institute and other federal and provincial government departments and agencies, the Networks of Centres of Excellence (NCE) program, and non-profit organizations that have a vested interest in infection and immunity research.
- Identify and leverage federal funding envelopes allocated for infectious disease and immunology research in Canada to advance Institute research priorities, partnership development and/or coordination among funding sources.
- Develop strategic vehicles that capitalize on unique aspects of the Canadian health system and Canada's research strengths to encourage investment in infection and immunity research.

Objective:

Foster and leverage industry partnership to support Institute activities.

EFFECTIVE PARTNERSHIPS AND PUBLIC ENGAGEMENT

Strategic Goal:

Develop and maintain effective partnerships that benefit Institute research domains.

Objective:

Make the Institute the infection and immunity “research partner of choice” nationally and internationally.

- Develop criteria to guide the Institute in developing partnerships.
- Include current and potential research and KT partners in strategic planning, communications and public consultation processes.
- Establish communication channels and formalize relationships that enable partners from different sectors to propose research



- Implement a communications strategy to increase industry awareness of the Institute and the value of its investments.
- Engage relevant industry partners early in the development of initiatives to maximize potential partnership opportunities.

Objective:

Develop strategic international research and KT partnerships.

- Leverage Canada's respected position in the world to create new international partnerships and collaborations between the Institute and governments, voluntary organizations and private sector concerns that share similar research, training and/or KT goals.
- Access existing resources and personnel to facilitate the development of RFA between the Institute and international research funding agencies and organizations.
- Seek to integrate Institute strategic initiatives with other CIHR programs that have an international component.

ORGANIZATIONAL EXCELLENCE

Strategic Goal:

Maintain and enhance organizational excellence through effective planning, communication and collaboration.

Objective:

Model best practices in effective management and governance.

- Invite Institute-funded researchers and their partners to IAB meetings to present progress,

outcomes and challenges associated with their research.

- Propose new IAB members with backgrounds that create an optimal mix of knowledge, experience and diversity of interests and retain the expertise of former IAB members by engaging them in strategic planning processes.
- Ensure financial transparency and accountability through regular reports to the IAB and annual reports to stakeholders.
- Retain a skilled, committed, stable, productive and integrated administrative team across both the university and corporate CIHR offices of the Institute.
- Evaluate performance of Institute staff on the basis of clearly defined position descriptions, roles and responsibilities.

Objective:

Enable organizational flexibility and responsiveness.

- Reserve sufficient financial resources to enable the Institute to respond rapidly and decisively to unanticipated national threats to the health of Canadians.
- Collaborate with corporate CIHR to optimize the functioning of infection and immunity-related peer review panels.

Objective:

Enhance the public voice of the Institute and increase its national and international visibility.

- Communicate Institute research priorities, progress and accomplishments nationally and internationally.



- Maintain a website that facilitates awareness, understanding and information-sharing with researchers, stakeholders and the public.
- Facilitate communication of research outcomes relating to infection and immunity health threats to government, health agencies, Canadian and international research communities and the public by hosting topical research meetings, funding research synthesis such as scoping or systematic reviews, establishing expert working groups or other suitable means.
- Identify and support key Institute representatives who can speak authoritatively to the media about infection and immunity research.
- Increase political awareness of the value of Institute research by hosting regular information sharing briefings and meetings with Members of Parliament, legislative assemblies and media.

Objective:

Engage in regular consultation and consensus building with the Institute research community.

- Conduct regular multi-sectoral and multidisciplinary consultations in the form of workshops, surveys, focus groups and needs assessments with internal¹, interface² and external stakeholders³ to facilitate ongoing

environmental scanning and the identification of new and emerging infection and immunity research priorities.

Objective:

Strengthen the sense of community among Institute-affiliated researchers and between infection and immunity researchers and research funding organizations.

- Develop and implement a strategy to increase the profile of the Institute among investigators and partners.
- Organize and/or support infection and immunity research and professional development workshops, symposia and conferences for Institute-related researchers and research partners with an interest in infection and immunity research and its application.
- Ensure Institute visibility at relevant professional society meetings and conferences through attendance of Institute representatives and Advisory Board members.

Objective:

Evaluate progress toward goals

- Develop organizational performance indicators associated with strategic goals and objectives and monitor progress towards their achievement.
- Report annually on achievement of goals and objectives to the Institute Advisory Board.

¹ Internal stakeholders include but are not limited to Institute-funded scientists, clinician scientists, nurse scientists, CIHR administrators, other CIHR Institutes, clinical and academic trainees.

² Interface stakeholders include but are not limited to universities, healthcare delivery organizations, public health agencies, infection and immunity international research collaborators, other funders of infectious and immune disease research and infection and immune disease-rela ups.

³ External stakeholders include but are not limited to federal and provincial governments, policy and program officials, industry, non-governmental organizations [NGOs], Canadian researchers in other disciplines, international researchers, trainees from other disciplines, professional groups, special interest groups, disease-based communities and patients, media, the public.



Conclusion

Consistent with its mission and vision, the Institute will continue to invest in infection and immunity research excellence and capacity development in a focused and strategic manner. By leveraging relationships and partnerships, the Institute also aims to provide national and international leadership that promotes innovation and fosters research developments that benefit human health.

In the years ahead, the Institute will increase its efforts to raise public and political awareness of the importance of a robust infection and immunity research capacity in Canada, and help position Canadian researchers as leaders within the global community of discovery, knowledge and knowledge translation.

Appendix A: Strategic Planning Approach

Well developed strategic priorities impact every decision an organization makes. Strategic priorities may:

- Lead to both small and relatively significant changes in the way an organization functions;
- Cause changes in the core concepts that guide organizational activity;
- Change the way resources are allocated by the organization; and
- Change the way the organization relates to and responds to actors and changes in its environment.

Strategic planning is about leadership, growth, alignment, focus and change within clearly defined parameters.

This strategic plan aims to communicate the strategic goals and objectives that will guide the development of the CIHR Institute for Infection and Immunity for the next five years in clear and concise language that allows all stakeholders, including the public, to clearly understand:

- What the Institute does (mission);
- What it seeks to become (vision);
- The core values and principles that guide its decisions and actions; and
- What it has set out to achieve within CIHR key outcome areas (strategic research priorities, and organizational goals and objectives);
- Actions the Institute will take to realize its strategic goals and objectives (tactics).

Research and consultation underpinning the development of this strategic plan include:

- Documentation and literature review – Spring/summer 2006
- Key informant interviews – April-May 2006
- Strategic Planning Retreat of the Institute Advisory Board – May-June 2006
- Roundtable discussion with the Institute Advisory Board – September 2006 and January 2007
- Stakeholder consultation – October 2006 - January 2007
- Revisions to the plan – February – April 2007
- Final IAB approval of the strategic plan – May 2007

Appendix B: Institute of Infection and Immunity Advisory Board

Lorne A. Babiuk, PhD, DSc, FRSC, FIDSA (Chair)
Director, Veterinary Infectious Disease Organization
Professor, Department of Veterinary Microbiology
University of Saskatchewan

Luis Barreto, MBBS, MD, MHSc
Vice President, Public Affairs
Sanofi Pasteur Ltd.

Robert C. Clarke, PhD
Deputy Chief Public Health Officer
Public Health Agency of Canada

Warren Hill, PhD
Executive Director, Canadian Viral Hepatitis Network
Senior Research Analyst, BC Centre for Disease
Control

James Lavery, PhD
Research Scientist, St. Michael's Hospital
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