



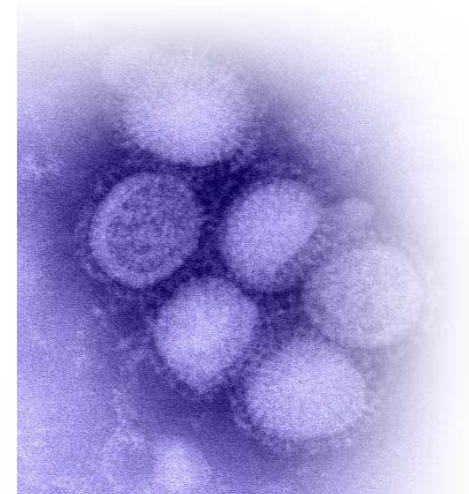
Canadian Institutes of Health Research Institute of Infection and Immunity

Preparing and Responding to the Pandemic H1N1 2009 Influenza Virus



In June 2009, the World Health Organization raised its pandemic alert level to Phase 6, indicating that an influenza pandemic is underway. The pandemic is caused by a novel form of H1N1 influenza virus (pandemic H1N1 2009 influenza virus). CIHR is working with the research community to help them create knowledge that will enable Canada and the rest of the world to mitigate the impact of the pandemic. As part of its Pandemic Preparedness Strategic Research Initiative (PPSRI), the Institute has organized teleconferences between influenza and pandemic experts to identify

research priorities and mechanisms to facilitate research. CIHR expedited the review and funding of CIHR outbreak research grant applications. In addition, a meeting of over 180 influenza and pandemic experts was organized by CIHR and held in Toronto on July 2009 to facilitate the sharing of recent research findings, enhance communication and foster research collaborations. The Institute is continuing to work with the research community to help coordinate and support Canada's research response to the pandemic.



Background

Thanks to the Government of Canada's investment in pandemic preparedness research in 2006, Canada is better prepared for the challenges of the pandemic H1N1 2009 influenza virus. When an avian flu outbreak was thought to be imminent, the CIHR Institute of Infection and Immunity (CIHR-III) created the Pandemic Preparedness Strategic Research Initiative (PPSRI) in 2006. The goal of the Initiative is to support and build capacity in pandemic influenza research and to promote uptake of results to those who will use them in pandemic planning and control. Originally allocated \$21.5 million over five years for pandemic influenza research, the PPSRI has received an additional \$20 million from partners and stakeholders. Over the last 3 years, CIHR-III and partners have continued to support excellent peer-reviewed research projects and have stimulated collaboration among researchers and users of the research findings to promote uptake of research results.

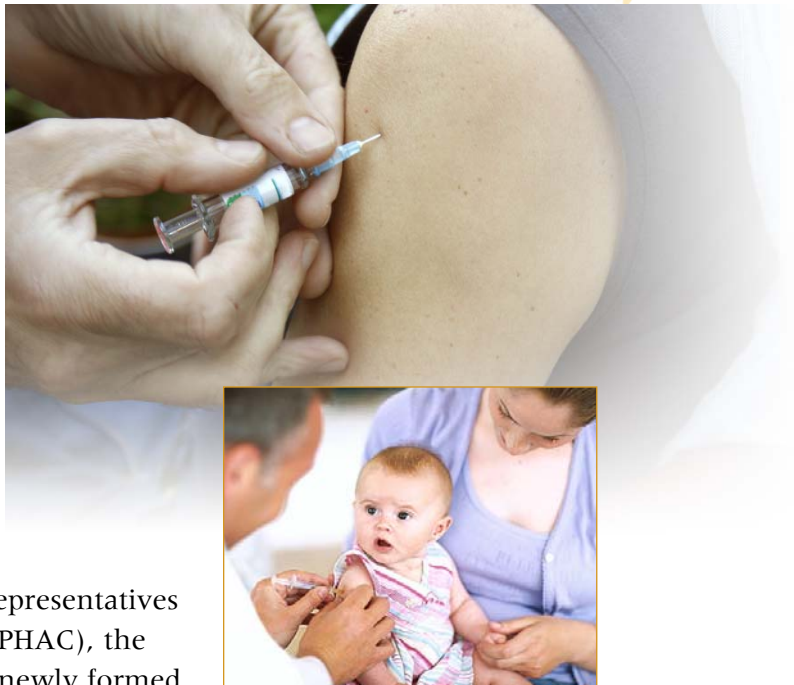


PPSRI by the Numbers	
Research Priorities	6
Partners with formal partnership agreements	4
Amount contributed by partners	\$20 million
Funding opportunities launched	30
Applications received	149
Funded applications	71
Nominated Principal Investigators supported	53

Pandemic H1N1/09 Research Priorities

On April 27, 2009, immediately after reports that the pandemic H1N1 2009 influenza virus had spread to Canada, CIHR-III convened an urgent meeting of the PPSRI Task Group to identify new priority research areas. The identified areas are:

- Epidemiological characteristics of spread of pandemic H1N1 influenza A virus and the natural history of infection
- Biology of the virus and antivirals
- Immune response to pandemic H1N1 virus and contributing cofactors of disease severity
- Vaccine development and evaluation
- Ethical and intellectual property issues
- Health services and policy research



The Task Group was expanded to include representatives from the Public Health Agency of Canada (PHAC), the Canadian Food Inspection Agency and the newly formed PHAC/CIHR Influenza Research Network on Vaccine Evaluation. The Task Group continues to meet regularly by teleconference to review research strategies and respond to changing issues.

Facilitating Research

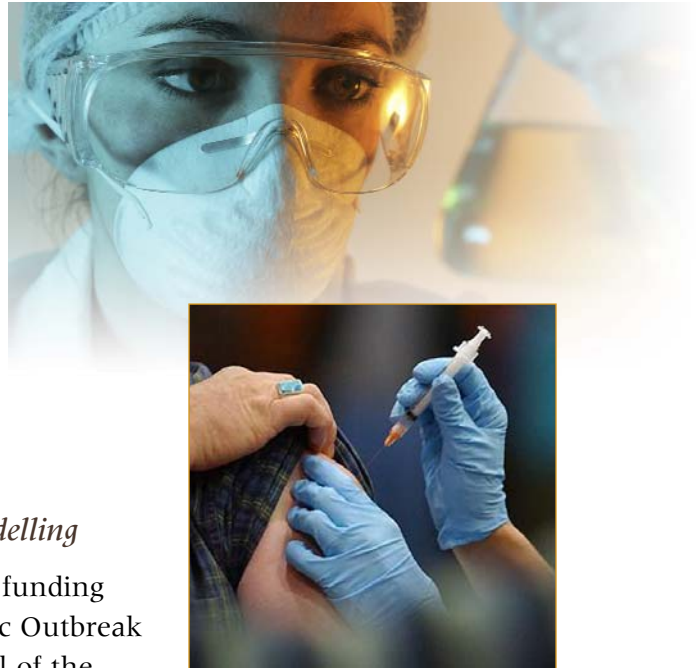
In May 2009, CIHR-III and the Task Group invited researchers to participate in a series of teleconferences to discuss priorities for facilitating outbreak research. The Task Group reviewed recommendations and developed the following strategic areas:

- Facilitate the development of a Canadian repository for reagents and clinical samples.
- Support mechanisms to link clinical data to samples and sequences.
- Foster the establishment of guidelines addressing ethical and intellectual property issues.
- Enhance data sharing and communication among researchers, partners, and end-users.

Funding Accelerated Pandemic Research

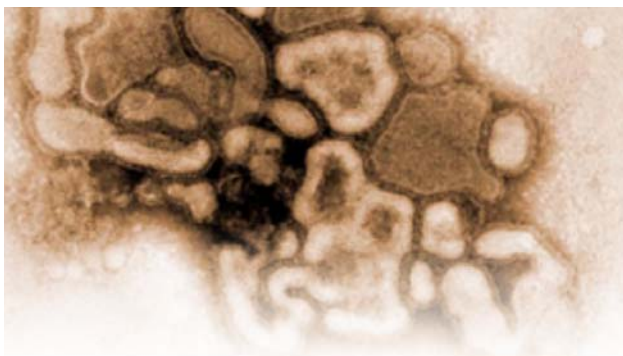
Vaccine Evaluation

Approval for \$10.8 million over 3 years to fund the PHAC/CIHR Influenza Research Network (PCIRN) was expedited to allow a national team of over 80 scientists from 30 research institutions across Canada to immediately start work on evaluating a pandemic vaccine when it is released. Working with the PHAC and provincial and municipal public health authorities, the network will inform Canadian immunization procedures and policies both during the current pandemic and in preparing for annual seasonal influenza outbreaks.



Pandemic Team in Antivirals and Mathematical Modelling

In collaboration with PHAC, CIHR-III announced a funding decision for Phase 1 of the Catalyst Grant: Pandemic Outbreak Team Leader competition in January 2009. The goal of the program was to provide development funds to team leaders with influenza and pandemic expertise who could bring a research team together in the event of a pandemic. This initial investment, as well as other pandemic preparedness programs, readied the research response to the pandemic H1N1 2009 influenza.



Phase 2 of the Catalyst Grant: Pandemic Outbreak Team Leader received unprecedented acceleration through the funding system. This program was launched by CIHR-III at the end of April 2009. It received expedited peer review and funding was announced on June 16, 2009. The program will support the work of two national research teams: one based at Laval University in Quebec City that will study the genetic evolution of pandemic H1N1 2009 influenza virus and its susceptibility to antiviral drugs; and one at the University of

British Columbia that will use mathematical models to understand the transmission and spread of the virus.

Stimulating Collaboration and Promoting Research Uptake

CIHR-III organized and hosted, with support from CFIA and the Rx&D Health Research Foundation, a meeting entitled: Canadian Pandemic Preparedness Meeting: H1N1 Outbreak Research Response. The meeting was held in Toronto on July 8, 2009 and provided an opportunity for influenza and pandemic experts to share current research results, develop research strategies and collaborate with partners and end-users. More than 180 researchers,

stakeholders, and knowledge users attended the meeting. An overview of the current pandemic was provided by plenary speakers and focused discussions occurred in breakout workshops on how to work together to respond to the pandemic.

Current Opportunities

Following the July meeting, CIHR-III announced \$1.2 million for the Catalyst Grant: Pandemic Outbreak Research Response funding opportunity. Its aim is to bring together researchers in each of the six outbreak priority research areas by supporting team planning and development activities. With short deadlines for application submission, peer review and funding approval, research teams will be funded in October 2009.



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