



Grand Challenges Canada™
Grands Défis Canada^{MC}

BACKGROUND

In low and middle-income countries, 8 million children die each year of preventable causes. Life expectancy is under 40 years in parts of the developing world. In the developed world, it is 80 years old. The health challenges are immense. But so are the opportunities to make a difference, to bring positive sustainable change to the health and well being of so many.

Grand Challenges Canada has been created to take a leading role at the forefront of this change, developing solutions to global health challenges through *Integrated Innovation*. Integrated Innovation is the coordinated application of scientific/technological, social, and business innovation to develop solutions to complex challenges. By integrating scientific, technological, social and business innovation, Grand Challenges Canada can lead change and develop long-term, sustainable solutions to pressing health challenges in the developing world.

Canada is the first country to fund a grand challenges approach in a foreign aid budget.

In 2008, the Government of Canada announced the Development Innovation Fund. The purpose of the fund is to:

“Support the best minds in the world as they search for breakthroughs in global health and other areas that have the potential to bring about enduring changes in the lives of millions of people in poor countries.”

The Government of Canada is committing \$225 million over five years to the Development Innovation Fund to address global health issues.

The Development Innovation Fund will be delivered by Grand Challenges Canada working with the International Development Research Centre and the Canadian Institutes of Health Research. Grand Challenges Canada is governed by its own Board and guided by a Scientific Advisory Board, whose members include some of the world's most distinguished medical scientists from both the developing and developed worlds. Grand Challenges Canada is hosted at the McLaughlin-Rotman Centre for Global Health, University Health Network and University of Toronto. As the Government of Canada's lead on the Development Innovation Fund, the International Development Research Centre will draw on decades of experience managing research projects and ensure that developing country researchers and concerns are front and centre in this exciting new initiative.

A grand challenge is a specific critical barrier that, if removed, would help solve an important health problem in the developing world with a high likelihood of global impact

through widespread implementation. The concept of grand challenges was first introduced over a century ago in Germany where Dr. David Hilbert defined a list of 23 challenges in mathematics. By defining the challenges, he inspired a generation of mathematicians to work to overcome them. His efforts were an overwhelming success; nearly all of those challenges were solved. The same focused energy and effort will be applied to define and address pressing global health issues.

How will Grand Challenges Canada do it? First through a process of exploration, Grand Challenges Canada will identify those challenges that will have a significant impact. Second, through funding and support, Grand Challenges Canada will enable Canadian and developing world scientists to introduce innovation to solve these persistent problems. Grand Challenges Canada is committed to unlocking the potential of developing world scientists and Canadian scientists working jointly to tackle health challenges and contribute to create permanent solutions. Local scientists have insight, skills and ability that can best define and solve the challenges faced by their countries. Third, once a solution is identified, the private sector and philanthropists will be encouraged to invest; thereby, making the solution available broadly to the people who need it most.

The uniqueness of Grand Challenges Canada is that it brings within a country's international assistance budget a large-scale commitment to innovation and global health. It also integrates scientific/ technological, social, and business innovation. Through this fresh approach, Canada's role in international development will be redefined, building our reputation for breakthrough innovation and long-term health solutions.

In total, there will be five Grand Challenges. Grand Challenge 1 is Explorations. Canadian Rising Stars in Global Health is part of the Explorations program. Rising Stars is designed to encourage young Canadian scientist to find bold and creative solutions to pressing global health challenges.

Grand Challenge 2 (launched on May 3, 2010) is Point-of-Care Diagnostics, which aims to improve diagnosis at the bedside of patients in remote regions of developing countries. Breakthroughs in diagnostics will improve treatment and save lives. Grand Challenges Canada is working with the Bill & Melinda Gates Foundation on Point-of-Care Diagnostics.

Further Grand Challenges will be announced as they are determined.

Dr. Peter A. Singer is the Chief Executive Officer of Grand Challenges Canada. Dr. Abdallah Daar is the Chief Science and Ethics Officer. Mr. Joseph L. Rotman, noted business leader and philanthropist, is the Chair of the Board of Directors. Mr. David Malone, President of IDRC and Dr. Alain Beaudet, President of CIHR are members of Grand Challenges Canada Board of Directors.