

May 15, 2017

Innovative Solutions for Planetary Health: seed grants for interdisciplinary research

McGill Global Health Programs & the Trottier Institute for Sustainability in Engineering and Design

Why?

McGill's Global Health Programs and the Trottier Institute for Sustainability in Engineering and Design are launching a collaboration to address the nexus between disease, rapid environmental degradation and climate change caused by unsustainable industrialization, urban growth and resource consumption practices. Poorer nations and regions tend to suffer most from the health impacts of unsustainable growth and we want to focus our efforts there.

The challenges are immense.

Water pollution and clean water scarcity - The U.N. estimates that currently 700 million people suffer from clean water scarcity, and by 2025 the number is likely to be at 3 billion. The U.S. National Institute of Environmental Health Sciences states that 1.9 million people, primarily children, died in 2004 from inadequate access to clean water and sanitation. This issue does not affect those in low and middle income countries (LMIC's) alone. Statistics from 2013 in Canada show that 73% of First Nation water systems are at high or medium risk of contamination and close to 120 communities are on boil-water advisories. Use of water contaminated by industrial pollution, poor sanitation and poor agricultural practices are major drivers of poor health and rising costs of health care around the world, particularly in developing regions.

Air Pollution - 2 million people, mostly women and children, die each year from exposure to indoor air pollution from cooking with solid fuels such as wood, dung, and charcoal. The World Health Organization estimates that roughly 25% of the disease burden in the developing world is due to environmental factors. Air pollution from urban and industrial centers, forest/brush fires, trash burning and improper indoor fuel use is a major source of respiratory and various non-communicable diseases.

McGill University has research ability, excellence, and a drive to help.

We have a critical mass of affiliated researchers and educators who are qualified to address these challenges. In a recent survey, we identified that there were at least 50 researchers working on air and water pollution issues and that one third of the researchers hold "Chairs"

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that help in accelerating and expanding their research and emphasizing the research excellence - including eminent Canada Research Chairs, James McGill Chairs, and William Dawson Scholar Chairs.

Let's contribute to planetary health with bold, new, high-risk ideas.

McGill Global Health Programs & the Trottier Institute for Sustainability in Engineering and Design (TISED) are launching a seed grant pilot initiative to fund at least two joint interdisciplinary projects that will kick off in 2017! *We are seeking novel, early-stage, bold ideas that look to bring simple, practical solutions to health problems related to air and water pollution.* We envision that the externally funded research initiatives will involve the participation of other Faculties at McGill as well as various centers and institutes.

We have a vision to impact research and education.

Significant and continued support will help build a sustained research initiative to provide the motivation and capacity to take up a grand challenge around sustainability frameworks for urban, rural and industrial growth that ensure direct and measurable improvements to health and quality of life. The research will not only provide direct knowledge and best practices, but will help educate and train *students* who may choose to work in academia, non-profits, and government - expanding the impact even further! The research will inform curriculum development, provide summer research and other experiential learning opportunities. Partnerships with Engineers without Borders, Médecins Sans Frontières and other indigenous and international non-governmental and governmental bodies will be a cornerstone to this initiative.

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