

Message from the Scientific Director

In this issue of POP news, we are pleased to feature an article by one of our very own Advisory Board Members, Dr. Jason Robert, Assistant Professor, School of Life Sciences, Arizona State University who challenges us to think about the many promises of science and their moral, ethical and social implications for public health and health care. In this issue, we also highlight our priority initiatives, including Dr. Malo's Centre for Research Development focused on asthma and the workplace, the Canadian Centre for Health and Safety in Agriculture (CCHSA) led by Dr. James Dosman and the recent World Health Organization-Canada dialogue on global health research.

Of particular note, is a landmark funding opportunity to provide masters of public health awards, jointly with the Public Health Agency of Canada. We also provide information about our ever popular Summer Institute (jointly sponsored with the Institute of Health Services and Policy Research), for interested graduate and post-graduate students in population and public health and health services and policy research. This year's institute is being organized under the able stewardship of Dr. Patricia Martens at the Manitoba Centre for Health Policy and will put the emphasis on enhancing the use of data to support intersectoral action (see page 4 for details). Our commitment to enhancing secondary data

analysis is further evidenced by our joint request for applications with the World Health Organization and Statistics Canada to support expert analysis of the World Health Survey (WHS) data by Canadian researchers and their international research collaborators. The WHS provides comprehensive baseline information on the health of populations and on the outcomes associated with the investment in health systems and their functioning (see page 3).

As always, we encourage you to be in touch if you have any suggestions to further the work of the Institute, including future issues of POP news. I look forward to another exciting year with IPPH.

Warm regards,



John Frank
Scientific Director



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Public Health and the Human Genome: What's the Connection?

An Article written by Jason Scott Robert, PhD ,
Assistant Professor, School of Life Sciences, Arizona State University



When the proposal to map and sequence all the genes in a typical human being was first proposed in the 1980s, and then again when – astonishingly – this ambition was actually realized in 2003, pundits of all sorts loudly proclaimed that health care and public health practice would be forever changed, even revolutionized.

Thanks to human genome sequence data, they prophesied, we were on the verge of witnessing

the ascendance of personalized medicine, whether acute or preventive. 'Lifestyle plans' tailored to our individual genetic risks and predispositions, a new 'molecular taxonomy' of diseases to replace current empirical methods of classification, new treatment regimes based on the molecular specifics of underlying pathologies instead of gross phenotypes, targeted 'pharmasuitables' in lieu of more generic pharmaceuticals – this, we heard repeatedly, would be the future of genomic medicine and of public health. In response, one word pops to mind: Really?

As a philosopher of science, I have an irresistible tendency to query the evidentiary basis of these kinds of proclamations, to ask whether and how these kinds of promises might be realized. As an ethicist, I have a moral obligation to probe the personal and societal dimensions of such promised futures, to ask whether and how these kinds of promises should be realized. Clearly, I have my work cut out for me!

In 2001, I received a CIHR New Investigator Award, and joined the faculty of the Department of Philosophy at Dalhousie University. This allowed me to complete the research for my first book (*Embryology, Epigenesis, and Evolution: Taking Development Seriously*, Cambridge University Press, 2004). Part of my burden in that book was to explore the nature of the developmental processes between genes and phenotypic outcomes that, in their very complexity, seemed to completely undermine the plausibility of personalized genomic medicine. In part, this is because knowing the details of someone's genotype is nowhere near as useful as you might think – in terms of understanding and predicting phenotypes, DNA sequences are meaningful only in developmental context, and only when considered as part of a dynamic developmental process over time. A snapshot of my genome at any point in time, or even of my current gene expression profile via a DNA microarray, reveals only one element of a multivariable matrix of interacting fac-

tors that, jointly but insufficiently, help to determine my phenotypic fate.

But beyond these considerations of individual development, there are also deep concerns about whether the individual is the appropriate locus for understanding health and disease. Public and population health are not reducible to individuals or their genotypes. Public and population health disparities are similarly not reducible to inter-individual variations in genome sequence (though these may, in some cases, be relevant). I do not mean to downplay the potential role of genetics and genomics data in some areas of public and population health research; there are already rich applications in toxicology, for instance. But the position that public and population health goals can and should be realized through genomics and its cognate disciplines (the other 'omics) is a position that must be justified, not just assumed. And its justification must take seriously the overwhelming evidence that genetic variation is not the only variation of health-related interest.

Understanding intra-individual developmental dynamics in the context of inter-individual and inter-group social, ecological, and political dynamics; this is the prime directive for public and population health research in the twenty-first century. This is a hugely complex problem requiring hugely expensive studies – not quite the silver bullet that so many hoped (and indeed promised) genomics would be. Figuring out how to design these studies in the first place is a formidable task, requiring the collaboration of a wide range of disciplines, including ethics and health law but also genetics, developmental biology, epidemiology, community health, and the population health sciences more broadly.

There are no natural habitats in Canada for interdisciplinary creatures like myself who are preoccupied with ethical, philosophical, conceptual, and methodological dimensions of the complexity of health at individual and population levels. We tend to scatter about, foraging for food and shelter in different kinds of interdisciplinary research units, but hardly ever forming a critical mass or making a visible difference. I thus felt somewhat out of place in a Philosophy department, and have since moved on, giving up my New Investigator Award and even my operating grant from CIHR. I have found a new home, far away from my family in Montreal and Truro, Nova Scotia, but much closer to my intellectual roots. I am now based in the Center for Biology and Society within the School of Life Sciences at Arizona State University, where I am also affiliated with the Consortium for Science, Policy, and Outcomes. Here I am able to explore the big questions that keep me up at night, in concert with a critical mass of collaborators who are

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equally interdisciplinary and just as haunted as I am by the complexity of health and health research.

But Arizona is not nirvana (not even during the winter months!). The biggest drawback is that the US National Institutes of Health is aeons behind the CIHR in funding what we call Pillar III (health services and health systems) and Pillar IV (on "the social, cultural and other factors that affect the health of populations") research in Canada. And while there has been some NIH funding for ethics research, this has largely been limited to basic issues in clinical ethics and research ethics related to genetics and genomics, not public or population health, for instance. So getting grant funding to seed and maintain interdisciplinary collaborations in health research is a constant challenge in the US. This is why it has been so important to me to maintain close working relationships with colleagues and students across Canada, and to continue to serve on the Institute Advisory Board of the Institute of Population and Public Health. Truth be told, we have a lot to learn from the remarkable experiment that is the IPPH, and indeed the CIHR more broadly. I sincerely hope we take our lessons seriously.

New Book: Healthier Societies - From Analysis to Action

Edited by Jody Heymann, Associate Professor of Social Medicine, Harvard Medical School; Clyde Hertzman, Professor of Health Care and Epidemiology, University of British Columbia; Morris L. Barer, Professor of Health Care and Epidemiology, University of British Columbia; and Robert G. Evans, Professor of Economics, University of British Columbia

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Description:

Extensive research has shown that social factors are as important as biological ones in determining health, and their impact is enormous in both adults and children. The challenge of changing public policies and programs remains. *Healthier Societies: From Analysis to Action* addresses the fundamental questions which will lead the way toward countries investing seriously in improving social conditions, as a way of improving population health. The book is divided into three parts. Section one addresses to what extent health is determined by biological factors, by social factors, and more fundamentally, by the interaction between the two. Section two examines four case studies that demonstrate the ways in which social change can dramatically affect adults' health, as well as launch children's lives onto healthy trajectories. This section analyzes the cases of nutrition, working conditions, social inequalities, and geographic disparities. The third section of the book takes a serious look at what would be involved in translating the research findings described throughout the book into action.

Readership: Public Health professionals at all levels and MPH students

IPPH Funding Opportunities

Analysis of the World Health Survey Data

The World Health Organization (WHO) undertook the World Health Survey (WHS) in 70 countries in an effort to strengthen the evidence base required by policy makers to improve programs and policies that have an impact on the health of populations and health systems. The WHS provides comprehensive baseline information on the health of populations and on the outcomes associated with the investment in health systems and their functioning. The purpose of this initiative is to provide an enhanced opportunity for expert analysis of the WHS data by Canadian researchers, together with international research collaborators.

Public Health Professional Master's Awards Program: CIHR - Institute of Population and Public Health and the Public Health Agency of Canada (PHAC)

Jointly issued by the CIHR-Institute of Population and Public Health (IPPH) and the PHAC-Office of Public Health Practice (OPHP), the purpose of this awards program is to strengthen public health capacity in Canada, by supporting the current and next generation of public health policy makers and practitioners. The program will thus build capacity for effective knowledge translation and use of research evidence by the public health system.

The Public Health Professional Master's Awards program will be administered by CIHR and will provide a number of Master's awards based on recommendations made by Canadian institutions offering a public health professional Master's degree program. By "public health professional Master's degree program" we mean primarily course-oriented programs that include a practicum and are intended to prepare graduates for the practice of public health. Universities that do not currently participate in this program and wish to request voucher allocation should have a representative from the office of the Faculty of Graduate Studies contact CIHR for information on the process for doing so.

For more information on these funding opportunities, please visit the IPPH website at:
<http://www.cihr-irsc.gc.ca/e/13777.html>

The Centre for Asthma in the Workplace, Dr. Jean-Luc Malo

The Centre for Asthma in the Workplace is supported by the Institute of Population and Public Health, in partnership with the Canadian Lung Association, the Quebec Lung Association and Quebec's Institut de recherche Robert-Sauvé en santé et sécurité du travail [Robert Sauvé occupational health and safety research institute] (IRSST). The Centre brings together thirteen researchers affiliated with various universities, i.e. the Université de Montréal, McGill University and the Université du Québec à Montréal. The Centre studies various impacts on health of asthma in the workplace, including clinical, functional, biological, psychological and social aspects. The aim of the Centre is to improve knowledge on the link between workplaces and asthma to better identify this condition and prevent its effects. It involves strategic partners (the workers' compensation and health and safety boards of Quebec and the Atlantic provinces, and Public Health) in its activities and programs. This collaboration makes it possible to increase the practical impact of the research results in such a way that Canadian asthmatics and people at risk for occupational asthma may derive benefit from them quickly.

Each year, in mid-January, the Centre organizes a scholarships and projects competition. It awards seven grants of \$20,000 each a year for the launching of pilot projects on the theme of the relationship between asthma and the workplace. It also supports a scholarships program, awarding one post-doctoral fellowship, three master's or PhD scholarships, and one summer student scholarship. It encourages multidisciplinary exchanges among the researchers and the strategic and scientific partners. In addition to supporting these activities, the Centre is involved in knowledge transfer through provision of information and continuing education on asthma in the workplace to various health professionals working in the field of occupational health, such as nurses, industrial hygienists, physicians and psychologists. An education day was offered to these professionals in December 2004 in Montreal. The content of the various presentations are available on our website. Because of interest expressed by professionals, we have decided to offer this program throughout the

country. On April 26, 2006, our continuing education program will be presented at the conference of the Canadian Occupational Health Nurses Association in Halifax, Nova Scotia. Also, on June 8, 2006, a joint meeting will be held with SafetyNet, a CIHR-supported centre, in St. John's, Newfoundland.

Although useful, these training workshops are insufficient because the number of participants is limited, the participation is more local in nature and exchange of information is restricted. The Centre for Asthma in the Workplace is therefore preparing on-line training. The target clientele is made up of occupational health professionals and workers, as well as students registered in health training programs. The project has two components: creation of a website that will be open to anyone seeking professional information; and creation of a course that can be accessed on the Internet and that will be proposed by a program at the Université de Montréal. The teachers and trainers involved in these two parallel components will be the researchers and health professionals of the Centre for Asthma in the Workplace. We plan to have these two components completed for September 2006. The establishment of this project is a demonstration of the Centre's national and international influence, since this information will be available through their website.

The Centre for Asthma in the Workplace wants to become an internationally renowned centre of excellence where most aspects of asthma in the workplace will be studied. It will then be able to attract a large number of students and fellows interested in this field, in addition to offering continuing education to health professionals.

In June 2007, we will have the opportunity to host the third edition of the Jack Pepys Workshop. This international symposium co-supported by the Centre will bring experts on asthma in the workplace together for two days to discuss the various aspects of this issue.

For more information, please visit our website at: <http://www.asthma-workplace.com>

CIHR's IPPH-IHSPR 2006 Summer Institute — CALL for Applications

**"Using population-based health and health services data for research:
challenges and opportunities in an intersectoral environment"**

**JUNE 19 — 21, 2006
University of Manitoba Fort Garry Campus
Winnipeg, Manitoba**

We are pleased to announce the 5th annual Summer Institute to be held at the University of Manitoba in Winnipeg, MB in June 2006. The major funders of CIHR's Summer Institute are the Institute of Health Services and Policy Research (IHSPR) and the Institute of Population and Public Health (IPPH), with other co-funders presently being formalized. This year's summer institute is hosted by the Manitoba Centre for Health Policy (MCHP). Dr. Patricia Martens, Director of MCHP, is the chair of the planning committee.

We invite applications from students in graduate training and post-doctoral fellows in applied health services and policy, or population and public health research. A limited number (30) of spaces are available for this unique training opportunity that will bring together researchers, students and decision-makers from across Canada and from a variety of disciplines. A student application review committee will select students based upon research interests, range of disciplinary backgrounds, academic qualifications and resumes, and geographical distribution.

For more information, please visit the Institute's website at: <http://www.cihr-irsc.qc.ca/e/29626.html>

Canadian Centre for Health and Safety in Agriculture (CCHSA)

The overall objective of the Canadian Centre for Health and Safety in Agriculture (CCHSA) is to address the health of people as a result of working and living in the agricultural rural ecosystem. The CCHSA provides interdisciplinary teams of researchers and their stakeholders with core infrastructure support to access other research funds to develop integrated programs of research and knowledge exchange.

Dr. James Dosman, CCHSA Director, says, "Our mandate to increase research productivity and granting council support by working together in a unique way will make a difference by all our stakeholders becoming interested and involved in what we are doing."

The CCHSA administration is located within the Institute of Agricultural Rural and Environmental Health (I.ARE.H) at the University of Saskatchewan, but its scope involves co-applicants and researchers from various disciplines working in more than twenty institutions across Canada; providing the basis for the CCHSA Scientific Network. Opportunities are provided to bring researchers and groups together in a common focus aimed at enhancing research productivity, the CCHSA Annual Scientific meeting is one means by which this is done. In 2005, a pre-conference workshop was held in collaboration with the Canadian Rural Health Research Society (CRHRS) Conference in which 51 network members and trainees presented abstracts among the four CCHSA thematic areas.

The CCHSA provides funding through the Junior/Senior Faculty Release Time Support Program in which applicants devote their research activities to one or more of the CCHSA Themes: What we breathe (Genetic and environmental determinants of lung dysfunction); What we eat and drink (Determinants of infections); How we work (Occupational health issues); and How we live (Physical and mental health, and social issues). A release time stipend is used for salary replacement for teaching duties in order to increase their time for CCHSA research.

The CCHSA also provides Postdoctoral and PhD scholarship support through the CIHR Strategic Training Program Grant, "Public Health and the Agricultural Rural Ecosystem" (PHARE). In a seamless manner, the Centre leverages the participation of other organizations in the training and mentoring of students at the masters, PhD and postdoctoral levels through both young and mature researchers in the underdeveloped science of agricultural health and safety issues.

The Pilot Project Program is another funding opportunity provided by the CCHSA which is intended to address research gaps in one or more of the four CCHSA theme areas, encourage new collabora-

tions among researchers, and provide funds for initial meetings and other communications leading to the development of research proposals for submission to national granting agencies.

The Mentoring Program is another aspect of the CCHSA which fosters the development and implementation of positive mentor-mentee relationships and sustainable research careers among junior CCHSA scholars. Junior faculty and postdoctoral fellows funded by the CCHSA must identify one mentor and are expected to complete the mentoring agreement to help clarify their respective roles and expectations. While it isn't binding, it sets the framework of the relationship. A research mentoring workshop was held on October 26, 2005 in conjunction with the CCHSA Annual meeting. It provided research mentors and their mentees with the opportunity to explore how they can best work together on projects as a means of increasing research output. Issues revealed will now be followed up by focus groups in order to assist mentors and mentees.

The Knowledge Translation (KT) Program is a significant function of the centre. We have been working with partners in supporting their individual knowledge translation programs and a protocol is presently being developed as we endeavour to review potential research papers that might be useful in knowledge translation. A national newsletter entitled "Agricultural Health and Injury Prevention: Research and Control" has been our main KT vehicle and different material will be developed to meet the needs of specific issues and target audiences.

The various CCHSA working committees and the Decision Makers Advisory Council have been instrumental in our success by contributing to strategic planning and direction setting for the CCHSA and provide advice and guidance to enhance the value and merit of scientific studies and research into the health and safety of Canadian agricultural workers, families, communities and rural ecosystems.

The Canadian Centre for Health and Safety in Agriculture is funded by the Canadian Institutes of Health Research, Centres for Research Development, Institute of Population and Public Health, "Understanding and Addressing the Impacts of Physical and Social Environments on Health" Strategic Initiative. The CCHSA is also supported by Quebec's Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST).

For further information contact:

Dr. James A. Dosman, MD, FRCPC
Director, CCHSA
Telephone: (306) 966-8286
Email: james.dosman@usask.ca

Recently Funded Initiatives

Pilot Project Grants - Population and Public Health Research Methods and Tools

The Institute of Population and Public Health and its partners: the Institute of Cancer Research, the Institute of Gender and Health, the Institute of Genetics, the Institute of Health Services and Policy Research, the Institute of Human Development, Child and Youth Health, the Institute of Nutrition, Metabolism and Diabetes and the Global Health Research Initiative are pleased to announce the results of the competition 'Pilot Project Grants - Population and Public Health Research Methods and Tools' Request for Applications (RFA).

The purpose of this Request for Applications is to support research that enables the development and refinement of qualitative and/or quantitative research methods and tools that are applicable to population and public health (PPH) research and that specifically address one or more of the Institute's strategic research priorities. It is expected that this targeted investment will strengthen and refine the methods and tools that underpin PPH research ultimately leading to improvements in the health of all Canadians.

Sixty-five operating grant applications were received, of which twenty-nine were approved for funding. For more information, please visit the IPPH website at: <http://www.cihr-irsc.gc.ca/e/30554.html>



IPPH Staff

Toronto-based IPPH Staff:

John Frank
Scientific Director
john.frank@utoronto.ca

Erica Di Ruggiero
Associate Director
e.diruggiero@utoronto.ca

Vera Ndaba
Financial/Event Officer
v.ndaba@utoronto.ca

Gail D. Bryant
Executive Assistant
gail.bryant@utoronto.ca

Rathika Vasavithasan
Project Coordinator
cihr.ipph@utoronto.ca

Ottawa-based IPPH Staff:

Michelle Gagnon
Assistant Director, Partnerships and
Knowledge Translation/
CIHR-IHSPR & CIHR-IPPH
mgagnon@cihr-irsc.gc.ca

Kim Gaudreau
Associate, Strategic Initiatives/
CIHR-IHSPR & CIHR-IPPH
kgaudreau@cihr-irsc.gc.ca

Danièle St-Jean
Project Officer/
CIHR-IHSPR & CIHR-IPPH
dst-jean@cihr-irsc.gc.ca

Michèle O'Rourke (on leave)

Phone: 416-946-7878

Fax: 416-946-7984

<http://www.cihr-irsc.gc.ca/institutes/ipph/>



WHO-Canada Dialogue on Global Health Research

November 2 to 4, 2005
Ottawa, Ontario, Canada

In January 2005, senior Canadian government delegates met with representatives of the World Health Organization (WHO) in Geneva and offered to collaboratively plan a meeting in Ottawa, Canada where individuals from Canadian research funding agencies, researchers and policy makers could meet to discuss Canada's role in advancing the resolutions from the Ministerial Summit on Health Research held in Mexico City in November 2004. Subsequently, Health Canada and the Canadian International Development Agency (CIDA) supported the planning of the WHO-Canada Dialogue on Global Health Research led by Dr. Vic Neufeld of the Canadian Coalition for Global Health Research (CCGHR) and WHO representative, Sonya Corkum, in collaboration with a team made up of representatives from the participating organizations.

The WHO-Canada Dialogue on Global Health Research, held in November 2005, brought together approximately 40 national and international participants, including health researchers, health research funders, policy-makers and knowledge translation experts representing organizations such as CCGHR, WHO, CIDA, the International Development Research Centre (IDRC), the Canadian Institutes of Health Research (CIHR), the Canadian Health Services Research Foundation (CHSRF), Health Canada and others. Following one year after the Ministerial Summit on Health Research, this represented one component of a three part process aimed at exploring and addressing Canada's role in contributing to two key areas identified in the Mexico Statement: strengthening health policy and systems research and addressing the "know-do" gap. This process consisted of a collective pre-meeting dialogue and post-meeting action plan framed within these two key areas:

- ◆ **Health policy and systems research (HPSR):** How can Canada contribute to strengthening health policy and systems research in low and middle-income countries (LMICs)?
- ◆ **The "know-do" gap:** How can Canada assist LMICs to develop effective mechanisms to bridge the divide between ways in which knowledge is generated and ways in which it is used, including the transformation of health research into policy and practice?

In small group and plenary discussions directed at addressing these challenges, key themes arose that led to subsequent collaborative action-planning. These included the need to:

- rapidly build on and respond to the window of opportunity catalyzed by the Mexico Summit
- strengthen and learn from existing LMIC initiatives (e.g. the Regional East African Community Health (REACH) Policy Initiative, Evidence-informed policy networks EVIPNet in Asia and Africa)
- expand existing Canadian initiatives [e.g. the Teasdale-Corti Global Health Research Partnerships Program developed by the Global Health Research Initiative, and CHSRF and IDRC's, Promoting Evidence-Based Action from Research for Leadership (PEARL)]
- support multilateral initiatives, such as the evolution of the Alliance for Health Policy and Systems Research situated within WHO, into the Partnership Programme for Health Policy and Systems Research
- promote low-cost/high impact change by promoting, supporting and expanding relevant initiatives already underway.

Following the meeting, the planning group was keen to demonstrate a commitment to action and drafted an 18-month action plan aimed at synergizing the efforts of the participating organizations in these important areas. Key actions include:

- directly supporting WHO initiatives such as the new "Partnership Program in Health Policy and Systems Research" (recent meetings following the Dialogue are moving the development of a new strategy for the Alliance forward)
- increasing Canadian investment in HPSR and addressing the know-do gap by supporting Teasdale-Corti and PEARL respectively (support and enthusiasm for these two initiatives is growing, particularly as the Teasdale-Corti initiative moves from the letter of intent stage to the full proposal stage.)
- strengthening Canada's HPSR and knowledge translation capacity (partners are working together to better identify Canada's current capacity and ways to synergize efforts in these areas)
- anticipating and responding to ad hoc opportunities as they arise, such as supporting Mexico's request for Canadian participation in a training course for research users (discussions about this training course are underway with support from CHSRF). Another example is CIDA's request for help in reviewing the available knowledge to support its "African Health Systems Initiative".

Following the meeting, the CCGHR has assumed responsibility for monitoring progress and continuing to work with meeting participants on these actions over the next 18 months. For more information, please visit the CCGHR website at: <http://www.ccghr.ca>