



Canadian Institutes
of Health Research

Instituts de recherche
en santé du Canada



ANNUAL REPORT OF ACTIVITIES 2003 • 2004



CIHR IRSC

Building the Life Foundation

IHDCYH

Institute of Human Development
Child and Youth Health



Message from the Scientific Director



Michael S. Kramer, MD
Scientific Director

The last year has witnessed many changes at IHDCYH. In May 2003, John Challis resigned as Scientific Director (SD) to assume his new position as Vice President for Research and Associate Provost at the University of Toronto. As the previous Chair of the Institute's Advisory Board, I was asked to serve as the interim SD, then appointed to the "permanent" post as of last November. The Institute's office was moved from Toronto to the McGill University Health Centre in Montreal and the official opening at The Montreal's Children Hospital will be held in November 2004. IHDCYH was the first of CIHR's Institutes to move and the first to change SDs. Many thanks to Denise Moretto and Jocelyne Arès in the Toronto office, Stella DiPiano in the Montreal office, and Loretta Wong and Amanda Devost at CIHR Corporate in Ottawa for their work both and commitment, before and after the Institute's move to Montreal.

The good news is that IHDCYH has a number of excellent funding initiatives planned over the next few months and years. These include a re-launch of our Healthy Pregnancy RFA in June 2004 and plans for joint RFAs on childhood asthma (with CIHR's Institute of Infection and Immunity) and ethical-legal-social issues in pregnancy and childhood (with the CIHR Ethics Office) in the coming year.

With new staff soon to be hired in Montreal and Ottawa, IHDCYH is poised to play a major role in reproductive and child health research in Canada and beyond.

Outstanding Research

The Institute of Human Development and Child and Youth Health supports research addressing the causes, prevention, diagnosis, and treatment of conditions associated with reproduction, pregnancy, infancy, childhood, and youth.

Request for Applications on Healthy Pregnancy for Great Life Beginnings

In Fall 2002, IHDCYH launched a Request for Applications (RFA) on Healthy Pregnancy for Great Life Beginnings. The purpose of this initiative was to provide support for multi-disciplinary collaborative research on the determinants, mechanisms, and therapies of preterm birth and adverse fetal growth and the impact of these outcomes on the child, family, and community. Only one project was accepted for funding: \$3,750,000 over five years was granted to Drs. Stephen Matthews (University of Toronto) and Michael Meaney (McGill University) for their project entitled "Maternal Adversity, Vulnerability, and Neurodevelopment".

RFA on Healthy Developmental Trajectories of Infants, Children, and Youth

In June 2003, the Institute issued an RFA on Healthy Developmental Trajectories of Infants, Children, and Youth. Its objective was to investigate the interplay among biological, psychosocial, environmental, and cultural influences on the development of healthy children and those with chronic physical or mental illness. After review of the submitted letters of intent, 10 applicants were invited to submit a full proposal.

Ongoing Initiatives

Under its strategic research priority on pre- and post-implantation health, the Institute continued to fund three interdisciplinary grants from our past RFA on Healthy Gametes and Great Embryos, for a total of \$1,698,000 in 2003-04. In partnership with other CIHR Institutes, IHDCYH provided \$668,541 in 2003-04 to ten New Emerging Teams (NETs) covering many aspects of the Institute's mandate. These NETs focused on fetal alcohol syndrome, prenatal exposure to maternal cigarette smoking, childhood asthma, diabetes, violence, schizophrenia, and childhood inattention.

CIHR

Institute of Human
Development, Child
and Youth Health

The Montreal Children's
Hospital, Les Tourelles, T-118
2300 Tupper Street, Montreal,
Quebec, Canada H3H 1P3

Tel.: (514) 412-4414
Fax: (514) 412-4253
www.cihr-irsc.gc.ca

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Outstanding Researchers in Innovative Environments

IHDCYH is committed to building capacity through effective training programs encompassing all areas of health research, including biomedical, clinical, health services and population health research. Over the past year, the Institute has focused on support for young investigators.

Start-up Grants for Young Investigators

IHDCYH provided seven start-up grants for young investigators through CIHR's Priority Announcements, for a total of \$421,196 in 2003-04. These young investigators are affiliated with IHDCYH and were highly rated in the March or September 2003 CIHR open grants competition, but were just below the threshold for funding (see table below).

MARCH 2003 OPEN COMPETITION

PRINCIPAL APPLICANT	GRANT TITLE
Jean-François Bilodeau CHUL – Université Laval	Glutathione peroxidases (Gpx) in preeclampsia: Potential biochemical markers and impact on vasoconstrictive prostanoids production
Victoria M. Allen Dalhousie University	Perinatal outcomes in pregnancies complicated by inflammatory bowel disease

SEPTEMBER 2003 OPEN COMPETITION

Anick Bérard Hôpital Sainte-Justine (Montreal)	Inappropriate management of women on isotretinoin therapy and its effect on pregnancy and congenital malformation outcomes, and health care cost
Robert F. Bertolo Memorial University of Newfoundland	Sulfur amino acid metabolism and compensatory growth
Johanne Renaud Hôpital Sainte-Justine (Montreal)	Comparative trajectories of utilisation of services and unmet needs: Suicide, suicide attempts and community controls
Hugo Théorêt Université de Montréal	Visual-auditory interactions in the brain of normal and sensory-deprived human subjects

Ongoing Initiatives

The New Investigator Grant Program is a collaboration with the Hospital for Sick Children Foundation (HSCF, Toronto) that funds new investigators to carry out research projects related to child health. In 2003-04, IHDCYH and HSCF co-funded 18 such projects across Canada, for a total IHDCYH contribution of \$500,000 over two years (see table below). The Institute also provided ongoing funds (\$1,108,081 in 2003-04) to 11 Strategic Training Initiatives in Health Research.

NEW INVESTIGATOR GRANT PROGRAM SPRING AND FALL 2003 COMPETITIONS

PRINCIPAL APPLICANT	GRANT TITLE
Ali A. Ashkar McMaster University	Induction of innate immunity against genital HSV-2 infection via TLR3 signaling
Volker Blank Lady Davis Inst. for Medical Research (Montreal)	Regulation of Maff by cytokines in uterus and placenta
Janet Brunton Memorial University of Newfoundland	The roles of arginine, nitric oxide and blood flow in small intestinal adaptation in the neonatal piglet
Farida Cheriet Hôpital Sainte-Justine (Montreal)	Reliability study of non-invasive assessment of the 3-D trunk asymmetry in adolescent idiopathic scoliosis
Carolyn Emery University of Calgary	A prevention strategy to reduce the incidence of injury in high school sport: A cluster randomized clinical trial
Walid Farhat Hospital for Sick Children (Toronto)	The search for an optimal bladder substitute
Bernhard Ganss University of Toronto	The role of the zinc finger transcription factor Krox-26 in developmental defects of tooth and enamel formation
Sharyn Gibbins Sunnybrook & Women's College Health Sciences Centre	Pain behaviours in extremely low birth weight infants
Donna Goodwin University of Saskatchewan	Illness to wellness: Building health capacity for youth with spinal cord injuries
Abdelilah Soussi Gounni University of Manitoba	High affinity receptor of IgE (FceRI) in airway smooth muscle cells
Vincent Joseph Centre hospitalier universitaire du Québec	Perinatal steroids are necessary for the normal development of the respiratory controller network
Donald J. Mabbott The Hospital for Sick Children (Toronto)	Neuroimaging and cognitive function in children with brain tumors
Bruce Mazer McGill University	Understanding respiratory and mucosal allergy using an ex vivo lymph node model
Marc Moreau University of Alberta	Improving the effectiveness of brace treatment for adolescent scoliosis
Anne Monique Nuyt Hôpital Sainte-Justine (Montreal)	Role of oxidative stress in utero programming of hypertension
Stephen Ryan Bloorview MacMillan Centre (Toronto)	Effect of postural control devices for preschoolers on child performance, family functioning and caregiver assistance
John B. Vincent Centre for Addiction and Mental Health (Toronto)	Epigenetic approaches to identifying autism susceptibility genes
Wendy Ward University of Toronto	Bone mass and growth following necrotizing enterocolitis



Translating Health Research into Action

One of IHDCYH's objectives is to promulgate and translate research findings into public policy, health care services, and health products that result in better lifelong health. Through its 2003-04 workshop program, IHDCYH funded 20 multidisciplinary workshops related to IHDCYH's research priorities, for a total of \$130,934. Funded workshops included:

- **International Conference on Cerebral Palsy** (Quebec City, April 2003, \$10,000)
- **Third International Child Health Congress** (Vancouver, May 2003, \$20,000)
- **Canadian Association of Pediatric Health Centres Knowledge Translation Workshop** (Calgary, June 2003, \$10,000)
- **London International Children's Festival** (London, June 2003, \$10,000)
- **Prairie Child Welfare Consortium** (Saskatoon, June 2003, \$7,500)
- **Research Ethics in Community-Based and Participatory Action Research with Children, Adolescents, and Youth** (Victoria, October 2003, \$10,000)

Effective Partnerships and Public Engagement

In 2003-04, IHDCYH continued to enhance linkages and partnerships in research planning and funding with other CIHR Institutes, national organizations, and its U.S. counterpart, the National Institute of Child Health and Human Development (NICHD).

Partnerships with other CIHR Institutes

IHDCYH partnered with the Institute of Gender and Health on Health Disparities; the Institute of Population and Public Health on Global Health Research; the Institute of Nutrition, Metabolism and Diabetes on Childhood Obesity; and the Institute of Neuroscience, Mental Health and Addiction (INMHA) on Gene Therapy for Neurological Diseases.

Partnerships with National Organizations

IHDCYH strongly supports research in environmental influences on health and has championed the Health and Environment cross-cutting strategic initiative. In 2003-04, the Institute actively developed partnerships with the National Research Council (NRC), the Canada Mortgage and Housing Corporation (CMHC), Health Canada, and Environment Canada for the initial planning and development of a future RFA on childhood asthma and indoor air quality.

IHDCYH also partnered with INMHA and the Canadian Tobacco Control Research Initiative on tobacco control and nicotine addiction in youth.

International Collaboration

In collaboration with INMHA and the Institute of Aging, IHDCYH implemented a new collaborative small grants program with JSPS, the Japanese Society for Promotion of Science. Although no IHDCYH grants were awarded in this program in 2003-04, the program has been re-announced for 2004-05.

IHDCYH initiated planning for joint IHDCYH-NICHD summer institutes in reproductive and perinatal epidemiology and in maternal-fetal pharmacology. The objective of the institutes is to provide Canadian and U.S. health research trainees with a methodological and substantive basis for pursuing independent investigation in these areas, for which courses are either unavailable or insufficient in both countries.

Canadian National Birth Cohort (CNBC) Study

In partnership with CIHR's Institute of Genetics and Institute of Population and Public Health, IHDCYH has been actively involved in planning the CNBC, which plans to investigate genetic and environmental determinants of selected health and disease outcomes in children and youth. The outcomes of major interest include adverse pregnancy outcomes, asthma, obesity, and attention deficit and conduct disorders. A second design workshop involving national and international experts was held in Toronto in March 2004.

Organizational Excellence

IHDCYH Offices

Michael Kramer has been the Scientific Director of IHDCYH since May 2003. During this past year, IHDCYH's office was successfully transferred from Toronto to the McGill University Health Centre in Montreal, with new staff to be recruited in Montreal and Ottawa early in 2004-05.

IHDCYH's staff

MONTREAL Dr. Michael Kramer (Scientific Director) and Stella DiPiano (Administrative Assistant)

OTTAWA Loretta Wong (Acting Assistant Director, Partnership and International Relations) and Amanda Devost (Project Officer)

TORONTO Denise Moretto (Special Project/Event Manager) and Jocelyne Arès (Executive Assistant)

Institute Advisory Board

The Institute Advisory Board (IAB) is composed of 16 members from the scientific community, voluntary sector, health care system, and governmental agencies. Lynn Krepart served as interim Chair for most of 2003-04, following Michael Kramer's nomination as Scientific Director. The IAB played a crucial role in supporting and advising the Institute's Directorate during its transition period.

IHDCYH Advisory Board Membership

Mrs. Lynn Krepart, Canadian Foundation for Women's Health (Interim chair)

Dr. James Bonta, Public Safety and Emergency Preparedness Canada
Dr. Sylvain Chemtob, Université de Montréal
Dr. Sandra Davidge, University of Alberta
Dr. Kathleen Glass, McGill University
Dr. Harvey Guyda, McGill University
Dr. Shoo Lee, University of British Columbia
Dr. Catherine McCourt, Health Canada

Dr. Patrick J. McGrath, Dalhousie University
Dr. Bruce Murphy, Université de Montréal
Dr. Hugh O'Brodovich, University of Toronto
Dr. Bryan Richardson, University of Western Ontario
Dr. Jim Roberts, University of Pittsburgh, Pennsylvania
Dr. Peter Rosenbaum, McMaster University
Dr. Bonnie Stevens, University of Toronto
Ms. Dawn Walker, Health Canada

Institute Support Grant

FOR THE YEAR ENDED MARCH 31, 2004

AVAILABLE FUNDS	\$1,000,029
Expenses	
Institute Development	
Conference, symposia and workshops	\$173,825
Institute Advisory Board	57,690
Professional services	38,765
Travel Expenditures	36,012
Institute Operations	
Salaries and benefits	\$479,399
Office accommodations	28,520
Telephone and communication services	5,422
Supplies, material and other services	48,621
Office furniture and fixtures	-
Computer equipment and IT support	15,049
Professional services	73,133
Travel expenditures	76,443
Other expenditures	861
Total Expenses	\$727,449
UNSPENT BALANCE*	\$1,033,741 (\$33,711)

* Note :The unspent balance as at March 31, 2004 is carried forward to the subsequent fiscal year

Investments in Strategic Initiatives

FOR THE YEAR ENDED MARCH 31, 2004

CONTRIBUTIONS THROUGH GRANTS AND AWARDS

STRATEGIC INITIATIVES	Number	2003-04	2004-05	2005-06	2006 and beyond	Total
Healthy Pregnancy	1	519,100	730,900	750,000	1,750,000	3,750,000
Reduce Health Disparities	5	204,683	-	-	-	204,683
Global Health Research	3	119,480	-	-	-	119,480
Obesity & Healthy Body Weight	3	89,999	-	-	-	89,999
Healthy Gametes & Great Embryos	3	1,698,290	1,698,290	1,698,290	2,972,009	8,066,879
Operating Grants	10	600,344	-	-	-	600,344
New Emerging Teams	10	668,541	668,140	668,141	636,122	2,640,944
Gene Therapy-Neuro Diseases	1	50,000	-	-	-	50,000
CIHR Training Program Grants	7	1,108,081	1,143,508	1,180,175	2,592,963	6,024,727
Healthy Dev. Trajectories Inf.	10	75,000	-	-	-	75,000
Tobacco	1	61,150	-	-	-	61,150
Env. Approaches Phys. Activity	2	110,000	-	-	-	110,000
	56	\$5,304,668	\$4,240,838	\$4,296,606	\$7,951,094	\$21,793,206

Note : Grants and awards in respect to these programs are approved for 1 to 5 years. Figures displayed represent CIHR financial commitments for these programs in 2003-04 and subsequent years. Availability of these funds in future years are subject to funding appropriations by Parliament. For some initiatives, partners also contributed to the funding of the grants and awards.