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It is with great pleasure that I share with you the wonderful accomplishments of our faculty over the past year and highlight two exciting new developments.

An academic department’s strength and achievements reflect the quality of its physicians. An essential characteristic of a successful department is an ability to renew itself to meet the present and future challenges of its Academic Health Science Centres (AHSCs) and Faculty of Medicine. The latter has been made possible through the successful re-negotiation of the HSC’s Department of Paediatrics’ alternative funding plan (2001–2006) and additional paediatric resources being acquired at the other fully affiliated teaching hospitals. Together these new resources have enabled many new junior, mid and senior career level faculty to be hired into our Department. The photographs in our 2002–2003 Annual Report highlight many of the 35 new full-time paediatricians who have been hired at The HSC (28), Bloorview MacMillan Centre (2), Mount Sinai Hospital (2) and the Sunnybrook and Women’s College Health Sciences Centre (3) from 2001 to July 1, 2003.

Another exciting development over the past year has been the change in status for Bloorview MacMillan Centre (BMC) to a fully affiliated teaching hospital of the Faculty of Medicine. BMC, previously a partially affiliated teaching hospital is dedicated to enabling children and youth with disabilities or special needs to achieve their personal best. I look forward to working together with Dr. Golda Milo-Manson and Ms. Sheila Jarvis, respectively the physician in Chief and CEO of BMC, to enhance the academic activities at their Institution.

This annual report features faculty who have their primary academic appointment within the Department of Paediatrics. I would like to take this opportunity to thank the members of my Department and its trainees for their contributions to the well-being of infants, children and invite you to share in their accomplishments described within the 2002–2003 annual report. I would also like to thank those individuals who have primary appointments in other departments and contribute to our achievements through their cross-appointment to Paediatrics.

Hugh O’Brodovich MD, FRCP(C)
Professor of Paediatrics and Physiology
Chairman of Paediatrics, University of Toronto
Paediatrician-in-Chief, Hospital for Sick Children
Senior Scientist, Hospital for Sick Children Research Institute
R.S. McLaughlin Foundation Chair in Paediatrics at The Hospital for Sick Children
The Division of Adolescent Medicine continues to focus its clinical activities in four program areas – eating disorders, substance abuse, young families, and complex adolescent problems.

The Eating Disorders Program at The Hospital for Sick Children continues to be the provincial centre for child and adolescent eating disorders providing a variety of integrated clinical services (inpatient, day treatment, outpatient and consultation) to young people and their families. This past year our Division, in collaboration with the Department of Psychiatry, developed a unique one-year fellowship in child and adolescent eating disorders. This fellowship provides clinical and research-based training in preparation for an academic career and leadership role in paediatric eating disorders. The first Eating Disorder Fellow was Anne Morris, MBBS, FRACP a paediatrician from Australia. Dr. Morris has had a very successful year in that she has secured funding from the Population and Public Health Branch and the Health Products and Food Branch, Health Canada to study early-onset eating disorders. In addition, Dr. Morris was the recipient of an Academy for Eating Disorders Clinician Scholarship that allowed her to attend the 2003 International Conference on Eating Disorders Meeting, May 29-31, 2003 in Denver, Colorado.

The 2002–2003 year saw an expansion of Adolescent Substance Abuse Outreach Program (ASAOP) services being provided to adolescents, their families and the community. As has been apparent over the past several years, the nature of the cases continues to move towards greater psychosocial complexity and more extensive substance involvement by the teens with more referrals involving some of the “heavier” substances. Leadership in the community continues, with the team coordinator serving a second term as Chair of Toronto Area Addiction Services Coalition. As well, there was an expansion of the successful glue-sniffing program established in the Jane/Finch area to other community centres in Toronto. In addition to the ASAOP yearly series of lectures to career-track University of Toronto child psychiatry residents and weekly teaching rounds for students of various backgrounds, the group continues to lecture to second year medical students at Mount Sinai and Toronto General Hospitals and to various groups of professionals from physicians to probation officers. Outreach activities ranged from our yearly “Drug Awareness Week” display booth here at HSC, to presentations at other hospitals, children’s mental health centers, public and separate schools at both the elementary and high school levels, and to various committees and coalitions in the community.

The Clinical Nurse Specialist/Nurse Practitioner (CNS/NP) role was established in the Young Families Program in January 2003. The Young Families Program provides health care services, support and health education to high-risk adolescent parents and their children. The CNS/NP provides primary and specialty care, including clinical management to this complex patient population focusing on general paediatric care, adolescent health care, adolescent/infant mental health and adolescent parenting.
This past year one of our Divisional physicians, Dr. Karen Leslie, was promoted to the rank of Associate Professor. Dr. Leslie, who has been on staff in the Division since 1992, has made significant contributions to paediatric teaching and education.

In October 2002, the Division hosted the 8th Canadian Association of Adolescent Health's National Conference on Adolescent Health, “Adolescence In The New Millennium: The Agony & The Ecstasy”. This one-day conference focused on the current world situation and its impact on the health and well being of our youth. The meeting brought together over 200 adolescent health care providers from all over Canada and infused fresh ideas and new perspectives. James Garbarino, Ph.D., Co-Director, Family Life Development Center, Elizabeth Lee Vincent Professor of Human Development, Cornell University, New York gave an excellent keynote address on “Understanding Why Our Kids Turn Violent and How We Can Save Them”. In addition, Debra Pepler, Ph.D. presented an outstanding plenary session on “Bullying in Adolescents.” There were also a number of state-of-the-art workshops on a variety of adolescent topics. The conference concluded with a theatre presentation performed by young people on issues of adolescent mental health.

Members of the Division participated on the Toronto District Health Council's (TDHC) Child Health System Planning Committee providing expertise in planning for the coordination of clinical service needs of youth in Toronto. As a result of this forum, the Child Health System Planning Committee recommended that the TDHC initiate the establishment of a Toronto Region Child and Adolescent Coordination Council to implement activities for improving service coordination and a true “child health system”.

The Divisional research activities are focused in the areas of medical complications of eating disorders, the evaluation of the use of information technology for health promotion with youth, treatment outcome and specific substance use studies in the area of adolescent substance use, HIV educational interventions with incarcerated youth, and health values in adolescents with chronic illnesses. The Division of Adolescent Medicine, in collaboration with the Department of Child Psychiatry, was recently funded by Health Canada to participate in the Canadian Paediatric Surveillance Program to study the incidence and clinical features of early-onset eating disorders. This study is a national and international collaborative initiative that will contribute to the ongoing debate on definition and classification of early-onset eating disorders and will inform the development of improved age and developmentally appropriate diagnostic criteria. In addition, this project will help promote the creation of appropriate interventions that will provide improved outcomes for children and adolescents with this disorder.
PUBLICATIONS

BOOKS AND CHAPTERS IN BOOKS

RESEARCH AND INVESTIGATIONS
The Hospital for Sick Children Day Hospital Treatment. Katzman DK, Pinhas L (Co-principal investigator), and the Eating Disorder Program at The Hospital for Sick Children: The Ontario Ministry of Health ($450,116 2002–2003)
The Division of Cardiology was formally established in the 1940’s and is now one of the largest and most successful in the world. Its philosophy has remained unchanged since its inception over sixty years ago; to provide the highest quality care in an evidence-based environment of clinical innovation and scientific discovery.

Over the past decade, the Divisional activities, in close collaboration with surgical and intensive care colleagues, have contributed to our markedly improved preoperative diagnosis and postoperative outcomes for children undergoing cardiac surgery, led the field in development of therapeutic catheter techniques, made important contributions to our understanding of fetal cardiac medicine, established one of the largest paediatric cardiac transplantation centers world wide, and has won international recognition for its contribution in the field of epidemiology of acquired and congenital heart disease and surgical outcomes. Each of these areas has provided the substrate for the large clinical research output of the Division which is underpinned by a world class laboratory science program. One of the most exciting clinical developments on the horizon is the commissioning of an integrated suite of catheter laboratories and magnetic resonance scanning facilities. This unique fusion will allow ‘simultaneous’ multi mode investigation and treatment, setting the scene for MRI-guided interventional procedures in children.

The cardiovascular research focus within the Research Institute, has made fundamental contributions to our understanding of the cellular biology and molecular genetics of pulmonary vascular bed, with recent diversification to include the study of the fetal myocyte, detailed study of the intercellular structure of the heart and vessels, electrophysiology of the developing heart and immunology of cardiac transplantation. While undergoing a change in leadership, it is expected that high quality basic and translational research, with an emphasis on direct clinical applicability, will continue to form the bedrock of our academic program.

Finally, the Royal College accredited Paediatric Cardiology Training Program, is the largest in Canada and one of the largest and most sought after in North America. As such, its fellows have populated cardiology groups throughout the world, many going on to become leaders of our specialty.
PUBLICATIONS


West LJ: Developmental aspects of immunomodulation: Exploiting the immature immune system for organ transplantation. Transplant Immunology 2002: 9(2-4): pp 149-153. PA

West LJ: Defining critical windows in the development of the human immune system. Human and Experimental Toxicology 2002: 21: pp 499-505. PA


BOOKS AND CHAPTERS IN BOOKS


RESEARCH AND INVESTIGATIONS

A Specialized Center of Clinically-Oriented Research (SCCOR) for the study of cardiac transplantation in infancy. Jeffrey Platt (Mayo Clinic, Rochester, MN), Brian W. McCrindle: NHLBI, NIH as a Specialized Center for Clinically Oriented Research (SCCOR) ($9,111,565 2003–2008)


Assessment of anti-HLA antibody development in infants following the Norwood procedure. West LJ, Dipchand AI, Hornberger L: Hospital for Sick Children Seed Grant Competition Grant (2002)

B1 integrins and the IGF2-IGF1 receptor system in fetal cardiac myocyte proliferation: regulatory role for the nuclear transcription factor Sp1. Hornberger LK, None: Heart and Stroke Foundation of Canada, Research Scholarship ($250,000 2001–2006)

Can remote preconditioning protect against multi-system ischemia-reperfusion injury after cardiopulmonary bypass. Dr. Andrew N. Redington, Dr. Glen Van Arsdell, Dr. Gregory Downey: CIHR Grant ($354,000 2002–2004)

Cardiac allograft tolerance induction during immaturity. West LJ: The Heart and Stroke Foundation of Ontario (per year) ($120,000 2003–2007)

Conotruncal Defects and the Developing Heart. Page Anderson (Duke University, Durham NC), Brian W. McCrindle: NHLBI, NIH, as a Specialized Center for Clinically Oriented Research (SCCOR) ($2,640,304 2003–2008)


Functional and humoral correlates during the first 24 hours after cardiopulmonary bypass procedures in children. Dr. Andrew N. Redington: British Heart Foundation ($154,000 2000–2002)

Haemodynamic predictors of poor functional outcome after Fontan procedures. Dr. Andrew N. Redington, Prof. M. deLeval, Prof. J. Deanfield: British Heart Foundation ($167,000 2000–2002)

Integrin regulation of the cardiac myocyte cell cycle. Lisa K. Hornberger, MD, Ali Riazi, PhD: CIHR ($100,000 2003)

Investigation of neonatally-induced allograft acceptance in a mouse model. West LJ: The Physicians’ Services Incorporated Foundation (per year) ($75,000 2003–2005)

In-vivo assessment of myocardial force-frequency relationships in children. Dr. Andrew N. Redington, Dr. J. Smallhorn, Dr. Forres, Dr. B. Desmon: Heart & Stroke Foundation of Ontario ($124,626 2002–2004)

Mechanisms of cardiac allograft tolerance induced during immaturity. West LJ: The Heart and Stroke Foundation of Ontario (per year) ($65,000 2001–2003)

Meeting the genetic needs of families with hypertrophic cardiomyopathy. Dr. William Newman, Dr. Harry Rakowski, Dr. Anna Woo, Dr. David Cole: The Charge Foundation ($100,000 2002–2004)


Passive stiffness of ventricular muscle from children with diastolic dysfunction. RR Chaturvedi: British Heart Foundation ($381,492 1999–2002)


Project Director Ontario consortium for cardiac imaging-combined industry and government grant for 5 years $400,000. Three dimensional echocardiography: The change in left A-V valve morphology following AVSD repair. Contrast echocardiography in Paediatrics-role in the evaluation of bidirectional cavopulmonary shunts (2001 – 2005). Smallhorn JF: Ontario consortium for cardiac imaging-combined industry and government grant ($400,000 2001–2005)

Right ventricular function in heart transplantation. Dr. Andrew N. Redington, Mr. S. Large: British Heart Foundation ($135,927 2000–2002)


Travel grant, for support of Dr Xiaohu Fan. West LJ: American Society for Transplantation. (2002)

The Division of Clinical and Metabolic Genetics is recognized nationally and internationally for its contributions to both clinical and basic genetics. Recent clinical initiatives have included a new multidisciplinary clinic for patients with 22q11 deletion syndrome involving more than 10 Divisions at the Hospital for Sick Children as well as clinics at the Toronto Hospital and Queen Street Mental Health Centre. Our specialty clinics continue to serve as an important link between the Division and other clinical services at the Hospital for Sick Children.

Research endeavours in the Division are actively expanding. These studies include an evaluation of clinical practice guidelines for children with achondroplasia, a study on genotype-phenotype correlations for Sotos syndrome as well as a comprehensive evaluation on children in the Craniofacial Program. The Fourth Annual Starbucks Studentship Award was won by Robert Grunfel who is involved in the study of optimal medical management for children with achondroplasia.
PUBLICATIONS


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BOOKS AND CHAPTERS IN BOOKS

Clarke JTR: A clinical guide to inherited metabolic diseases, 2nd edition Cambridge University, Cambridge 2002. PA


RESEARCH AND INVESTIGATIONS


Feasibility of Prenatal Screening for SLO syndrome (SLOS). Haddow JE, MacRae A, Chitayat D: National Institutes of Health – NIH (Grant #HD-38940-02) ($500,000 2001–2005)


Retinal and corneal stem cells. McInnes RR: Centres of Excellence Program – The Stem Cell Network ($56,000/yr 2003–2005)

Second And First trimester Evaluation of Risk of fetal trisomies (SAFER). MacRae A, Chitayat D: Canadian Institute of Health Research – CIHR (Grant #107635) ($655,833 2003)

Supplement to Developmental Genetics of the Mammalian Eye. McInnes RR: CIHR – Scientific Director Research Program Supplement ($150,000/yr 2001–2005)
The Division of Clinical Pharmacology and Toxicology focuses on a wide range of drug-related issues in pediatrics. The division is one of the largest and the most active pediatric pharmacology programs internationally. Our major clinical activities include a consultation service, the Motherisk program (the counseling and information center for drug and other exposures during pregnancy and lactation), and the Ontario Regional Poison Information Center. The division is one of the two major training sites of the Royal College-accredited Clinical Pharmacology Residency program of the University of Toronto. Our research programs focus on drug metabolizing enzymes and its regulation, drug transporters, placental and mammary gland drug transport and metabolism, and reproductive toxicology and teratology, including fetal alcohol syndrome research.
PUBLICATIONS


**RESEARCH AND INVESTIGATIONS**

A population-based study of drug-drug interactions in the elderly. Juurlink, D: **Canadian Institutes of Health Research Postdoctoral Fellowship. $135,000 over 3 years (2001–2004)**

Biomarkers and oxidative damage in FAS. Koren G: **CHIR Net grant ($250,000/yr 2002–2007)**


Determinants of renal handling of drugs during development. Ito S: **CIHR ($583,000 2003–2008)**


Maternal Occupational exposure to organic solvents during pregnancy and infant visual processing. Koren G, Dr. J. Rovet, Dr. C. Estall: **Workplace Safety and Insurance Board’s Research Advisory Council ($252,000 2001–2004)**

Pregnancy outcome following exposure to beta-blockers. Koren G, Dr. Ray: **Canadian Foundation for Women’s Health ($40,000 2002–2003)**

Pregnancy outcome in women with polycystic ovary syndrome exposed to metformin. Koren G, Vallois M: **PSI ($50,000 2002–2004)**

Propylthiouracil use during breastfeeding: The cost of misinformation. Ito S: **Canadian Foundation for Women’s Health (The Duscheney fund for better use of drugs during pregnancy and lactation) ($16,000 2002–2003)**


The Division of Endocrinology continued to be extremely active and productive in 2002–2003, clinically, educationally and in the research areas. The major accomplishments were in four main areas:

(i) Diabetes: Enhancement of the comprehensive program for children and teens with type 1 diabetes from diagnosis to transition to adult care; early development of a parallel program for the steadily increasing number of teens with type 2 diabetes; amplification of outreach activities; studies to determine outcomes in these children with respect to metabolic control, diabetic ketoacidosis, eating disorders, and early complications;

(ii) General Endocrinology: Ongoing development of the subspecialty clinics for children with intersex disorders and disorders of female reproductive health; ongoing research in the area of growth and thyroid disorders;

(iii) Calcium: Initiation of the Osteoporosis Clinic as a joint venture with the Division of Rheumatology plus further development of the treatment program for children with osteogenesis imperfecta;

(iv) Gynaecology section: Enhancement of clinical activities in the section. The Paediatric Endocrinology Training Program continues to attract excellent candidates from centres around the world: this year there were 9 fellows at different stages of training in the Division.
PUBLICATIONS


BOOKS AND CHAPTERS IN BOOKS


RESEARCH AND INVESTIGATIONS

A 24 week randomized, double-blind, active-controlled, multicenter study to evaluate the safety and efficacy of rosiglitazone when administered to pediatric patients with type 2 diabetes mellitus. Jill Hamilton: GlaxoSmithKline ($20,000 2001 – 2003)

A comparison of two family-based interventions for girls with type 1 diabetes and problematic eating attitudes and behaviours. Daneman D: Canadian Diabetes Association ($150,000 2001 – 2003)


TrialNet Center (Study group for prevention of type 1 diabetes). Wherrett D, Daneman D, Mahon J: National Institute of Health ($1,099,000 2001 – 2008)


Morning Lantus Insulin Glargine Vs Intermediate Acting Insulin Twice Daily as Basal Insulin in a Multiple Daily Insulin Regimen With Humalog in Adolescents with Type 1 Diabetes Mellitus: An Active-Controlled, Open, Randomized, Gender-Stratified, Two-Arm, Parallel-Group Study. Denis Daneman, Kusiel Perlman: Aventis Pharma ($103,140 2003 – 2004)


Psychosocial Adjustment and Gender Identity in Genetic Males Born with Ambiguous Genitalia. Dr. Diane K. Wherrett, Dr. K. Zucker, Ms. B. Neilson, Dr. S. Bradley: The Hospital for Sick Children, Research Institute Seed Grant ($31,180 2001 – 2003)


TrialNet Center (Study group for prevention of type 1 diabetes). Wherrett D, Daneman D, Mahon J: National Institute of Health ($1,099,000 2001 – 2008)

Type 1 Diabetes TrialNet – The impact of GAD on preservation of Beta cell function. Dr. Diane K. Wherrett, Mahon J, Daneman D: National Institutes of Health ($1,750,000 2001 – 2008)

The Division of GI/Nutrition has a fully integrated program in paediatric clinical nutrition, luminal gastroenterology, hepatology and transplantation making it one of few in North America with total paediatric ‘GI-coverage’.

The Division continues its proud heritage as the pre-eminent Canadian academic GI/Nutrition Fellowship Program. The program offers one year of clinical training and two research years. The clinical component includes a wide array of experiences including procedures (endoscopy, manometry, liver biopsies and calorimetry); in-patient management (transplant, GI and nutrition), ambulatory clinics (including hepatology, home-TPN, dysphasia, general GI, hepatology and nutrition), evidence-based rounds and training in ethics and communication. Many of our trainees in the research program (two years) combine a formal degree-granting program (MSc or PhD) with their research fellowship years.

The Division hosts eleven full-time staff, two part-time and two cross-appointed members. Our research spans the spectrum from basic and translational to patient-based in such areas as cystic fibrosis, inflammatory bowel diseases, nutrition and hepatology. Funding support (over six million dollars annually) includes grants from the CIHR, NIH, CF Foundation, Crohn’s and Colitis Foundation, the HJ Heinz Co. Foundation, Canadian Digestive Disease Foundation, the CDC, Health Canada and more.

**PUBLICATIONS**


Shoveller, Brunton, Pencharz, Ball: The methionine requirement is lower in the parenterally fed neonatal piglet than in the enterally fed. Journal of Nutrition: March 2003: 133: pp 1390-1397.


BOOKS AND CHAPTERS IN BOOKS


RESEARCH AND INVESTIGATIONS


Cell Signalling in Mucosal Inflammation and Pain. Richard Ellen, P Sherman: Canadian Institute for Health Research ($300,000 2002 – 2005)


Development of a blood collection cassette. SH Zlotkin: *Dept. of Health and Human Services, Centre for Disease Control* ($300,074 2000–2003)


Director: Molecular Basis of the Cystic Fibrosis Phenotype ($US3,430,290)


Mapping and Isolation of Genes Influencing Severity of Disease in Cystic Fibrosis. Peter Durie and Lap-Chee Tsui, Mary Corey, Julian Zielenki, Andy Sandford, Peter Pare, Yves Berthiaume: *Genome Canada* ($6,728,404 2002–2005)


Multi-Center Registry of Acute Liver Failure in Children. Dr. Vicky Ng, Fecteau, A: *NIH* (US$400 per patient 2000–2005)


Optimizing Cyclosporine Exposure in Stable Pediatric Liver Transplant Patients by the use of C2 Monitoring. Dr. Vicky Ng: *Novartis Canada* ($11,000 2003–2004)


Prospective Analysis of Fatty Acid Oxidation Defects in Pediatric Acute Liver Failure. Dr. Vicky Ng, Fecteau A: *National Institutes of Health* (US$500 per patient 2000–2005)


The haematology/oncology/bone marrow transplantation (BMT) cluster provides care for children with cancer and non-malignant disorders of the blood and children who require stem-cell transplantation. Approximately 300 children (<18 years of age) with newly diagnosed cancer are registered in the paediatric oncology program each year, representing 25% of all cases of paediatric cancer seen in Canada annually. The BMT program is the designated centre for paediatric stem-cell transplantation in Ontario and has performed a total of 65 transplants in the past year. Other very large programs exist in bleeding and clotting disorders and in the hemoglobinopathies eg. sickle cell syndromes and the thalassemias. The Division is one of the largest institutional members of the Children’s Oncology Group (COG), and registered a total of 68 children on COG initiated cooperative clinical trials in 2002, representing a doubling of patient enrollment over previous years and signaling a deliberate strategy to enter, wherever possible, children with cancer on well-designed clinical trials.

Highlights of the past year included consolidation of the hematology/oncology/BMT cluster into five sections and three programs under the leadership of Dr. Victor Blanchette (Haematology), Dr. John Doyle (BMT), Dr. Eric Bouffet (NeuroOncology), Dr. Alberto Pappo (Solid Tumors), Dr. Sheila Weitzman (Lymphoma/Leukemia), Dr. Sylvain Baruchel (New Agents and Innovative Therapies Program), Dr. Mark Greenberg (Aftercare Program) and Dr. David Malkin (Cancer Genetics Program). This restructuring process was enhanced by the recruitment of two new physicians into the Division: Dr. Michael Capra (clinician specialist, Solid Tumour section) and Dr. Walter Kahr (clinician scientist, Hematology Section). Of note, during the past year Dr. David Malkin and Dr. Sylvain Baruchel, senior paediatric oncologists in the Division, were promoted to the rank of full professor in the Department of Paediatrics at the University of Toronto.

The Division boasts an active international clinical/research paediatric haematology/oncology fellowship program with 24 fellows in 2002–2003. Research in the Division is active and expanding. Highlights included the award of a Canada Tier II Chair to Dr. Meredith Irwin based on her basic science studies in the biology of childhood cancer and the inaugural Department of Paediatrics Junior Faculty Research Award to Dr. Hans Hitzler for his discovery of the mutation responsible for infant megakaryoblastic leukemia. An important and very exciting development in the past year was the recruitment of Dr. David Kaplan to head the Paediatric Cancer Research Program in the Research Institute at HSC; several of the scientists in the Division of Haematology/Oncology are working closely with Dr. Kaplan and his research team to generate new knowledge concerning the etiology and potential treatment of cancer in children.
PUBLICATIONS
Chan HSL: Retinoblastoma genetics and clinical applications. Peer reviewed, review article. eMedicine Journal, September 27 2002, Volume 3, Number 9 (in press). Sole Author
Chan HSL: Tumors metastasizing to the heart and cardiovascular system. Peer reviewed, review article. eMedicine Journal, October 14 2002, Volume 3, Number 10 (in press). Sole Author
Chan HSL, Valverde K: Clinical syndromes at high risk for malignancy. Peer reviewed, review articles. eMedicine Journal, July 5 2002, Volume 3, Number 7 (in press). Senior Author
RESEARCH AND INVESTIGATIONS


A prospective, randomized trial to compare two regimens of prophylaxis in older boys with severe haemophilia A. Carcao MD, Blanchette V (Co-Investigator), Feldman BM, Babyn P, Oh P, Hedden D: Canadian Haemophilia Society Research Program ($98,834 2001–2003)


Angiogenesis in Shwachman-Diamond syndrome bone marrow stroma: the interplay between angiogenic characteristics, apoptosis and leukemogenic potential. Freedman MH, Dror Y: Shwachman-Diamond Syndrome Canada ($22,000 2003)


Canadian Inherited Marrow Failure Registry (CIMFR). Dror Y: Donor Directed funds to Division of Hematology/Oncology via Hospital for Sick Children Foundation ($78,000 2002–2005)

Canadian Inherited Marrow Failure Registry (CIMFR). Dror Y: Fanconi Anemia Canada ($22,500 2002–2003)

Canadian Inherited Marrow Failure Registry (CIMFR). Dror Y: Shwachman-Diamond Canada ($10,000 2002–2003)

Canadian Inherited Marrow Failure Registry (CIMFR). Dror Y: Amgen Inc. ($11,100 2002–2003)


Controlled series of N-of-1 trials of topical vitamin E as prophylaxis for chemotherapy induced oral mucositis in pediatric patients. Sung L, Feldman BM, Tomlinson GA, Greenberg ML, Koren M: Hospital for Sick Children Seed Grant Competition ($23,000 2003–2005)

Cross sectional observational study of low bone mass in thalassemia. 2003–2004 transferred study over to Dr. Kirby. Kirby M: NIH ($250,000 2003)


Effectiveness of child and parent-targeted health promotion interventions in pediatric stem cell transplantation. Phipps S, St Jude Children’s Research Hospital, Memphis TN, Barrera M, Vannatta K (CHMCC), Doyle J: NHLBI/NIH ($57,000 2002)


Functional analysis of the p53 family members p73 and p63 roles in apoptosis, development and cancer. Irwin M: Canada Research Chair; Tier II (Salary Award) ($75,000 2003–2008)

Leukemogenesis in inherited marrow failure syndromes. Dror Y: University of Toronto Schools’ Students Directed Donation for Cancer Research ($2,000 2003)

Magnetic resonance imaging studies of severe haemophilia A patients on a randomized trial comparing two regimens of recombinant factor VIII prophylaxis. Carcao, MD, Blanchette V (Co-Principal Investigator), Feldman BM, Babyn P: Bayer Canada ($140,183 2001–2003)


Molecular determinants of tumor formation in Li-Fraumeni syndrome. Malkin D: National Cancer Institute of Canada ($336,000 2001–2004)


Phase I Trial of Temodal using an extended continuous oral schedule in recurrent pediatric brain tumors. Baruchel S: Schering-Plough Canada ($90,000 1999 – 2002)


The Division of Immunology/Allergy has recently received recognition for its excellent national and international contribution to the diagnosis of primary immunodeficiency (PID) from the Jeffrey Modell Foundation. This American foundation chose our program as one of five sites world-wide and will provide annual funding in perpetuity for the diagnosis of PID. Dr. Roifman was also the recipient of the 2003 Clinical Research Society of Toronto Senior Scientist Award. Teaching in our division has been assessed recently by surveyors of the Royal College who gave full approval and found no weaknesses in our training program. Research in the division continues to flourish, by means of funding and publications. Of special note, are the discoveries concerning novel types of primary immunodeficiency, the role of Eph receptor in the immune system and the establishment of a PNP deficiency knockout mouse model for gene therapy.
PUBLICATIONS
Miller CDE, Roifman C: Immunodeficiency in Jacobsen syndrome. Journal of Allergy and Clinical Immunology 2003: 111: p S232. PA
Miller C, Freywald A, Roifman C: EphA receptors as regulations of negative selection of self reacting thymocytes. FOCIS 2003 annual meeting Federation of Clinical Immunology Societies, France 2003. PA
Triassi M, Roifman C: Common Gamma chain mutation R222C causes atypical severe combined immunodeficiency (SCID) phenotype. Journal of Allergy and Clinical Immunology 2003: 111: p S222. PA

BOOKS AND CHAPTERS IN BOOKS

RESEARCH AND INVESTIGATIONS
Role of Eph receptors in the immune system. Roifman CM: Canadian Institute of Health Research (CIHR) ($300,084 2001–2004)
The Division of Infectious Diseases plays a clinical and research leadership role, locally, nationally and internationally. We are a resource for issues related to infectious disease outbreaks, including new and emerging infections such as SARS, infection control and the specialized areas of HIV, congenital infections, management of infectious complications of transplants, and the ever-increasing problem of multi-drug resistant tuberculosis. Our TB clinic, designed for appropriate biocontainment, continues to expand. Division members play a leading role in national and international epidemiological, clinical, and research advisory committees including committees of the US Centers for Disease Control, the Infectious Diseases Society of America, and Health Canada, as well as consultant roles in Russia and the Bahamas.

In the area of education, our Division continues to play a key role in the Infectious Diseases section of the Royal College of Physicians and Surgeons of Canada, and in many areas of Continuing Medical Education.

Our research in Infection Control includes the clinical and molecular epidemiology of paediatric nosocomial infections. Other research initiatives include multicentered Paediatric HIV studies related to maternal-to-child transmission and studies on new antiretrovirals, vaccine studies and research into the mechanisms of host susceptibility to viral infections. These infections include viral myocarditis, HIV and EBV related lymphoproliferative disease. Multicentered trials related to the diagnosis and prevention of infections in transplant patients are ongoing, as well as participation in national surveillance studies (IMPACT) and national collaborative Paediatric studies through the Pediatric Investigators Collaborative Network on Infections in Canada (PICNIC).


Roberts J, DeMatteo D, King SM, Read S: Involving participants in the dissemination of HIV research results. Canadian Psychology 2002: 43: pp 112-114. SRI


Safety, tolerability and immunogenicity of 3 different formulations of a liquid hexavalent combination vaccine (HR5I) Hib conjugate, recombinant HBsAg, diphtheria toxoid, tetanus toxoid, 5-component acellular pertussis vaccine, and inactivated poliovirus 1, 2, 3) when administered to healthy hepatitis B vaccine naïve infants at 2, 4, 6 and 12-14 months. (Protocol 003-01). Merck & Co. Inc., Ford-Jones EL (HSC Vaccine Investigator): Merck Frosst Canada & Co. ($217,420 2001–2003)

The Division of Neonatology was pleased to welcome Dr. Yenge Diambomba to the full-time faculty at Mt. Sinai Hospital, and Dr. Robert Jankov to the full-time faculty at the Sunnybrook and Women's College Health Sciences Centre.

The three level III NICUs at the Hospital for Sick Children, Mt. Sinai Hospital and the Sunnybrook & Women's College Health Sciences Centre continue to experience staffing difficulties, though there has been a noticeable improvement over the last year. Patient and staff transfer restrictions during the SARS outbreak have created acute difficulties on numerous occasions.

The Division has an "approved" Neonatal/Perinatal Fellowship Training Programme, which continues to train the largest number of subspeciality trainees in Neonatology of any centre in Canada. The recently observed and welcome increase in the number of Canadian trainees continues. Various members of the Division have obtained new or continuing peer-reviewed research support for clinical and laboratory research in the last year. The major foci for research continue to be laboratory bases research on lung and gut development at the Hospital for Sick Children, perinatal epidemiology at Mt. Sinai Hospital and Clinical Trials at the Sunnybrook & Women's College Health Sciences Centre.
PUBLICATIONS


Dunn MS, Reilly MC. Approaches to the initial respiratory management of preterm neonates. Paediatric Respiratory Reviews 2003: 243: pp 1-7. PA


BOOKS AND CHAPTERS IN BOOKS


RESEARCH AND INVESTIGATIONS

A multicenter study to evaluate the efficacy and safety of tin-mesoporphyrin (stannsoporfin) to reduce the need for phototherapy in term and near-term infants. Kim JH, Sgro M, Kelly E, Ng E, Doctor S, Lodha A: Wellspring Pharmaceutical Canada ($3,000,000 2003)


Canadian Cochrane Network and Centre. Ohlsson A: The Canadian Cochrane Network: CIHR ($1,000,000 2000-2005)


Clinician Scientist Training Award. Jankov R: The Hospital for Sick Children ($60,000 2001-2005)


Thyroid hormone and infant visual processing development. Rovet J, Westall C, Asztalos E: Canadian Institute of Health Research ($616,540 2001–2006)

Clinically, the Division of Nephrology division remains very active, particularly in the dialysis field, and during the past year the division instituted the first Home Nocturnal Hemodialysis program in North America. Prospective monitoring of this program is funded by a grant from the Change Foundation. A concern remains a shortage of cadaver kidney donors, though with increasing numbers of live donors the transplant program remains busy. The clinical activity has been augmented since Dr. Rachel Pearl and Dr. Valerie Langlois joined the staff part-time.

Developmental biology research into the developing kidney continues as a major focus in the laboratories of Dr. Norman Rosenblum and Dr. Tino Piscione. Dr. Rosenblum is also a recent recipient of renewed funding for 5 years from the Canadian Institute for Health Research. In addition, the research arm of the division has been strengthened by the arrival of Dr. Lisa Robinson, whose research focuses on the control of inflammation as related to renal transplant rejection.

The Nephrology training program, which is accredited by the Royal College of Physicians, graduated four paediatric nephrologists in the past year, two of whom remain in academic practice in Canada, while 2 others returned to their homelands to assume consultant positions.
PUBLICATIONS


RESEARCH AND INVESTIGATIONS

Canadian Child Health Clinician-Scientist Program. Rosenblum ND: Canadian Institutes of Health Research ($1,800,000 2002–2008)


Clinician Child Health Clinician-Scientist Program. Rosenblum ND: The Hospital for Sick Children Foundation ($1,800,000 2002–2008)


The major foci of the clinical activities of the Division of Neurology are epilepsy, stroke, headache, neurometabolic disease, neuromuscular disease, sleep disorders, movement disorders, multiple sclerosis, autism, developmental disorders and functional neuroimaging. The Neurology Division has a Royal College accredited training program in Child Neurology as well as postdoctoral training programs in epilepsy, stroke, and developmental pediatrics. The latter is in conjunction with the Bloorview MacMillan Center. In addition, there are a number of graduate students and postdoctoral fellows in clinical neurophysiology and molecular and cellular neurobiology. The research foci of the Neurology Division is epilepsy (both clinical and basic research), magnetoencephalography, stroke, dyslexia, autism, burden of disease and quality of life, attention deficit disorder/hyperactivity, muscular dystrophy, multiple sclerosis, fatty acid oxidation disorders, and molecular and cellular neurobiology.

**PUBLICATIONS**


Carnitine-responsive cardiomyopathy and the different-affinity carnitine transporters. Tein I: Heart and Stroke Foundation of Ontario Grant-NA 4964 ($154,000 2002 – 2004)


Clinician Scientist Start-up funds to hire project co-ordinator for Childhood Stroke Research program. deVeber, GA: Hospital for Sick Children Research Institute ($50,000 1999 – 2003)


EEG changes with vagus nerve stimulation. Betty Koo, David Adelson, Brent Tarver: Cyberonics ($450,000 2002 – 2004)


Generation of carnitine transporter OCTN1 knock-out mouse. Tein I: Hospital for Sick Children Foundation Grant ($60,000 2002 – 2003)


Localization brain language in a normal pediatric population: a comparison of functional magnetic resonance imaging (fMRI) and magnetoencephalography/magnetic source imaging (MEG/MSI) techniques. Logan W, Pang E, Otsubo H: Pediatric Consultants, Research Proposal at the Hospital for Sick Children ($5,000 2002 – 2003)


Mitochondrial encephalomyopathies – MELAS Dichloroacetate Trial. De Vivo DC, Tein I (External Medical Review and Advisory Committee): National Institutes of Health Grant (NICHD) ($1,144,125 1999 – 2004)

Molecular genetics and functional studies in Lafora’s progressive myoclonus epilepsy. Minassian BA: Canadian Institute of Health Research ($866,680 2000 – 2005)


Neural correlates of auditory processing in autism and language disorders. Roberts SW, Oram J, Roberts T: Canadian Institute of Health Research, Postdoctoral fellowship for Janis Oram ($80,000 2003 – 2005)
### Neurobehavioural outcome of head injury in children – Subcontact


### New defects of polyamine metabolism.


### Is lipoprotein (a) a risk factor for recurrent ischemic stroke in children.
deVeber GA, Chan AK, Connolly P: Canadian Stroke Network ($45,000 2003–2004)


### Research Fellowship Award (Dr. M. Frantseva). Snead OC: CIHR – Fellowship Award ($38,500 2001–2004)

### Role of the carnitine/organic cation transporters in the mammary gland and implications for the suckling infant.
Tein Ingrid: Mead-Johnson Grant ($7,500 2003–2004)

### Serotoninergic mechanisms in atypical absence seizures.
Snead OC: Hospital For Sick Children, Paediatric Consultants ($5,000 2001–2002)

### Stroke Investigators Award Research Scholar.

### The investigation of genetic factors in ADHD.


### Training Program In Autism Research.


The Division of Paediatric Emergency Medicine at The Hospital for Sick Children provides acute care to children who are ill or who have been injured. We are both the primary care centre for children in Toronto, plus the tertiary referral centre for the GTA, in addition to being the designated Paediatric Trauma Centre for the GTA. Over the last year, we have worked with Toronto EMS, the CCU, and NICU at HSC to develop a paediatric transport system for the GTA which will be a vital component to the provision of care to acutely ill or injured children. In recognition of the development and expansion of the work that is done by the division, this past year saw a name change from the Division of Emergency Services to the Division of Paediatric Emergency Medicine.

The Division has an active 3 year Paediatric Emergency Medicine Fellowship program. The Royal College of Physicians and Surgeons has recently accredited our fellowship program. In addition, we have a number of clinical departmental fellows from around the world spending a year with us, further developing their paediatric emergency medicine skills. The division continues to run Paediatric Life Support Courses (PALS or APLS). We also have a well developed half-day of educational activities for trainees and all Health care providers in the Emergency Department.

Research in the Division remains clinically focused, covering a wide range of topics from respiratory disease acute care management, orthopedic ankle injuries, pain and sedation, to drug errors. One additional clinician investigator has joined the division, Dr. Ran Goldman. An increase in clinical research activities has resulted. Research done within the division continues to be presented nationally and internationally with publication in peer reviewed journals.
PUBLICATIONS

BOOKS AND CHAPTERS IN BOOKS

RESEARCH AND INVESTIGATIONS
Children leaving the pediatric emergency department without being seen by a pediatrician: Why don’t they stay and where do they go? Goldman RD: CAEP Research Grant Competition ($4,940 2001 – 2003)
Reducing prescription errors in a pediatric emergency department – a randomized controlled trial. Kozer E, Scolnik D: Trainee’s Start-up Fund ($2,000 2001 – 2002)
The clinical programs of the Division of Paediatric Medicine provide care to children admitted to the Paediatric Medicine In-patient Unit and children attending Ambulatory Clinics in Dermatology, Paediatrics and Suspected Child Abuse and Neglect (SCAN). In addition, 90 part-time faculty actively participate in the Section of Community Paediatrics. Faculty participate in education of trainees at all levels, including medical students, paediatric residents and fellows. Clinical Fellows have pursued training in paediatric dermatology and child maltreatment. Academic Fellows have pursued post-graduate training in Clinical Epidemiology and Medical Education. This year's Awards Day Celebration recognized Dr. Sanjay Mahant as runner-up for the RHA Haslam PreClerkship Teaching Award; Dr. Robert Hilliard as winner of the RHA Haslam PreClerkship Teaching Award; Dr. Vincent Ho as runner up for the Clerkship Teaching Award; Dr. Marvin Gans as winner of the Clerkship Teaching Award; Dr. Jeremy Friedman as the runner up for the Harry Bain Teaching Award; Dr. Susan Tallett as the winner of the Harry Bain Teaching Award; Dr. Michael Peer as the runner up for the Marvin Gerstein Teaching Award; Dr. Marvin Gans as the winner of the Marvin Gerstein Teaching Award; Dr. Bernice Krafchik as the winner of the Continuing Medical Education Award and Dr. Sanjay Mahant as the runner up for the Junior Faculty Clinical Award. Other awards include Dr. Bernice Krafchik who is the winner of the PAIRO Excellence in Teaching Award and the Dermatology Excellence in Teaching Award, and Dr. Susan Tallett who is the winner of the...
Award of Excellence in Postgraduate Medical Education in the category of Program Development and Administration and Innovation.

Dr. Bernice Krafchik retired at the end of June 2003 following an outstanding career as a clinician, teacher and researcher in Paediatric Dermatology. New faculty include Dr. Elena Pope in Paediatric Dermatology and Paediatric Consultation Clinic.

Divisional research activities are broad and range from studies of the management of common paediatric problems, assessment of quality of life in developmentally delayed children, evaluation of the hospitalist model, and injury prevention. Members of the division have supervised residents, fellows, and graduate students, and presented work at national and international meetings. Dr. Colin Macarthur supervised Dr. Ra Han who won the Core Paediatrics Research Award at the Department of Paediatrics Annual Awards Day and the Annual Canadian National Paediatric Resident Research Award in Winnipeg. Dr. Alison Macpherson successfully defended her PhD under the supervision of Dr. Teresa To and Dr. Patricia Parkin, with Dr. Colin Macarthur as a committee member. Dr. Carolyn Beck’s Abstract was selected to be presented in poster format at the Residents and Fellows Research Competition in Toronto, Ontario in May 2003.

PUBLICATIONS


BOOKS AND CHAPTERS IN BOOKS


RESEARCH AND INVESTIGATIONS


A multicentre, single arm prospective, open label study to assess the safety of Elidel (SDZ ASM 981 – pimecrolimus) cream 1% in patients with atopic dermatitis (Rainbow study). Krafchik BR, Pope E: Novartis Pharmaceuticals Canada Inc ($7,000 2002 – 2003)

An open label effectiveness and safety study of Elidel (pimecrolimus) cream 1% in subjects with atopic dermatitis who completed study CASM981C2405. Krafchik BR, Pope E: Novartis Pharmaceuticals Canada Inc ($9,000 2002–2003)


Center for Injury Research and Prevention (LOI) Macarthur C (Co-PI): Canadian Institutes of Health Research ($9,500 2003)


Faculty Development for Community Pediatric Teachers. Leslie K, Hilliard RI, Schneider R, Tallett SE: Dean's Excellence Fund for Undergraduate Medical Education ($16,300 2002–2003)


Integration of teletriage and homecare services into a sustainable service for Toronto children. Dick PT, Young N: The Richard Ivey Foundation ($250,000 2000–2003)


Pediatric Postgraduate Residents’ Perceptions of Ethical Dilemmas during their Training. Hilliard RI, Harrison C: Pediatric Consultants, Department of Pediatrics, Hospital for Sick Children ($2,230 2003–2004)


Tacrolimus pharmacokinetics in pediatric atopic dermatitis patients after topical administration of Protopic (tacrolimus) ointment 0.03%. Krafchik BR: **Fujisawa Healthcare Inc ($72,450 2001 – 2003)**


The efficacy and safety of intravenous pulse steroids compared to standard oral steroids in the treatment of problematic hemangiomas in infants: A randomized controlled trial. Pope E, Krafchik BR, Weinstein M: **Weston Grant for Pediatric Dermatology, Society for Pediatric Dermatology ($20,000 2002 – 2004)**


To set up research into Stevens-Johnson disease. Krafchik BR: **The Hospital for Sick Children Foundation Donation ($3,408 1999 – 2003)**


Where to go: a study examining students’ priorities when ranking pediatric residency programs. Gelman T, Macarthur C, Tallett S: **Research Institute, The Hospital for Sick Children, Trainee Start-up Fund ($2,000 2003)**
The Division of Respiratory Medicine provides comprehensive care for the full range of pediatric pulmonary disease. Overall clinical responsibility is assumed for children with complex asthma, cystic fibrosis, interstitial lung disease, and chronic respiratory insufficiency in infancy due to prematurity and/or congenital malformations. We also provide consultation support for the Hospital in all areas of pediatric respiratory disease. We maintain an ongoing follow-up programme for children with chronic respiratory insufficiency, and who are technologically dependent. The Sleep Laboratory (the only dedicated pediatric sleep laboratory in Ontario) provides ongoing follow-up in care for children with sleep apnea, sleep related respiratory insufficiency, as well as being affiliated with Divisions of Neurology and General Paediatrics in caring for children with complex neuro-behavioural sleep disorders. The Division is part of the Toronto Lung Transplantation Programme, providing pre- and post transplantation care for children with end-stage lung disease. The Division also provides a flexible bronchoscopy programme in the diagnosis of children with interstitial lung disease, anatomical abnormalities and infections in the immunocompromised host.

The training programme has independent Royal College of Physicians and Surgeons of Canada accreditation and provides the full range of training that is required for Board Certification in Paediatric Pulmonology in the United States. As well as offering training to Royal College of Physicians and Surgeons of Canada eligible candidates, it also trains physicians from abroad.

The major research foci include clinical and basic science studies in aerosol therapy and exercise physiology, asthma, the molecular biology of electrolyte transport in the lung epithelium, novel genes in lung development and the NIH Childhood Asthma Management Programme Continuation Study as well as a number of smaller clinical studies. We are currently working with the WHO in developing a measles vaccine that can be given by aerosol in developing countries.
PUBLICATIONS


Sweezey NB, Kaplan F, Genetics, McGill University: Canadian Institutes of Health Research (formerly MRC Canada) ($273,540 2000–2003)

RESEARCH AND INVESTIGATIONS
A randomized double blind placebo controlled study to investigate the efficacy and safety of 24 weeks of oral treatment with BIL 284 BS in adult (75 mg, 150 mg) and pediatric (75 mg) cystic fibrosis patients. Site PI – Hiran Selvadurai: Boehringer Ingelheim Pharm Inc. ($115,682 2003–2004)


CAMP-CS: The Hospital for Sick Children Clinical Centre for Study of a Childhood Asthma Management Program – Continuation Study. Dr. Ian MacLusky, John Hopkins University Centre for Clinical Trials: National Institutes of Health National Heart, Lung and Blood Institute ($2,000,000 1999–2003)

Does physical activity make a difference to lung health in cystic fibrosis? Coates AL: Canadian Cystic Fibrosis Foundation ($149,743 2000–2003)


Effect of heparin derivatives on thrombin regulation by the fetal lung surface. Chan A, O'Brodovich H, Andrew M: Medical Research Council of Canada ($93,000 1999–2002)


Glucocorticoid receptor and glucocorticoid-responsive genes in developing lung. Sweezey NB, Kaplan F, Genetics, McGill University: Canadian Institutes of Health Research (formerly MRC Canada) ($232,923 2003–2006)


NIH SCDR ($48,000 2002–2003)


The Division of Rheumatology provides comprehensive care for children with rheumatic diseases. The ambulatory clinics have approximately 5,000 patient visits per year at the Hospital for Sick Children and Bloorview MacMillan sites and the outreach clinic in Sudbury. In addition to the general rheumatology clinics, there are unique multidisciplinary subspecialty clinics for children with dermatomyositis, morphea, spondyloarthopathies, systemic-onset JRA and systemic lupus erythematosus. This year a new subspecialty clinic for children with osteoporosis was initiated together with the Division of Endocrinology. The division makes extensive use of the medical day care unit, where children receive joint injections under anaesthesia, therapeutic infusions or undergo investigations, which would otherwise require inpatient admission. This year there has been a significantly increased number of children who have benefited from treatment with biologic agents on the medical day care unit.

STAFF AWARDS
Dr. Rayfel Schneider
Runner-up, Subspecialty Education Award, Department of Pediatrics
Dr. Rae Yeung
Canadian Institutes of Health Research/The Arthritis Society New Investigator Award, January 2002–December 2006

The division has the largest paediatric rheumatology fellowship training program in North America and is fully accredited by the Royal College of Physicians and Surgeons of Canada. Graduates have done extremely well in obtaining academic placements across Canada and around the world and trainees have been productive in the research arena. Fellows received the following research awards this year:

- Hospital for Sick Children Annual Research Day, 2nd Place Poster Prize, May 2003
- Canadian Rheumatology Association Paul Rosen Award for Best Rheumatology Research, May 2003
- University of Toronto, Rheumatic Disease Unit, Ogryzlo Day (Rheumatology Fellow's Competition), 1st Place for Best Oral Presentation, June 2003
- University of Toronto, Rheumatic Disease Unit, Ogryzlo Day (Rheumatology Fellow's Competition), 1st Place Poster Prize, June 2003
- American College of Rheumatology, Pediatric Rheumatology Research Award, 2002

Research foci include the development of trial design for the study of rare diseases, outcome, prognosis and treatment studies in juvenile arthritis, SLE, neonatal lupus, scleroderma, dermatomyositis and vasculitis. Our centre is the lead centre for a number of international treatment trials for JRA. Basic research focuses on the immunopathogenesis of Kawasaki disease using an animal model.

Dr. Rayfel Schneider was re-appointed as Division Chief after a successful 5 year review.

Dr. Ronald Laxer was appointed as Vice President, Clinical and Academic Affairs, January 2003.
PUBLICATIONS


BOOKS AND CHAPTERS IN BOOKS


RESEARCH AND INVESTIGATIONS

A prospective, randomized trial to compare two regimens of prophylaxis in older boys with severe hemophilia A. Carcao M, Blanchette V, Feldman BM, Oh P, Babyn P, Hedden D: Canadian Hemophilia Society – Care until Cure Program ($98,834 2001–2003)


Dean’s Excellence Fund Award. Karen Lesley, Rayfel Schneider, Robert Hilliard: University of Toronto, Department of Medicine ($20,000 2002–2003)


The following faculty members have a primary academic appointment to the Department of Paediatrics while they may not be affiliated with a specific division:

Michael Balthazor
Marcia Barnes
Mary Corey
Virginia Frisk
Patricia Harper
Christine Harrison
Jim Hu
Tom Humphries
 Tilman Humpl
Jamie Hutchison
Amira Klip
Lorelei Lingard
Maureen Lovett
Molly Malone
Hiroshi Otsubo
Gail Otulakowski
Elizabeth Pang
Martin Post
Joanne Rovet
Bonnie Stevens
Margot Taylor
Teresa To
Ethel Ying
Shi-Joon Yoo
Nancy Young
Randi Zlotnik-Shaul

PUBLICATIONS


Ginsburg S, Regehr G, Lingard L: To be or not to be: The paradox of the emerging professional stance. Medical Education 2003 Apr: 37(4): pp 350-357. CPA


Rovet J, Daneman, D: Congenital hypothyroidism: a review of current diagnostic and treatment disorder. Paediatric Drugs 2003: 5(3): pp 141-149. PA


To T, Curtis JR, Daneman D: Diabetes in Children. In: Diabetes In Ontario – An ICES Practice Atlas (Janet E. Hux, MD, SM, FRCP; Gillian L. Booth, MD, MSc, FRCP; Pamela M. Slaughter, RN, MA, MSc; Andreas Laupacis, MD, MSc, FRCP, eds). ICES, Toronto 2003: pp 219-229. PA


23 Supplement: pp 4-7.


**RESEARCH AND INVESTIGATIONS**


A new genetic tool for mutational analysis of genes in mammalian cells and in animals. The goal of this project is to develop a novel genetic tool for mutational analysis of gene functions in mammalian cells and in animals. Hu J: *CIHR grant* ($294,017 2003–2006)


Effect of hypothermia on leukocyte adhesion to cerebrovascular endothelial cells following cerebral ischemia. Hutchinson JS (PI): Heart and Stroke Foundation of Ontario ($105,670 2002–2004)


Evaluating the Transition to Adult Health Services among Children with Complex Physical Disabilities: a look at the nature, outcomes and determinants. Young N: Bloorview Foundation ($121,984 2003)


From laboratory to community classrooms: Evaluating the generalizability of remedial programs for children with reading difficulties in a systems-based research partnership. Benson NJ, Lovett MW, Lacersenza L, Steinbach KA: Research Institute, Hospital for Sick Children, ($100,000 2000–2002)

Gene regulation in airway epithelial cells. The goal of this project is to understand the roles of a set of novel epithelium-specific transcription factors in airway gene regulation. Hu J: CIHR grant ($314,000 2002–2005)


GLUT4 activation in insulin action and insulin resistance. Klip A: Canadian Diabetes Association Grant-In-Aid ($75,000/year 2002–2004)


Hypothesis for Cardiac Arrest in Paediatrics (HypCAP) – Pilot Study. Hutchinson JS (PI): Hospital for Sick Children Seed Grant ($23,000 2002–2003)

Hypothermia for Cardiac Arrest in Paediatrics (HypCAP) – Pilot Study. Hutchinson JS (PI): CIHR, ONF, CHEO Research Institute, HSC Foundation, PSI, the Fonds de la recherche en santé du Quebec ($65,800 1998–2004)


Investigator Award (Salary & Benefits). To T: The Canadian Institutes of Health Research & The Ontario Ministry of Health and Long-Term Care ($375,000 2001–2005)


Molecular basis of the Cystic Fibrosis Phenotype (Peter Durie as the Director), Core unit C: The goal of this project is to maintain a colony of CF mice for CF researchers in Toronto. Hu J, Kent G: NIH Group Grant (US$124,380 2002–2004)


Neuropsychological Outcome Following Hypothyroidism During Pregnancy. Rovet J, Feig D, Koren G: Abbott Pharmaceuticals TRAC Competition Grant ($100,000 2002–2004)

New Investigator Salary Support Award. Lingard, L: Canadian Institutes of Health Research. 2003


Outstanding Paper Award. Lingard, L: Association of American Medical Colleges, Research in Medical Education. 2002

Outstanding Paper Award. Lingard, L: The Association for Surgical Education Foundation’s Haemoneutics Corporation. 2003


Pain in Child Health: An innovative, transdisciplinary, cross-Canada training consortium. McGrath P (PI), Stevens B (Co-PI), et al: CIHR Training Grant ($350,000/year 2002–2008)


Project to Evaluate the Effectiveness of Clinical Ethics (PEECE). Upshur R (CI), Members of the University of Toronto Joint Centre for Bioethics Clinical Ethics Group: Funded by The University of Toronto Joint Centre for Bioethics ($85,000 2002–2003)


Regulation of normal and oxygen-mediated aberrant postnatal lung growth (Dr. Keith Tanswell as Principal Applicant). The goal of this project is to study the roles of growth factors in normal and abnormal lung growth. The fund is mainly to support research activities in Dr. Tanswell’s laboratory. Hu J: CIHR ($666,405 Apr 2000–Mar 2005)


Spatial-temporal resolution of the intracellular traffic of glucose Transporter. Klip A: Canadian Institutes for Health Research, Operating Grant ($128,760/year 2000–2005)


The Mechanism for Mutations in HPRP3 Leading to Retinitis Pigmentosa. The goal of this project is to study mutations in a gene identified in our lab leading to retina degeneration. Hu J: Foundation Fighting Blindness-Canada ($164,000 2003–2005)


Transfusion Requirements in Paediatric Intensive Care Units. Hutchison JS (Co-I): CIHR $750,000 (2001 – 2004)

Transgenic expression of the human CFTR gene in mouse lung epithelia. The goal of this project is to identify cell-specific DNA elements to be used for CFTR expression in gene therapy. Hu J: CCFF ($271,000 Apr 2001 – Mar 2004)


**PGY4s**

**Chief Residents**
Dr. Adam Cheng, University of Toronto  
Dr. Aviva Lowe, McGill University

**Associate Chief Residents**
Dr. Nessa Bayer, University of Toronto  
Dr. Abdullah Shamsah, National University of Ireland  
Dr. Leah Tattum, Northwestern University, Chicago  
Dr. Carolyn Taylor, University of Toronto  
Dr. Brent Williams, Dalhousie University

**General Paediatrics**
Dr. Ari Bitnun, University of British Columbia

**PGY3s**

**Third Year Residents**
Dr. Alexandra Ahmet, McMaster University  
Dr. Khalid Al-Ansari, King Faisal University  
Dr. Zaid Al-Harbash, Kuwait University  
Dr. Sarah Barker, University of Ottawa  
Dr. Eyal Cohen, University of Toronto  
Dr. Emma Cory, University of Western Ontario  
Dr. Tamar Flanders, McGill University  
Dr. Deborah Fruitman, Dalhousie University  
Dr. Steven Greenway, University of Manitoba  
Dr. Ra Kyung Han, University of Toronto  
Dr. Anita Jethwa, University of Toronto  
Dr. Daphne Korczak, Queen's University  
Dr. Alvin Loh, University of Toronto  
Dr. Joanna MacLean, McMaster University  
Dr. Saba Merchant, Amravati University, India  
Dr. David Skidmore, University of Western Ontario

**PGY2s**

**Second Year Residents**
Dr. Hosanna Au, University of Toronto  
Dr. Chantelle Barnard, University of Saskatchewan  
Dr. Matthew Crystal, University of Western Ontario  
Dr. Tara Gelman, University of Toronto  
Dr. Jane Healey, University of Toronto  
Dr. Joanna Holland, University of Toronto  
Dr. Ronik Kanani, University of Calgary  
Dr. Susan Koshy, University of British Columbia  
Dr. Alex Muise, University of Toronto  
Dr. Angela Orsino, University of Toronto  
Dr. Anwar Sallam, Royal College of Surgeons, Ireland  
Dr. Peggy Wong, University of Toronto

**PGY1s**

**First Year Residents**
Dr. Fatma Al-Jasmi, Al-Ain University, United Arab Emirates  
Dr. Abdulla Al-Junaibi, Royal College of Surgeons, Ireland  
Dr. Reshma Amin, University of Toronto  
Dr. Rakesh Bhattacharjee, McMaster University  
Dr. Zia Bismilla, University of Western Ontario  
Dr. Vicky Breakey, University of Calgary  
Dr. Daniel Flanders, McGill University  
Dr. Elizabeth Gold, University of Toronto  
Dr. Megan Harrison, McMaster University  
Dr. Elana Lavine, University of Toronto  
Dr. Rabah Mahmoud, Al-Ain University, United Arab Emirates  
Dr. Melissa Parker, University of Western Ontario  
Dr. Adam Rapoport, University of Toronto  
Dr. Dhenuka Tennankore, University of Toronto  
Dr. Tony Truong, University of Calgary  
Dr. David Callen, McMaster University (Neurology)
We would like to thank the following administrative staff for their continued efforts and contributions to the Department of Paediatrics:

**Adolescent Medicine**
Rhonda Smith
Burnett Wint

**Cardiology**
Teresa Angileri
Sandra Brisebois
Paula Capela
Julie Dean
Esther Delea
Susan Jessop
Iris Kehler-Reimer
Ruth Taylor

**Clinical and Metabolic Genetics**
Denese Henry
Helen Karbaliotis
Hemali Maru
Shelly Noble
Rebecca Procter
Deborah Taylor
Rozmin Visram

**Clinical Pharmacology and Toxicology**
Niki Balamatsis
Caryn Feder
Carmela Fichman

**Endocrinology**
Joyce Robinson
Minet Smith
Zarine Tilak

**GI/Nutrition**
Gail Bratby
Chona Callejo
Shemina Hemraj
Margaret Johnson
Joanne McHugh
Lilatool Shakur

**Haematology/Oncology**
Bibi Ali
Ingrid Arigropoulos
Barbara Black
Sandra Carbone-Walker
Sylvia Drake
Lucy Holford
Kim Lucid
Kathleen McDermott
Ana Novokmet
Pauline Walsh

**Immunology/Allergy**
Sandra Mendonca
Stephanie Pacheco

**Infectious Diseases**
Brenda Bishop
Toula Myriklis
Bebi Wali
Sue Weller

**Neonatology**
Muriel Gibson
Frances Lewis
Sharon Neish
Halleh Rezvany

**Nephrology**
Dana Debernyj
Judith E. McNicoll
Juliet Simpson

**Neurology**
Zahida Dhanji
Libby Duke
Harriette Chosh
Maureen Hodge (Child Development Centre)
Fatima Ledo
Marilyn McLaughlin
Jennifer Mochoruk
Barbara Zimnowodzki

**Paediatric Emergency Medicine**
Marika Bishop
Diana Cristea
Jennifer Dobbin
Andrea Giggey-Hartin
Wendy Johnston
Majda Savaglio

**Paediatric Medicine**
Jane Almero
Tiziana Altobelli
Maha Chaltaf
Marg Mather
Daffodil Morrison
Kathryn Robertson

**Respiratory Medicine**
Jennifer Chay
Victoria Snell

**Rheumatology**
Shona Magee
Roseanne Richard
Susan Wesson

**Department of Paediatrics**
Anna Capizzano
Keara Emmett
Sharon MacMillan

**Medical Education**
Mary Antonopoulos
Ewa Engman
Parviz Manji
Brenda Rau
Jan White
Bloorsview MacMillan Children’s Centre offers both inpatient and outpatient rehabilitation services to the children and families of greater Toronto and provides tertiary services in paediatric rehabilitation to the Province of Ontario.

Bloorsview MacMillan Children’s Centre became a fully affiliated Academic Health Science Centre in February 2002 – recognizing formally our academic relationship with both the University of Toronto and the Hospital for Sick Children.

All of our medical staff have appointments in the Division of Neurology, Department of Paediatrics at the University of Toronto. Our developmental paediatric fellowship training program became fully accredited in 2003 by the Royal College of Physicians and Surgeons of Canada and is a shared program between Bloorsview MacMillan Children’s Centre and the Child Development Centre at the Hospital for Sick Children.
**Highlights**

**February 2003**
- **Bloorview MacMillan Children’s Centre**
  - Signed a new AFP with the Ministry of Health and Long-Term Care, University of Toronto and the Ontario Medical Association. The AFP recognized the contributions of full and part-time staff and approved two new positions in response to our long wait lists.

**March 2003**
- Dr. Carolyn Hunt
  - Joined our staff as a developmental paediatrician.

**June 2003**
- Dr. Tara Kennedy
  - Joined our staff as a developmental paediatrician in partnership with the Centre Research in Education at University of Toronto where she is completing her PhD.
- Dr. Tara Kennedy
  - Awarded the New Investigator Prize at the American Education Research Association Annual Meeting in Chicago.
- Dr. Darcy Fehlings
  - Appointed Associate Professor of Paediatrics at University of Toronto.

**Invited International Meetings**

**February 2003**
- Los Angeles, CA
  - Dr. Darcy Fehlings
    - National Institutes of Health Spasticity Working Group

**April 2003**
- Quebec City
  - Dr. Golda Milo-Manson
    - The first joint meeting of European Academy of Cerebral Palsy and American Academy for Cerebral Palsy and Developmental Medicine for protocol development

**May 2003**
- Washington D.C.
  - Dr. Doug Biggar
    - Evidence-Based Practice in Spina Bifida: Developing a Research Agenda.

**June 2003**
- Monte Carlo
  - Dr. Doug Biggar
    - The Cooperative International Neuromuscular Research Group for protocol development
PUBLICATIONS


RESEARCH AND INVESTIGATIONS


Construction of the ‘Difficult’ Patient in Paediatric Medical Education. Kennedy, et al: Association of Canadian Medical Colleges Committee on Research in Medical Education/ Canadian Institutes of Health Research ($19,917 June 2002)


Evaluating the Transition to Adult Health Services among Children with Complex Physical Disabilities. Fehlings & Rumney: Bloorview Children’s Hospital Foundation ($121,984 April 2002 – March 2003)


Hospital for Sick Children Foundation ($25,000)

Outcome Evaluation of Paediatric ABI. Johnson, Thomas-Stonell, Rumney, Oddson. Part II: Bloorview Children’s Hospital Foundation ($97,000 April 2002 – March 2003)

Randomized Controlled Trial Evaluating Low Dose vs High Dose Botox into the Spastic Upper Extremity of Children with Hemiplegic C.P. Fehlings et al: PSI ($39,000 2003)

PAMOT is a multidisciplinary program encompassing individuals from multiple Divisions in the Departments of Paediatrics, Surgery, Nursing, Pharmacy, and Professional Health Services. Current transplants encompass heart, kidney, lung, liver, and small bowel. Increasingly, living-related donors are being employed for kidney, and liver transplants in the pediatric setting. The program is focused on the providing state-of-the-art care for children awaiting organ transplant, during the peri-operative period, and long-term management following successful transplantation. Excellence in the provision of care is ensured by an active educational program, a training program for emerging transplant physicians, and advancing knowledge in the field by promoting and encouraging fundamental, translational, and patient-based research activities.

Resources required to successfully maintain an active organ transplant program are considerable. PAMOT strives to provide services across traditional disciplines and hierarchies and, thereby, foster cross-fertilization of ideas, pool talents and energies, and optimize the use of limited resources.

PAMOT has been successful in recruiting a cadre of young talent to begin their academic careers by working in a stimulating, supportive, and interactive academic environment. Physicians recently hired to the Department of Paediatrics who are actively engaged in PAMOT include, for example, Sharon Dell, Anne Dipchand, Nicola Jones, Simon Ling, Vicky Ng, Lisa Robinson, Mindy Solomon, and Mary Zachos. These bright and energetic young faculty members, working in a variety of job-activity profiles, ensure the future success of the PAMOT program.

The training of a cadre of fellows who have been successful in obtaining academic appointments globally is another achievement of the PAMOT program. Recent graduates of the fellowship program in PAMOT are now faculty members in Departments of Paediatrics around the world including, for example, Sao Paulo, Brazil (Carmen Santos), Medillin, Columbia (Raul Perez), Sydney, Australia (Michael Stormon), San Juan, Costa Rica (Carolina Jimenez), Leeds, England (Assaf Doulah), and Ottawa, Canada (Sylvie Lebel). Current trainees continue to reflect the international nature of the fellowship program, with exceptional trainees from international medical centres, including
Israel (Yaron Avitzur), Argentina (Fernando Gonzalez), and Brazil (Angela Valente). When these trainees return to their country of origin to assume faculty positions they not only will be able to provide care for children undergoing organ transplantation, but they serve as international ambassadors for the Hospital for Sick Children, the University of Toronto, and Canada.

Current research activities cover a breadth of issues relevant to optimizing outcomes following organ transplant. Currently funded patient-based research projects include, for example, blood group mismatches in infants undergoing heart transplants (Lori West, Principal Investigator), the assessment of bone mineral density following liver transplant (Vicky Ng) and the prevalence of viral infections after organ transplantation (Upton Allen).

Planning for the future is being considered by the development of both strategic directions and priorities during a retreat, and by the formation of a Centre for Excellence. These initiatives should place PAMOT in an appropriate position to optimize the availability and success of organ transplants for those children who are in need of these life-saving interventions.
The transport services at the Hospital for Sick Children have undergone a dramatic change in the past year. In early 2002, in keeping with a plan for an expanded mandate, the Neonatal Transport Team name was changed to the Acute Care Transport Service Team (ACTS Team). By August 2002, the Hospital for Sick Children Acute Care Transport Services (HSC-ACTS) had become a fully operational service facilitating the transport and transfer of all patients, age 0 – 18 years, into and out of the hospital, with Ms. Alison Quigley named the director of the service. Within the past year the ACTS team has undergone training and implementation of an expanded role to service the population under the age of 2 years, while the rest of pediatric transport service has developed from an expansion of the Emergency Medical Services (EMS) for the Greater Toronto area. To fully appreciate this change it is important to understand the beginnings of this new service.

In 1972 when the first helipad opened on the roof of the HSC, the sole purpose was to access the downtown hospitals permitting access to the tertiary care services offered for the adult population. The sole NICU in Toronto, also located at HSC, never refused access to any patient but had no means of retrieval or transport of their patients. The result was a population of outborn infants who arrived by road and air ambulance in such extremis that the faculty was forced to address this dilemma. The rudimentary beginnings of a transport team at HSC involved designated and committed nurses and doctors who, when pulled from their routine assignments of the day, performed minor miracles in a hostile environment across the Province particularly the distant North.

Thirty years later, a well-integrated and coordinated network of neonatal transport teams operates across the province of Ontario. Each is responsible for a well-defined region of the province and is accountable to their community hospitals for providing consultation, advice, stabilization and transport of all sick and unstable newborns in their catchment area. While clear boundaries and responsibilities exist for neonatology, each team strives to always-put “baby before bed” and works collaboratively to ensure that an appropriate team of experts has been dispatched to retrieve the patient. Bed identification is an afterthought once the NICU has been brought to the bedside of the baby wherever it may have been born. The Central East Region of the province, served by the HSC transport team, has been particularly subject to deferrals of both high risk mothers and newborns out of region due to the difficulties of maintaining adequate numbers of staffed neonatal tertiary beds. To address this, almost 3 years ago, the Ministry of Health and Long-Term Care (MOHLTC) enhanced the HSC based team to increase team availability through expansion in number of team members and the addition of transport physicians to the mix. Five post fellowship trainees provide 24 hours a day/7 days a week physician backup to the team complementing their technical expertise and judgment and providing opportunities for the team to attend even the highest risk deliveries where mothers cannot be moved to tertiary facilities to deliver, most often due to capacity issues.
This is best illustrated by the fact that 27% of high-risk mothers within the GTA delivered in non-tertiary facilities in the past year. Despite this, today we accommodate 94% of our patients within our region through the efforts of the Greater Toronto Area Children's Health Network (GTA CHN) and development of 5 advanced level II units in Toronto, to compliment the 5 modified level III units in Northern and Western Ontario. Use of the CritiCall system for referral of the high-risk mothers across the province and its use as an adjunct to the established Neonatal transport network provide an opportunity to track capacity problems across the province. Each tertiary NICU provides one number to call for team access, eg. 1-866-HSC-NICU and once bed capacity has been exceeded the NICU engages CritiCall to identify the next most appropriate bed outside the patient's region. In the past year this provincial effort to solve the problem of tertiary capacity issues has been spearheaded by the HSC team under the leadership of Dr. Hilary Whyte and Ms. Alison Quigley. The streamlined process for Neonatal transports across the province has improved patient care and stakeholder satisfaction as well as reducing the number of deferrals. The HSC transport process is facilitated by newly acquired technology to facilitate on line consultations, recording of all calls with maintenance of a current database and tracking of all adverse events. The HSC team transports 800 unstable critically ill newborns each year; all level II transports are performed by regular EMS crews. The dedicated team also transports 250 patients annually within the hospital who require specialized diagnostic tests or interventions and the attendance of these experts in transportation, to provide a stable environment and proper analgesia and sedation.

The situation in the non-neonatal paediatric population has been entirely different and the transport system has lagged way behind that for newborns. Barriers to the development of transport both locally and provincially include the lack of a regionalized system for care in paediatrics, relatively small numbers of critically ill children, some expertise among EMS paramedic providers in paediatrics and inadequate financial and human resources to mount an independent system for small numbers of patients. In Toronto, several iterations of models for transport were proposed; PERT (Paediatric Emergency Response Team), and CHART (Child Health Acute Response Team) in the past decade but went no further than a paper exercise. Three years ago, Dr. Hilary Whyte proposed to expand 2 already established teams, in an effort to meet the pressing need to establish one dedicated team with paediatric expertise. To that end, 4 respiratory care practitioners were hired onto the Neonatal team as we sought to expand our role. The neonatal team would develop expertise in children under age 2 while the adult based Critical Care Transport Unit (CCTU) paramedics would move down the age range to service the rest of paediatrics. The CCTU, which was originally established to transfer critically ill adult patients from one hospital to another, easily transitioned to children 12 years and older. In February 2002, the hospital executive announced the plan to
provide services to infants under the age of 2 using the expanded ACTS team, with the CCTU assuming responsibility for all other paediatric critical transports within the GTA. The education and preceptoring of the paramedic team took some time but the team was launched in July 2002, with physician attendance from either Emergency Department or Critical Care Units. The need for air ambulance paramedics to also upgrade their skills and prepare to take physician accompaniment from HSC was implicit.

In May 2002, the neonatal transport team began their expanded role change has occurred at a frenetic pace. Each team member required paediatric knowledge which was obtained through formal didactic sessions held at monthly team meetings. Content expertise was provided by physician staff form across the HSC with informal sessions from the Transport physician group. All personnel received both ER, OR, and CCU experience to facilitate hands on work with the older population and the development of the necessary skills, especially airway management and vascular access. Completion with a passing grade of the Advanced Paediatric Life Support (APLS) course was mandatory. In parallel with this process the equipment necessary for 2 full paediatric setups was purchased and modified to meet our needs including a mount of the “deck” system mandated by the EMS to facilitate carriage of all of the transport equipment on their “Ferno” stretcher in their ambulance vehicles. Once the team had completed competency based assessments on all items of equipment (as well as inhaled Nitric Oxide circulatory and delivery system) they went live with their services on January 1st 2003. As was predicted the call volumes have been small with only about 20 transports in the past 6 months using the ACTS team and a further 30 performed by the CCTU team.

The system is still evolving: telephone advice, consultation logs and databases have been established to parallel those available for newborns. Similarly, all calls go through the critical care transport line which is recorded and has a conference bridge on the line. Next steps include increased advertising and the education the referral paediatricians. Over the past year using the GTA CHN, we have established both documentation tools and standards for all neonatal and paediatric transport. The guidelines for transport equipment and processes have been executed for all levels of transport, stable and unstable infants and children. These have been promoted through a series of talks in each of the CHN clusters or quadrants in Toronto, and through a one day conference on transport for the regions. Attendance of transport directors from many of the regions of the province served to remind us that the system for paediatric patients has not yet evolved in the other parts of the province with London’s South West being the exception. They have run a hybrid RN/RT team providing all neonatal and paediatric transport for a decade. The challenge remains to develop the provincial system.

Under the leadership of Dr.Hilary Whyte, the newly named medical director of the HSC ACTS and the chair of the transport subcommittee of the Ontario Perinatal Partnership Programs, we expect to see continued changes and advancement of the transport system across Ontario.
The Department of Paediatrics completed another exciting and successful Grand Rounds program for 2002-2003 academic year. Paediatric Grand Rounds in the Department of Paediatrics at the University of Toronto is intended to bring the world’s best clinicians, scientists and educators to The Hospital for Sick Children (HSC). The major goal of the series is to allow the faculty, fellows, residents and students to experience state-of-the-art analyses and research on topics in paediatric medicine. As such, our committee has worked hard to create a program which includes world-renowned speakers to address a wide variety of paediatric topics. All presentations focus on excellence in paediatric clinical care and recent scientific advances.

The overall Grand Rounds program is organized by a committee that consists of Debbie Katzman, MD, Alan Coates, MD, Saul Greenberg, MD, Bernice Krafchik, MD, Johanna Rommens, PhD, Rayfel Schneider, MD, Phil Sherman, MD, and our two paediatric chief residents Aviva Lowe, MD and Adam Cheng, MD.

Some of the highlights of this year’s program included Alan Krensky, MD, the Shelagh Galligan Professor of Paediatrics and the Chief of the Division of Immunology and Transplantation Biology at Stanford University Medical Center. Dr. Krensky was invited to be the 2002 Robert H. Haslam Lecturer and gave an outstanding presentation on the current understanding of molecules of major importance in TB (granulysin) and AIDS (RANTES). Our very own Stanley Zlotkin, M.D., Ph.D., Professor of Paediatrics and Nutritional Sciences and Senior Scientist in the Research Institute gave a brilliant overview of his work on clinical trials to treat and prevent iron and vitamin A deficiency in children worldwide. Dr. Laurence A. Boxer, M.D., Professor and Director, Paediatric Hematology/Oncology and Associate Chair for Academic Affairs, Department of Paediatrics, University of Michigan was invited to present the second annual Dr. Bernard Laski Lecture. Dr. Boxer, an internationally recognized paediatric hematologist presented his research on granulocyte cell biology and disorders of granulocyte function and number in the paediatric population. We were also fortunate to have Dr. Alain Fischer, Professor of Paediatric Immunology, Necker Enfants Malades Hospital, Paris, France visit the Hospital for Sick Children. Dr. Fischer was awarded The Royal College of Physicians and Surgeons of Canada's Visiting Professorship. As the Royal College Visiting Professor Dr. Fischer presented Paediatric Grand Rounds on development of the lymphoid system, the genetics of immunological disorders and gene therapy with a specific focus on Severe Combined Immunodeficiencies. Dr. Fischer’s visit to the Department of Paediatrics, University of Toronto and the Hospital for Sick Children was a wonderful educational opportunity for our trainees and faculty and an overwhelming success. In addition to these presentations, our faculty presented two clinical pathological conferences during the academic year and our associate residents presented interesting clinical cases from the paediatric service. This is but a glimpse of a few of the highlights of our 2002-2003 program.

Other accomplishments this past year include a Paediatric Grand Rounds Calendar posted in “Upcoming Events” on the HSC homepage. The site displays monthly grand rounds’ dates, speakers, topics and hosts. In addition, Paediatric Grand Rounds are videotaped and the presentations are maintained online by PROFOR. PROFOR is a web-based site that is currently available to health care professionals across Ontario. Health care professionals who have registered with PROFOR will have access to our grand rounds presentations.

Grand Rounds will continue to be held every Wednesday from 9:00 am to 10:00 am in the Main Auditorium at the Hospital for Sick Children. The Department of Paediatrics Grand Rounds Committee would like to acknowledge the help and support of the following people, to whom we are very grateful: The Paediatric Executive Committee, Burnett Wint, Division of Adolescent Medicine, Marice Hart, The Department of Paediatrics, and Frank Ferrari and Sam Mendolia, from the Audio-Visual Department at the Hospital for Sick Children.
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<td>10 July 2002</td>
<td>Drs. Cara Dosman, Anne Kawamura, Lana Weaver</td>
<td>Recognizing the many faces of non verbal learning disability</td>
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<td>17 July 2002</td>
<td>Drs. Amina Lalani, Ahmad Mehta, Sanjay Mehta</td>
<td>The mystery of McBurney: Searching for the elusive appy</td>
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<td>24 July 2002</td>
<td>Drs. Susan Bannister, Catherine Birken, Amy Ornstein</td>
<td>Pediatric injury: Burning questions answered</td>
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<td>31 July 2002</td>
<td>Dr. Joao Amaral</td>
<td>Cases in interventional radiology</td>
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<td>7 August 2002</td>
<td>Dr. Maryanne Robb</td>
<td>Neonatal TB at HSC: An outbreak investigation and lessons learned</td>
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<td>14 August 2002</td>
<td>Drs. David Mitchell, Hien Huynh, Reuben Jackson</td>
<td>Helicobacter pylori: the usual suspect?</td>
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<td>21 August 2002</td>
<td>Drs. Steve Powell, Doug Campbell, Cherrie Tan Dy</td>
<td>The very low birth weight infant: Can new developments provide hope?</td>
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<td>28 August 2002</td>
<td>Drs. Mubeen Rafay, Asif Doja, Michael Salman</td>
<td>The eyes have it: An approach to neuro-ophthalmologic problems seen in paediatric practice</td>
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<td></td>
<td>Professor, Department of Paediatrics</td>
<td>T-Lymphocytes versus the scourges of humanity TB and HIV</td>
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<td>18 September 2002</td>
<td>Diane Wherrett, M.D.</td>
<td>Ambiguous genitalia: Beyond the crisis in the delivery room</td>
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<td>Division of Endocrinology</td>
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<td>Barbara Neilson</td>
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<td>Department of Social Work</td>
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<td>Tony Khoury, M.D.</td>
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<td>Chief, Division of Urology</td>
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<td>David Chitayat, M.D.</td>
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<td>Division of Genetics, The Hospital for Sick Children and The University of Toronto</td>
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<td>Ken Zuker, M.D.</td>
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| 25 September 2002 | Charles Stolar, M.D.  
Professor of Surgery and Paediatric Surgery  
Chief, Paediatric Surgery  
Babies & Children’s Hospital of New York | Perinatal management and long-term consequences of congenital diaphragmatic hernia |
Assistant Professor of Paediatrics  
Clinical Epidemiologist  
Population Health Sciences  
Ted McNeill, Ph.D., R.S.W  
Director of Social Work and  
Acting Director of Child Life  
Lorrie Hagen, R.D., B.A.Sc  
Clinical Dietitian, The Hospital for Sick Children | You’re thinking about doing what??!!  
Complementary and Alternative Medicine (CAM) and The Hospital for Sick Children |
| 9 October 2002   | Michael Bay, J.D.  
Chair and Chief Executive Officer of the Consent and Capacity Board  
Adjunct Faculty, Faculty of Law, University of Toronto | Consent to treatment: The child’s role, the parent/guardian’s position, and the practitioner’s responsibility |
| 16 October 2002  | Kopano Mukelabai, M.D.  
Senior Health Advisor, UNICEF  
New York, New York | The new global health agenda for children: Can paediatricians make a difference? |
| 23 October 2002  | Stanley Zlotkin, MD, Ph.D.  
Professor, Department of Paediatrics and Nutritional Sciences  
Head, Division of Gastroenterology and Nutrition | A holistic approach (from laboratory to village to the marketplace) to the most prevalent nutritional problem in the world – iron deficiency anemia. A story with (hopefully) a happy ending. |
| 30 October 2002  | James Garbarino, Ph.D.  
Family Life Development Center  
MVR, Cornell University, Ithaca, New York | Understanding why our kids turn violent and how we can save them |
| 6 November 2002  | Associate Chief Residents | Cases from the Paediatric Services |
| 13 November 2002 | Albert E. Chudley, M.D., F.R.C.P.C., F.C.C.M.G.  
Professor, Departments of Paediatrics and Child Health, Biochemistry and Medical Genetics, University of Manitoba | Fetal alcohol syndrome and Pandora’s Box: Harbinger for sorrow – reasons for hope  
In collaboration with Mother Risk Update 2002 |
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<td>20 November 2002</td>
<td>Laurence A. Boxer, M.D.</td>
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<td>Professor and Director</td>
<td>Quantitative and qualitative disorders of the Neutrophil: From bench to bedside</td>
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<td>University of Michigan</td>
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<td>27 November 2002</td>
<td>Alan H. Jobe, M.D., Ph.D.</td>
<td>The Barry Smith Lecture</td>
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<td>Division of Pulmonary Biology</td>
<td>Chorioamnionic modulation of lung injury and lung maturation</td>
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<td>Cincinnati Children's Hospital</td>
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<td>Cincinnati, Ohio</td>
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<td>4 December 2002</td>
<td>Ellen Wald, M.D.</td>
<td>Sinusitis guidelines</td>
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<td>Professor of Paediatrics and Otolaryngology</td>
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<td>University of Pittsburgh School of Medicine</td>
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<td>Chief of Allergy, Asthma and Infectious Diseases</td>
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<td>11 December 2002</td>
<td>Eric J. Hall, Ph.D., D.Sc., FACR, FRCR</td>
<td>Lessons we have learned from our children: Cancer risks from paediatric helical CT</td>
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<td>Higgins Professor of Radiation Biophysics</td>
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<td>Columbia University, New York, New York</td>
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<td>8 January 2003</td>
<td>Clinical Pathological Conference (CPC)</td>
<td>Does molecular genetics help patient management? A case study</td>
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<td>15 January 2003</td>
<td>Michael M.A. Preece, M.D., M.Sc., F.R.C.P.</td>
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<td>Professor, Biochemistry</td>
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<td>University College, London</td>
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<td>22 January 2003</td>
<td>Lisa Hornberger, M.D.</td>
<td>Fetal myocardial growth: From clinical observations to cellular mechanisms</td>
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<td>Associate Professor of Paediatrics</td>
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<td>29 January 2003</td>
<td>Associate Chief Residents</td>
<td>Cases from the Paediatric Services</td>
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<td>5 February 2003</td>
<td>Anne Marie Griffiths, M.D. Professor, Department of Paediatrics</td>
<td>Phenotype to genotype: Crohn’s disease or Crohn diseases</td>
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<td>12 February 2003</td>
<td>Oded Bar-Or, M.D. Professor, Department of Paediatrics</td>
<td>The juvenile obesity epidemic: Can paediatricians help by prescribing exercise?</td>
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<td>Hamilton Health Sciences Centre Chedoke Site</td>
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<td>19 February 2003</td>
<td>Caroline B. Hall, M.D. Division of Paediatric Infectious Diseases</td>
<td>Respiratory syncytial virus: Problems, prevention, and presage</td>
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<td>University of Rochester School of Medicine</td>
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<td>26 February 2003</td>
<td>Richard G. Tiberius, M.D. Department of Medical Education</td>
<td>As clear as glass: Teacher perspectives and teacher-student relationships</td>
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<td>University of Miami School of Medicine</td>
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<td>5 March 2003</td>
<td>Associate Chief Residents</td>
<td>Cases from the Paediatric Service</td>
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<td>Robert Arceci, MD Professor of Pediatrics Johns Hopkins Oncology Center</td>
<td>Acute Myelogenous Leukemia as a model for therapeutic targeting in cancer: Are we aiming at the right targets?</td>
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<td>26 March 2003</td>
<td>Alain Fischer, MD, PhD Professor of Paediatric Immunology Hôpital</td>
<td>Severe Combined Immunodeficiencies: From Pathophysiology to Treatment</td>
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<td>Necker-Enfants Malades Paris, France</td>
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<td>4 June 2003</td>
<td>Kazuhiko Nakabayashi, Ph.D. Research Fellow, Genetics and Genomic</td>
<td>Genomic imprinting and human disease: Russell-Silver Syndrome 15th Annual Andrew Sass-Kortsak Award</td>
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<td>11 June 2003</td>
<td>Department of Paediatrics Award’s Day</td>
<td>Final Grand Rounds for 2002–2003</td>
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Teaching/Education Awards

R.H.A Haslam Preclerkship Teaching Award to the faculty member who has demonstrated excellence in preclerkship teaching.

**Dr. Robert Hilliard, Paediatric Medicine**

Clerkship Teaching Award to the faculty member who has demonstrated excellence in clerkship teaching.

**Dr. Marvin Gans, Paediatric Medicine**

Harry Bain Award to a full-time member of the Department of Paediatrics who has demonstrated excellence in teaching as nominated by core paediatric residents.

**Dr. Susan Tallett, Paediatric Medicine**

Marvin Gerstein Award to a part-time member of the Department of Paediatrics who has demonstrated excellence in teaching as nominated by core paediatric residents.

**Dr. Marvin Gans, Paediatric Medicine**

Subspecialty Teaching Award to the faculty member who has demonstrated commitment to excellence in teaching the subspecialty residents and clinical fellows.

**Dr. Gil Gross, Cardiology**

CME Award to the faculty member who has demonstrated excellence in course coordination or teaching in a Department of Paediatrics or University of Toronto Continuing Education sponsored event.

For course coordination

**Dr. David Chitayat, Clinical and Metabolic Genetics**

For long term contributions

**Dr. Bernice Krafchik, Paediatric Medicine (Section of Dermatology)**

PERLS Awards (Paediatric Educational Resident Lecture Series Award) to the faculty member who has demonstrated commitment to excellence in teaching at the Paediatric academic sessions.

**Dr. Wendy Roberts, Neurology**

Clinical Awards

Richard Rowe Award for Clinical Excellence in Paediatric Medical Care to the physician in the Department of Paediatrics who has demonstrated excellence in the delivery of clinical care in the broadest sense over a significant period of time.

**Dr. Eve Roberts, Gastroenterology & Nutrition**

Award for Clinical Excellence in Paediatric Medical Care to a physician within the first 5-10 years of appointment to an Academic Health Science Centre, who has demonstrated excellence in the delivery of clinical care.

**Dr. Anne Dipchand, Cardiology**

Research Awards

Junior Faculty Award for Excellence in Research recognizes outstanding achievements and progress in research by a physician during the first six years after his/her initial academic appointment and whose primary appointment is in the Department of Paediatrics, University of Toronto. The award is adjudicated based on the importance/impact of the nominee's research in comparison to research being performed by other investigators in the nominee's research field and, particularly, by young investigators.

**Dr. Hans Hitzler, Haematology/Oncology**
**Teaching/Education Awards**

Ondaatje Award to a senior resident for excellence in clinical teaching as nominated by core paediatric residents.

- **Dr. Adam Cheng**, PGY4, Chief Resident
- **Dr. Leah Tattum**, PGY4
- **Dr. Alvin Loh**, PGY3

**Clinical Awards**

The Saunders Prize to a senior resident who has demonstrated excellence in clinical paediatrics.

- **Dr. Joanna MacLean**, PGY3
- **Dr. Steve Greenway**, PGY3

**Royal College of Physicians and Surgeons of Canada Clinician Investigators Program**

- **Dr. Carol Huang**, Endocrinology
- **Dr. Sherri Katz**, Respiratory Medicine
- **Dr. Sylvie Lebel**, Gastroenterology/Nutrition
- **Dr. Theo Moraes**, Respiratory Medicine
- **Dr. Lillian Sung**, Haematology/Oncology
- **Dr. Shirley Tse**, Rheumatology

**National Residents & Fellows Research Competition**

Resident Category Winner.

- **Dr. Ra Han**, PGY3

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**Research Awards**

Paediatric Research Awards for excellence in resident research.

**Core Paediatrics**

1st place

**Dr. Ra Han**

Title: Cost effectiveness analysis of a legislative/educational strategy to reduce tap water scald injuries in children. Han RK, Ungar WJ, Macarthur C.

2nd place

**Dr. Daphne Korczak**

Title: Attitudes, confidence and training of Canadian paediatric residents towards adolescent gynaecological care and medical abortion. Korczak D, Katzman DK, Macarthur C.

**Poster**

**Dr. Aleixo Muise**

Title: Laboratory changes during standard treatment of DKA: Can cerebral edema be predicted? Muise A, Daneman D, Wherrett D.
**Subspecialty Paediatrics**

**1st place**

**Title**

Initial treatment of juvenile dermatomyositis (JDM) using methotrexate (MTX) and aggressively tapered prednisone (PRED). Ramanan AV, Campbell-Webster N, Tran D, Tyrrell PH, Cameron B, Speigel L, Laxer RM, Schneider R, Feldman BM.

**Dr. A.V. Ramanan, Rheumatology**

**2nd place**

**Title**

Optimal dosing of Definity™ for left ventricular opacification and enhancing endocardial border detection in paediatric patients. Golding F, Burns PN, Lee K-J, Smallhorn J.

**Dr. Fraser Golding, Cardiology**

**1st place**

**Poster**

Does oximetry predict length of therapy in children with acute asthma? Mehta S, Parkin PC, Stephens D, Schuh S.

**Dr. Sanjay Mehta, Paediatric Emergency Medicine**

**2nd place**

**Poster**


**Dr. Susanne Benseler, Rheumatology**

**3rd place**

**Poster**


**Dr. Christina Boros, Rheumatology**

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**Annual Resident and Fellow Research Day Participants**

**Dr. Jonathan Akikusa**

Bradyarrhythmias associated with high dose pulse methylprednisolone. Akikusa J, Schneider R, Laxer R, Silverman ES.

**Dr. Fayza Al Jenaidi**

Hypoparathyroidism in 22q11 deletion syndrome. Al Jenaidi FA, Makitie O, Sochett E.

**Dr. Rand Askalan**


**Dr. Carolyn Beck**


**Dr. Susanne Benseler**


**Dr. Ilan Buffo-Sequeira**

Suppression of ventricular ectopy with exercise may be falsely reassuring in patients with Arrhythmogenic Right Ventricular Dysplasia (ARVD). Buffo Sequeira I, Kirsh JA, Hamilton RM, Gross GJ.

**Dr. Dave F. Clarke**

**Dr. Eyal Cohen**

Immunization uptake and attitudes in a rural population in Guyana. Cohen E, Scolnik I, Lightsone A, Scolnik D.

**Dr. Sandrine Compeyrot**


**Dr. Matthew Crystal**

Evidence of regression of coronary artery dilation after acute Kawasaki disease for patients with measurements within the normal range – a continuum of coronary artery involvement. Crystal MA, Syan SK, McCrindle BW.

**Dr. Cecil Hahn**

Neonatal and infant brain death: how often does it occur? Hahn CD, McCarthy L, Hellmann J, Banwell BL, Shemie SD.

**Dr. Joanna Holland**

Natural history of autosomal dominant polycystic kidney disease diagnosed in childhood. Holland JL, Geary DF.

**Dr. Melinda Nolan**


**Dr. A.V. Ramanan**


**Dr. Michael Salman**

Can eye movements be quantified in pediatrics? Salman MS, Sharpe JA, Eizenman M, Lillakas L, Dennis M, Westall, C, Steinbach MJ.

**Dr. Prakesh Satodia**


**Dr. Prakesh Satodia**

Real time olivocochlear response audiometry in neonates. Satodia P, James A, Mount RJ, Harrison RV.

**Dr. Prakesh Satodia**


**Dr. Leah Tattum**

Referral patterns of surgical subspecialists to an adolescent medicine service at a tertiary pediatric hospital. Tattum L, Kaufman M.

**Dr. Rachel Wald**

Patent ductus arteriosus: Friend or foe in the management of neonatal Ebstein’s anomaly? Wald RM, Adatia IKT, Hornberger LK.

**Dr. Evangeline Wassmer**

Promotions

Promoted to Professor of Paediatrics

- Dr. Sylvain Baruchel, Division of Haematology/Oncology
- Dr. Denis Geary, Division of Nephrology
- Dr. Jonathan Hellmann, Division of Neonatology
- Dr. David Malkin, Division of Haematology/Oncology

Promoted to Associate Professor of Paediatrics

- Dr. Marcia Barnes, Psychology
- Dr. Darcy Fehlings, Division of Neurology
- Dr. Patricia Harper, Division of Clinical Pharmacology and Toxicology
- Dr. Jim Hu, Lung Biology
- Dr. Ann Jefferies, Division of Neonatology
- Dr. Karen Leslie, Division of Adolescent Medicine
- Dr. Lori West, Division of Cardiology
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