2011-2012 was a stellar year for the Department of Paediatrics in all spheres of academic activity: excellence in clinical care, education and education scholarship, and research. This report highlights some of the important milestones achieved during the year.

**Changes in departmental leadership**

- Chaim Roifman stepped down as Head of the Division of Immunology/Allergy after almost 20 years in the position and has been replaced by Eyal Grunebaum, a clinician scientist in the division.
- O. Carter Snead III was replaced as Head of the Division of Neurology by Steven Miller who joined us Sep. 1, 2012 from UBC.
- Daune MacGregor’s term as interim Head of the Division of Clinical and Metabolic Genetics ended with the arrival of Ronald Cohn from Johns Hopkins Sep. 1, 2012.

These new Division Heads all come with the promise of ongoing development of their outstanding divisions to maintain and enhance their academic standing. We look forward to exciting times. At the same time, our profuse thanks go to Chaim, Carter and Daune for their enormous contributions.

**Clinical excellence**

The demand for clinical care has increased – there are more emergency and ambulatory care visits, more admissions, more complex patients. At the same time, the metrics of care have improved with shorter wait times in the ED, shorter lengths of stay, and better outcomes. These improvements are the result of close collaboration between medical and CHS leaders.

**The Academic Enterprise**

More than $47 million in research grants, numerous publications in high-impact journals, broad-based approach to research, hundreds of trainees, and more, all attest to a vibrant research environment. This will only get better when the Centre for Research & Learning opens a year from now.

Our annual awards day session gets longer each year as more members of our faculty receive important awards from the department, the medical school, and national and international agencies.

Finally, the department is in great shape thanks to the tireless efforts of all of our faculty, and the ongoing support of both the University of Toronto Faculty of Medicine and The Hospital for Sick Children. For this I remain immensely grateful.

Sincerely,

Denis Daneman, Department of Paediatrics
Ronald Cohn
Head, Division of Clinical and Metabolic Genetics and Co-Director of the Centre for Genetic Medicine

Medicine has always been changing at a fast pace, but no aspect of medicine has changed as fast and fundamental as genetics. In the next few years, the concept of individualized medicine will become reality, and SickKids is preparing for the future with its new Centre for Genetic Medicine, co-led by Ronald Cohn and Stephen Scherer.

Dr. Cohn joined SickKids in 2012. He received his medical degree from the University of Essen, Germany, and was the first combined resident in paediatrics and genetics at Johns Hopkins. He subsequently joined the faculty of the McKusick-Nathans Institute of Genetic Medicine at Johns Hopkins where he became the director of the world’s first multidisciplinary centre for hypotonia, and he was director of the medical genetics residency program at Johns Hopkins.

As a leader of change, Dr. Cohn emphasizes the importance of active and open communication and a general willingness to look at genetic and genomic medicine with a different mindset. “I will personally reach out to all divisions at SickKids to look at genetic and genomic medicine with a different mindset. “I will personally reach out to all divisions at SickKids to look at genetic and genomic medicine with a different mindset. “I will personally reach out to all divisions at SickKids to look at genetic and genomic medicine with a different mindset. “I will personally reach out to all divisions at SickKids to look at genetic and genomic medicine with a different mindset. “I will personally reach out to all divisions at SickKids to look at genetic and genomic medicine with a different mindset.”

Jeremy Friedman
Associate Chair, Clinical

Jeremy Friedman will help to lead the Department of Pediatrics in its ongoing goal of providing outstanding clinical care to patients and their families. In collaboration with his colleagues he is continuously striving to find ways to improve care, achieve better outcomes, and share these improvements on a broad scale.

“My personal passion is to emphasize the art and science of medicine and how they are both integral to achieving the best care we can provide,” Dr. Friedman says. “My initial focus will be on quality improvement, patient safety, enhancing clinical systems and promoting clinical scholarship.”

Dr. Friedman graduated from the University of Cape Town, South Africa in 1985. He moved to Canada in 1987, spending his first three years as a general practitioner in rural Saskatchewan. He completed his residency training at SickKids from 1990-1994, and was appointed chief resident in his final year. He has worked as a general paediatrician on staff at SickKids since then, with a primary interest in hospitalist and complex care. He was appointed Division Head of Paediatric Medicine in 2004 and in 2011, was appointed Associate Paediatrician-in-Chief. He has won a number of departmental awards for clinical care, teaching and humanitarianism and was promoted to Professor in 2012.

Eyal Grunebaum
Division of Immunology/Allergy

Eyal Grunebaum’s goal is to support health-care providers who are treating patients with immune-related abnormalities. He will do this through education and by contributing to basic and translational research into immune abnormalities. His work complements the growing appreciation of the central role of the immune system in health and disease.

Dr. Grunebaum will also address the significant increase of the frequency and severity of food allergy. His goal is to establish a centre of excellence that will use the superb research tools at SickKids to improve the care for children who are suffering from food allergy. To reach his goal, he will collaborate with families, physicians and researchers, recruit clinicians and scientists to help advance the field of food allergy, and share their findings with the medical and non-medical community.

Dr. Grunebaum started his medical career at Hadassah Medical School, Hebrew University Jerusalem, Israel. He joined SickKids in 1998 for a fellowship in Immunology/Allergy, and in 2002 he joined the Division staff of Immunology and Allergy and Clinical Immunology as well as the Bone Blood and Marrow Transplantation Unit in the Division of Haematology/Oncology. In 2011 he became Director of Paediatric Allergy and Clinical Immunology Training at the University of Toronto.

Steven Miller
Head, Division of Neurology, and Director of Centre for Brain and Behaviour

Steven Miller’s vision is all about outcomes. While it’s important to publish papers and attain research dollars, Dr. Miller believes that improving the care for children with neurological disease is the best outcome of all.

To realize his vision, he needs a dynamic team, strong informatics infrastructure, and lots of partnerships inside and outside SickKids. He is busy building on all fronts and is excited to be at SickKids whose neurology department is “outstanding with a depth and breadth that doesn’t exist anywhere else.”

The SickKids Centre for Brain and Behaviour is the perfect place to improve patient care through research discovery, evaluate it and use evidence-based research to continue to move it forward, he says. The credit for the fine state of neurology at SickKids goes to his predecessor, Dr. Carter Snead, he says.

A graduate of McGill School of Medicine, Dr. Miller studied and worked at University of California San Francisco in 2006-2005, after which he joined BC Children’s Hospital, the Child & Family Research Institute and UBC as an associate professor of paediatrics and a Tier 2 Canada Research Chair in Neonatal Neuroscience. The focus of his collaborative research is using advanced imaging techniques to study brain development and injury in the newborn.
The Division of Adolescent Medicine at The Hospital for Sick Children is an interprofessional group committed to promoting and providing excellence in adolescent health care, and collaborating with local, national and international communities in the areas of patient care, training, education and research.

The Division has five programs — The Young Families’ Program (YFP), The Substance Abuse Program, The Good 2 Go Transition Program (G2G), and the SickKids Interprofessional Team for Youth (SITY) — all of which continue to be active in clinical care, education, research, resource creation and international collaborations.

The Young Families’ Program has integrated social pediatrics students into its clinical, research and educational programs. Research has increased and includes work in the areas of young fatherhood, contraception, literacy and sleep regulation. Moms on the Move is a two-phase project funded by Service Canada that combines employment and life skills training with job experience for adolescent mothers. During their work placement, the mothers continue to attend weekly workshops focusing on job maintenance and social support.

The Eating Disorders Program had an extensive external review in 2011 that led to a major restructuring, with the program moving from a model of joint leadership from Adolescent Medicine and Psychiatry to a program with a single leader, supported by an executive committee that has representation from all players on the interprofessional team. Throughout this, the program has continued to explore innovative treatments (and their outcomes) and to add to its research with studies on transition to adult care, evaluating a new refeeding protocol, and creating robust evidence to support a diagnostic addition to the DSM-5.
SITY is an important educational resource providing continuity clinics for fellows and teaching about a broad range of adolescent issues. Collaboration continues with clinics throughout the hospital, and data collection is complete for a study evaluating the model of providing adolescent health care for chronically ill teens that was developed at SickKids and has been in place for over 15 years. Plans to collaborate with more clinics are underway. SITY has optimized the involvement of a part-time psychologist and a post-doc who provide assessments, ongoing psychological treatment and important clinical and didactic teaching.

The Substance Abuse Program provides a continuum of care from outpatient to day treatment, incorporating best practices in clinical care, while providing learning for a variety of health professional trainees. A quality improvement project was initiated to ensure that effective assessment and treatment planning are in place for all patients. A validated assessment tool for concurrent disorders (GAIN-SS) was introduced, studied and is now being utilized. A study funded by Health Canada examining long-term health and psychosocial outcomes for day treatment patients was completed.

Good 2 Go’s new initiatives included a transition group focusing on early intervention for youth with special health care needs and their parents. With support from G2G, a number of programs became “Good 2 Go” including Marrow Failure and Neurosciences. Many G2G resources became readily accessible within the hospital, barcoded for easy access in EPC including the readiness checklist, transfer checklist and Transition Clinic assessment forms. Transition related research included a collaboration with McMaster Children’s Hospital on the Transition to Adulthood with Cyberguide Evaluation (TRACE), a project to increase remote access to transition care and improve efficiency of transition support. G2G celebrated its fifth anniversary in a hospital-wide event including grand rounds and a half-day symposium.

**HONORS AND AWARDS**


**PUBLICATIONS**


**BOOKS AND CHAPTERS**


GRANTS AND FUNDING


A pilot project to explore the determinants of knowledge use in a medical education context. Reeves S, Leslie K, Legare F, Silver I, Rosenfield J, Hodges B, Zwarenstein M, Armasson H, Carran V. KT CANADA SEED Funding Grant. $30,000 2011


Effects of anorexia nervosa on peak bone mass. Klilanski A, Katzman DK (Principal Investigator at SickKids site), Mura M, Herzog D, Levinsky L, Bouzenna M, Russell M. National Institutes of Health/CFAR, Health Canada for Clinical Trial Application at SickKids site and for project at-large. $5,000,000. 2011 to 2013

Examining the long-term outcomes of adolescents receiving treatment in a substance abuse day treatment program. Leslie K, Brands B, Maser C. Health Canada. $37,161. 2010 to 2012


Further development of the MyHealth Passport. Good 2 Go Transition Program. John Deere Foundation. $50,000. 2008 to 2013


Students and faculty as partners in innovation: The e-Faculty Development Project. Leslie K, Law M, Ballon B, Yeung E, Shamji A, Lindzon G. University of Toronto Instruction Technology Incentive Fund ($15,000+matched funds of $15,000 from the Faculty of Medicine T-IME initiative). 2011 to 2013

Understanding the role of “Coach” within faculty development. Leslie K, Ginsburg S, Egan-Lee E, Baker L, Reeves S. Royal College of Physicians and Surgeons of Canada Faculty Development Grant. $4,915. 2011


Vitamin D status in children and adolescents with anorexia nervosa. Steinegger C, Sherwood K, Segal S, Pinhas L, Katzman DK. Pediatric Consultants Partnership Grant for Creative Professional Activity. $9,889. 2010 to 2012


Understanding the role of “Coach” within faculty development. Leslie K, Ginsburg S, Egan-Lee E, Baker L, Reeves S. Royal College of Physicians and Surgeons of Canada Faculty Development Grant. $4,915. 2011

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Understanding the role of “Coach” within faculty development. Leslie K, Ginsburg S, Egan-Lee E, Baker L, Reeves S. Royal College of Physicians and Surgeons of Canada Faculty Development Grant. $4,915. 2011

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Understanding the role of “Coach” within faculty development. Leslie K, Ginsburg S, Egan-Lee E, Baker L, Reeves S. Royal College of Physicians and Surgeons of Canada Faculty Development Grant. $4,915. 2011

Vitamin D status in children and adolescents with anorexia nervosa. Steinegger C, Sherwood K, Segal S, Pinhas L, Katzman DK. Pediatric Consultants Partnership Grant for Creative Professional Activity. $9,889. 2010 to 2012
The Division of Cardiology was formally established in the 1940s and is now one of the largest and most successful in the world. Its philosophy has remained unchanged since its inception over 60 years ago: to provide the highest quality care in an evidence-based environment of clinical innovation and scientific discovery. The Division is not only performing at the highest clinical standard, but is now better positioned to drive innovation and scientific discovery than at any other time in its history.

While the Division is an integral part of the Department of Paediatrics, it also forms a key part of the Labatt Family Heart Centre, which was officially opened two years ago. Incorporating the Division of Cardiology, the Division of Cardiac Surgery, the Division of Cardiac Critical Care and The Toronto Congenital Cardiac Centre for Adults, the heart centre is already one of the best organized and cohesive in the world. However, there is much more investment and development required before it will have reached its goals. Nonetheless, over the past decade, the divisional activities, in close collaboration with surgical and intensive care colleagues and all the other members of the heart centre, have contributed to our markedly improved preoperative diagnosis and postoperative outcomes for children undergoing cardiac surgery. In addition, our activities have 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 centres worldwide, and won international recognition for contributions 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 recent exciting clinical developments was the commissioning of an integrated suite of catheter laboratories and magnetic resonance scanning facilities. This unique fusion will allow simultaneous multi-mode research, investigation and treatment, setting the scene for MRI-guided interventional procedures and physiological measurements in children.
The cardiovascular research focus within SickKids 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. High-quality basic and translational research, with an emphasis on direct clinical applicability, will continue to form the bedrock of our academic ambidexterity. As an example, the biology of a new technique, remote ischemic preconditioning, has been explored and translated to clinical trials at SickKids. The heart centre is making a major investment in the development of bioanatomic facility in which DNA and tissue samples will be held for future fundamental, translational and clinical research investigations. Aside from this thematic funding, the heart centre supports many proposals for clinical innovation and seed-funding for scientific programs via its endowed, with the expectation that patient and family satisfaction will improve and the quality of research and its ability to garner external peer-reviewed funding will be enhanced.

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.

The single most important development of the last decade, however, has been the establishment of the Libbey Family Heart Centre. Following a series of important internal initiatives, the extraordinary generosity of the Libbey family has funded the redevelopment and future activities of the heart centre at SickKids.

HONORS AND AWARDS

Conway, J. ISHLT International Travelling Scholarship Award, 2011.
Conway, J. Young Investigators Award, International Pediatric Transplant Association, 2011.

McCrindle, B. Awarded the Dr. Harold N. Segal Award of Merit (Recognition of a significant contributon to the prevention of cardiovascular disease or the promotion of cardiovascular health in Canadians), Canadian Cardiovascular Society, 2012.

PUBLICATIONS


Banks I, Dipchand AI, Manlihoit C, Millar K, McCrindle B. Factors associated with low physical activity levels following pediatric cardiac transplantation. Pediatric Transplantation 2012: (Epub ahead of print).


Department of Paediatrics


GRANTS AND FUNDING

A pharmacogenetic trial of tacrolimus after pediatric transplantation. Mital S. SickKids Transplant Centre Catalyst Grant. $150,000 CAD Jan 1-2012 to Dec 31-2014

A proof of principal randomized controlled trial of chronic remote ischemic conditioning to modify post-MI remodeling. Redington AN, Overgaard C, Dzavik V, Farkouh M, Crean A. Canadian Institute of Health Research. $310,156 CAD. Jan 1-2012 to Dec 31-2014

A randomised, controlled, multidose, multicentre, adaptive phase II/III study in infants with proliferating infantile hemangio mas requiring systemic therapy to compare four regimens of propranolol (1 or 3 mg/kg for 3 or 6 months) to placebo [double blind]. Pope E, Bradley TJ, Chakkittakkandiyl A, Lara-Corrales I. Pierre Fabre Dermatology. $737,044 CAD. Jan 1-2010 to Dec 31-2013


Biologic determinants of right ventricular remodeling in tetralogy of Fallot. Mital S, Redington AN, McCrindle, B, Mertens L. Heart and Stroke Foundation of Canada. $150,634 CAD Jan 1-2011 to Dec 31-2016

Can post-operative biventricular pacing improve cardiac output and decrease mechanical ventilation in children with electro-mechanical dyssynchrony after surgical repair of atrioventricular septal defect? Friedberg M, Stephenson E. Labart Family Heart Centre Innovations Funding. $48,640 CAD. Jan 1-2010 to Dec 31-2011


CBHR emerging team in ARVC research. Hamilton R. Canadian Institute of Health Research. $2,499,925 CAD. Dec 1-2009 to Nov 20-2014


Adolescent type 1 diabetes cardio-renal intervention trial. (AddIT) - Canada Site: (1) Randomized controlled trial, (2) Follow-up of non-randomized low risk subjects; (3) Ancillary study - urinary proteomics in adolescents with type 1 diabetes. Daneman D, Mahmud FH, Sochett EB, Curtis JR, Moineddin, Bradley TJ, Chernen DZl, Reich HN, Scholey JW. Juvenile Diabetes Research Foundation - Canadian Clinical Trials Network. $3,657,088 CAD Jan 1-2011 to Dec 31-2016

Adolescent type 1 diabetes cardio-renal intervention trial. (AddIT) - Canada Site: (1) Randomized controlled trial, (2) Follow-up of non-randomized low risk subjects; (3) Ancillary study - urinary proteomics in adolescents with type 1 diabetes. Daneman D, Mahmud FH, Sochett EB, Curtis JR, Moineddin, Bradley TJ, Chernen DZl, Reich HN, Scholey JW. Juvenile Diabetes Research Foundation - Canadian Clinical Trials Network. $3,657,088 CAD Jan 1-2011 to Dec 31-2016


Creating a fetal lamb model of hypoplastic left heart syndrome. De Vrijer B, Chaturvedi R, Jorgi E, Keunen J. Labart Family Heart Centre Innovation Funds. $37,490 CAD Jan 1-2011 to Dec 31-2013


Effects of remote ischemic preconditioning on clinical and genomic responses to open heart surgery in children. Redington AN, McCrindle BW, Heart and Stroke Foundation of Ontario. $570,399 CAD Jan 1-2009 to Dec 31-2012

Establishment of normal values for echocardiography ventricular and vascular functional research. Mertens L, Bradley TJ, Friedman MK, Jorgi ET. Labart Family Heart Centre - Innovation Fund. $48,000 CAD Jan 1-2010 to Dec 31-2012
Kawasaki disease: On our way to unraveling the pathogenesis. McCrindle B, Yeung R. Canadian Institutes of Health Research. $798,779 CAD. Jan 1-2011 Dec 31-2017


Melody transcatheter pulmonary valve post-market surveillance study Benson L. Medtronic Inc. $8,800 US/patient over 5 years. Jan 1-2008 to Dec 31-2013


Normal human fetal circulatory physiology by echocardiography and MRI. Seed M, Jaeggi E, Macgowan C, Yoo S-J, Grosse-Wortmann L, Labatt Family Heart Center Innovation Grant. $24,000 CAD Jan 1-2011 - ongoing


Patterns and clinical significance of electro-mechanical dysynchrony in pediatric dilated cardiomyopathy. Friedberg MK. Cardiomyopathy Foundation. $44,550 CAD. Feb 1-2012 to Feb 1-2013


Pilot study to evaluate the effect of peri-operative diastolic function on post-surgical course in infants with single ventricle physiology. Friedberg M, Mertens L, Schwartz S, Jarggi E, Dragulescu A, Petrovic M. SickKids Foundation. $44,868.00 CAD Jan 1-2009 to Dec 31-2012


The CHAPTER Study: Congenital heart adolescents participating in transition evaluation research. McCrindle B, Mackie A. Heart and Stroke Foundation, Multi-Provincial Grant in-aid. $358,115 CAD. Jan 1-2006 to Dec 31-2015


Thrombosis in pediatric heart transplant recipients and risk factors for outcomes. Dipchand AI, Marhoft C. CSL Behring. $5,000 CAD Jan 1-2012 to Dec 31-2013

Ventricular function and arterial stiffness in the evaluation of pediatric heart failure. Bradley TJ, Kantor PF, Roche SL, Sorach C. Paediatric Consultants at the Hospital for Sick Children. $7,200 CAD Jan 1-2007 to Dec 31-2012

Ventricular-ventricular interactions and their modulation for enhancement of right ventricular performance in pulmonary arterial hypertension. Friedberg M, Redington A, Humpl T, Mertens L. Canadian Institutes of Health Research. $298,500 CAD Jan 1-2010 to Dec 31-2013
The Division of Clinical and Metabolic Genetics is committed to providing excellence in patient care, research and education.

The Division welcomed two new physicians in 2011: Dr. Melissa Carter in September and Dr. Saadet Mahmutoglu in October. Dr. Carter completed her medical genetics training at the Children’s Hospital of Eastern Ontario in 2009 followed by a clinical fellowship in developmental paediatrics at Holland-Blloorview Kids Rehabilitation Hospital in Toronto. Her clinical interests include care of children with genetic developmental disabilities (in particular, chromosomal disorders and Rett syndrome). She established Toronto’s first autism genetics clinic in October 2011. Research interests include delineation of new syndromes associated with recurrent copy number variants, in particular those reported in studies of autism spectrum disorder. Dr. Saadet Mahmutoglu received her medical degree at the Ege University, Medical Faculty in Turkey and Leopold-Franzens University, Medical Faculty, in Austria. She trained in paediatrics at the University of Istanbul in Turkey and University of Vienna in Austria. She undertook fellowship training in biochemical genetics and paediatric neurology at Children’s Hospital, Vancouver, British Columbia. Saadet is in the final stages of writing her PhD on Creatine Deficiency Syndromes at the VU Medical Center, Amsterdam, The Netherlands. Her clinical interest is neurometabolic disorders and she has started the Neurometabolic Clinic in the Division of Clinical and Metabolic Genetics. Her research interests included creatine deficiency syndromes, metabolic epilepsies, white matter disorders and lysosomal storage disease. The Department has recruited a new Division Head, Dr. Ronald Cohn, who will be joining the Division in September 2012.

In addition, Dr. Roberto Mendoza was promoted to the rank of Associate Professor.
Research endeavours in the Division are a vital part of our program and currently focus on the translation of new genomic information for patients and their families. There is continuing increase in the use of microarrays for genetic testing. The influx of genomic data for many of our patients has influenced our patterns of practice. There are many new challenges in the interpretation of entirely novel data in clinical settings. In March 2012, the Division hosted the first annual Divisional Research Day. Dr. Raymond Kim was awarded the Research Day Poster Award for Exome Sequencing in Primary Ciliary Dyskinesia. The Research Day Platform Award was awarded to Dr. Ramesh Badilla-Portas for DNA Sequencing as a Diagnostic Tool for FBTP1 Gene Mutations in Costa Rican Patients with Fructose-1,6-Bisphosphatase Deficiency.

The Eleventh Annual Starbuck’s Clinical Research Summer Students Competition were awarded to Dr. Melissa Carter (Delineation of Clinical Features of Individuals with Microduplication 22q11.2 (1A: A Questionnaire)); Dr. Julian Raiman (Retropective Study of Bone Health inGaucher Disease at the Hospital for Sick Children (SickKids) and Mount Sinai Hospital (MSH)); Dr. Saadet Mahmutoglu (Retropective review of patients with myoclonic epilepsy to create a database: first steps to identify underlying aetiology); Dr. Peter Kainu and Ms. Andrea Shugar (Prevalence of Autism Spectrum Disorder (ASD) in Neurofibromatosis Type 1 (NF1) Patients and Implications for Screening Policies); and Ms. Sarah Hered and Ms. Laura Burr (Dietary Treatment with a High Medium-Chain Triglyceride Formula in Early Life and Nutritional Status of Children with Long Chain Fatty Acid Oxidation Defects).

The Division of Clinical and Metabolic Genetics has developed and participated in numerous educational activities within SickKids. It has important links to the Research Institute and the Department of Pediatriac Laboratory Medicine. The Division directs fellowship and residency training programs in genetic medicine as well as the MSc Program in Genetic Counselling. During the 2011-2012 academic year, there were ten medical genetics residents and three clinical fellows, making our division one of the largest training programs in Canada.

Dr. David Chitayat was awarded the Dr. Richard Rowe Award. Dr. Rowe was Head of the Division of Cardiology from 1973 until 1986, and demonstrated the very finest attributes of a clinical scholar. This award honors a physician in the Department for sustained clinical excellence and aimed at physicians who have demonstrated excellence in the delivery of clinical care in its broadest sense over a significant period of time.

Dr. Ramesh Badilla was awarded the CanMEDS Competencies Award. This award recognizes and honours trainees who exemplify one or more of the non-medical expert competencies embodied in the Royal College of Physicians and Surgeons of Canada CanMEDS 2005 Physician Competency Framework. Only two awards are handed out each year – one to a resident in core paediatrics and one to a resident or fellow in a paediatric subspecialty program.

Rozmin Varah received the Department’s Administrative Award. This award acknowledges a administrative team member who demonstrates outstanding performance and excellence in all aspects of their role and beyond.

As well, Dr. Julian Raiman was this year’s recipient of the Robert Salter Humanitarian Award. This award recognizes and honours medical health professionals or support staff at SickKids who exemplify the qualities of compassion and humanitarianism in the provision of patient and family-centric care.

HONOURS AND AWARDS

Carter, M: Winner of the Autism Research Training Program Fellowship, funded by Canadian Institutes of Health Research (CIHR) Strategic Training Initiative in Health Research (STIHR), 2009 to 2012.


PUBLICATIONS


Carter MT, Badilla-Porras for DNA Sequencing as a Diagnostic Tool for FBTP1 Gene Mutations in Costa Rican Patients with Fructose-1,6-Bisphosphatase Deficiency.

The Research Day Platform Award was awarded to Dr. Ramesh Badilla-Portas for DNA Sequencing as a Diagnostic Tool for FBTP1 Gene Mutations in Costa Rican Patients with Fructose-1,6-Bisphosphatase Deficiency.


BOOKS AND CHAPTERS


BMN004: A pilot study to assess prevalence of GAMT deficiency in British Columbia. Mahmutoglu S. Rare Disease Foundation, Microgrant Program. $3,500 CAD 2011 to 2012

Aetiology of carpal and tarsal tunnel syndrome in children and in adolescents in British Columbia. Mahmutoglu S Rare Disease Foundation, Microgrant Program. $3,500 CAD 2011 to 2012

An observational study of the clinical characteristics and disease progression of patients with Lysosomal Acid Lipase deficiency. Cholesteryl ester Storage disease phenotype. LAL-2-N401. Raiman J, Synagogue Biopharm Ltd. $1254 CAD per subject. 2011

BMN004: A multicenter, multinational, extension study to evaluate long-term efficacy and safety of BMN 110 in patients with Mucopolysaccharidosis IVA (Morquio A Syndrome). Raiman J, Biomarin Pharmaceutical. $56,690 CAD per patient (7 patients). 2011 to Present


BOOKS AND CHAPTERS


DNA damage responses in human hematopoietic stem and progenitor cells – A pilot study. Meyn MS. SickKids Cancer Center New Ideas Grant. $49,600 CAD. Apr 2009 to Dec 2011


Establishing DNA testing criteria for children with possible neurofibromatosis type 1. Kannu P, Shugar A. Rare Diseases Foundation Microgrant. $3,500 CAD 2011 to 2012

Expanding the phenotypic spectrum of GLUT1 deficiency: A treatable metabolic epilepsy. Mahmutoglu S. Rare Disease Foundation, Microgrant Program. $3,500 CAD. 2012 to 2013

Finding of rare disease genes in Canada (FORGE Canada). Canadian Pediatric Genetic Disorders Sequencing Consortium Competition. Mendoza R. Advancing Technology Innovation through Discovery Funders: Genome Canada, CIHR, Genome Quebec, Genome BC. $3,000,000 CAD. Mar 2011 to Aug 2012

First steps to the improvement of long-term outcome of GALT deficiency by using an international database. Mahmutoglu S. Rare Disease Foundation, Microgrant Program. $3,500 CAD 2011 to 2012

First steps towards newborn screening for GALT deficiency. Mahmutoglu S. Rare Disease Foundation, Microgrant Program. $3,500 CAD 2011 to 2012


Genomic basis of congenital heart disease. Mital S, Brudno M, Bowdin S, Oechslin E, Chaty D. McLaughlin Centre Accelerator Grant in Genomic Medicine. $50,000 CAD 2011 to 2012


Identification of new gene cluster assembly gene defects by exome sequencing. Robinson B, Schulze A. McLoughlin Centre. $20,000 CAD. May 2012 to Apr 2013


Meeting the needs of children with skeletal dysplasia: Parents awareness, access to support and education services. Mendoza-Londono R, Dupas L, Chaty D, Shuman C, Trang H. Rare Diseases Fund. $2,045 CAD. 2011

MetaKids. Mahmutoglu S. The Netherlands. $66,000 CAD. 2012 to 2014


Myoclonic epilepsy: Generating a database to identify treatable causes. Mahmutoglu S. Rare Disease Foundation, Microgrant Program. $3,500 CAD 2012 to 2013


The FAC.TS Project: Fabry disease clinical research and therapeutics. Medin J. CIHR Emerging Team Grant in Rare Diseases. $2,500,000 CAD. 2012

The GeneMed Program, Division of Clinical Pharmacology and Toxicology. The Hospital for Sick Children. Kooran G, Chaty D, Shinya I, Madadi P. McLaughlin Centre Accelerator Grant Competition. $60,000 CAD. 2011 to 2012

The Division of Clinical Pharmacology and Toxicology at SickKids is one of the largest and most active paediatric pharmacology programs internationally. Our major clinical activities include a consultation service, the Motherisk program (a reproductive toxicology program), the Ontario Poison Centre, and DART (Drug Allergy, Reactions, and Toxicity) clinic in collaboration with the Division of Allergy and Immunology to provide specialized out-patient follow-up and management for those with various drug/toxin-related problems. The two information centres, Motherisk and Poison Centre, receive annually about 35,000 (Motherisk) and 75,000 (Poison Centre) inquiries. The Motherisk Program directed by Dr. Gideon Koren continues generating and disseminating new knowledge in the field of drug safety for fetus and breastfeeding babies. The Ontario Poison Centre led by Dr. Margaret Thompson has now become a hub to medical toxicology training in Canada, attracting many residents and fellows nationally and internationally. In 2012, we have expanded our activity to provide toxicology/poisoning information to health professionals and the public in Manitoba.

On the education front, the division is one of the two major training sites of the Royal College-accredited Clinical Pharmacology and Toxicology Residency Program of the University of Toronto. On the international scene, Dr. Shinya Ito, representing SickKids Clinical Pharmacology and Toxicology, co-leads the European Union-funded international initiative of paediatric pharmacology training to address global needs for paediatric clinical pharmacologists.

Research by our members includes pharmacogenomics, drug metabolizing enzymes, drug transporters, mammary gland drug transport, reproductive toxicology and fetal alcohol syndrome. In particular, translational aspects of pharmacogenomics have become one of the important foci of our division. Recently, the pharmacogenomics-based personalized medicine program (GeneMed) has been launched as an Ontario Ministry funded research project to optimize drug therapy using patient’s genetic information.

The division is one of the two major training sites of the Royal College.
HONORS AND AWARDS
Koren, G: Winner of Sumner J Yaffe Lifetime Achievement Award, Paediatric Pharmacology and Therapeutics, 2012.

PUBLICATIONS


Jong GW, Einarson T, Koren G, Einarson A. Antidepressant use in pregnancy and persistent pulmonary hypertension of the newborn (PPHN): A systematic review. Reproductive Toxicology 2012: May S. (Epub ahead of print)


Shevchik GJ, Fischer GS. Clinical decision support to promote safe prescribing to women of reproductive age: A cluster-randomized trial. Journal of General Internal Medicine 2012: Feb 2 (Epub ahead of print)


BOOKS AND CHAPTERS


GRANTS AND FUNDING
Access to data from the Norwegian Mother and Child Cohort.
Koren G. The University of Oslo and the Foundation for the Promotion of Norwegian Pharmacies. 36,000 Euro. 2010 to 2011
Bioavailability of amoxicillin dissolved in human milk. Ito S. Women Health Organization. $481,188 USD. 2011
Biologically-based outcome predictors in juvenile radiopathic arthritis. Koren G. Canadian Institute of Health Research. $1,250,000 CAD. 2007 to 2012
Canadian Pharmacogenetic Network for Drug Safety. Koren G. $34,000,000 CAD. 2004 to 2014
Development of clinical practice guideline for pharmacogenetic testing. Koren G. Canadian Institute of Health Research. $83,940 CAD. 2011 to 2012
Developing GeneMed for Canada: Pilot study. Ito S. University of Toronto Center for Applied Genomics. $60,000 CAD. 2011 to 2012
Drug in Lactation Analyses Consortium (DLAC). Ito S. CIHR and DSEN (Catalyst grant). $97,150 CAD. 2012 to 2013
Drugs and human milk (MT1374: renewal). Ito S. Canadian Institute of Health Research. $602,292 CAD. 2010 to 2015
Environmental team grant: Effects of brominated flame retardants on reproductive health on development. Koren G. Canadian Institute of Health Research. $2,500,000 CAD. 2010 to 2015
Global Research in Paediatrics (GRiP). Ito S. European Union. 120,300 EUR. 2011 to 2016
International registry for Gilenya in multiple sclerosis. Koren G. Novartis Inc. $595,000 CAD. 2011 to 2017
Medication use in pregnancy with focus on attitudes perception of risk and mental well-being. Koren G. The University of Oslo. 225,000 Euro. 2011 to 2013
Neurocognitive-phenome, genome, epigenome and nutriome in childhood leukemia survivors. N-PhenoGENICS. “Childhood Cancer-Late Effects of Treatment” Team grant competition. Ito S. Canadian Institute of Health Research (CIHR). $1,898,381 CAD. 2012 to 2017
Neurodevelopment of children exposed in utero to chemotherapy for maternal breast cancer. Nulman I. Canadian Breast Cancer Foundation (CBCF). $436,257 CAD. 2010 to 2013
Pain in preterm infants in development and effects. Koren G. National Institute of Health Research. $1,304,369 CAD. 2007 to 2012
Pharmacokinetics of folate in pregnancy. Koren G. Duchesnay Inc. Canada. $96,000/yr CAD. 2006 to 2012
Pilot project—Diagnosis of FASD in children in the care of Children’s Aid Society of Toronto and Catholic Children’s Aid Society. Nulman I. Mothercraft. $55,000/yr CAD. 2009 to 2011
Pre-emptive use of diclectin. Koren G. Duchesnay Inc. Canada. $135,000/yr CAD. 2009 to 2011
Studies on pregnancy exposure to medications and vaccines. Koren G. Organization of Teratology Information Services (OTIS). $5,300,000 US. 2004 to 2012
Testing the fetal programming hypothesis. Koren G. Canadian Institute of Health Research: CHIP-Child. $1,150,000 CAD. 2011 to 2016
The association between fatty acid ethyl esters in meconium and the diagnoses of FASD in an at-risk Canadian population. Nulman I. Canadian Foundation on Fetal Alcohol Research. $54,950 CAD. 2008 to 2011
The Ivey Chair in Molecular Toxicology. Koren G. Canadian Institute of Health Research. $250,000/yr CAD. 2008 to 2013
The role of placenta in fetal toxicology. Koren G. Canadian Institute of Health Research. $884,309 CAD. 2007 to 2011
The role of the placenta in fetal toxicology: Ito S. Canadian Institute of Health Research. $140,000/yr CAD. 2006 to 2011
The Vulnerable Infant Population (VIP) perinatal stress study. Koren G. American Association of Critical Nurses. $72,000 US. 2010 to 2012
The Division of Developmental Pediatrics is situated at the Holland Bloorview Kids Rehabilitation Hospital. The division consists of full-time academic clinicians as well as a community section of developmental paediatricians. The main clinical focus of the division is on childhood neuro-developmental and neuro-rehabilitation disorders. Comprehensive assessment and treatment programs are run for children and youth with conditions such as cerebral palsy, acquired brain injury, neuromuscular disorders and spina bifida. Inpatient services are provided for children with medical conditions requiring complex continuing care. Specialized assessment clinics provide diagnostic assessments for children and youth with autism spectrum disorders with clinics located at Holland Bloorview as well as regional developmental clinics situated throughout the metropolitan Toronto area. The division runs a large psychopharmacology clinic providing consultation for children and youth with complex neuro-behavioural needs. We are pleased to welcome Dr. Sharon Smile to our division to provide academic leadership in preschool developmental disorders.

Within the division, there is a strong commitment to education. Under the leadership of Dr. Anne Kawamura as program director, the fully accredited subspecialty residency program in Developmental Pediatrics is the largest in Canada. There is also a commitment to training paediatric, physiatry, and neurology residents and medical students in applied childhood disability. A highlight of the divisions’ educational activities is the Child Development Update — a national conference held once every three years — chaired by Dr. Golda Milo-Manson and supported by the continuing educational office of The Hospital for Sick Children and the Department of Paediatrics. The conference attracts attendees from across Canada.

The Division members actively lead research projects in applied childhood disability studies, in association with the Bloorview Research Institute. Highlights include the creation of two Ontario-based research networks funded by the Ontario Brain Institute — one focused on autism spectrum disorders led by Dr. Evdokia Anagnostou and one focused on cerebral palsy led by Dr. Darcy Fehlings.
**Honours and Awards**

Pennner, M: Chronic Pain in Children and Youth with Cerebral Palsy – Winner of best Developmental Paediatrics Abstract Award at the Canadian Paediatric Society Annual Conference (Supervisor: D. Fehlings), 2011.

McAdam, L: Elsevier WMS Membership Award, World Muscle Society, Algarve, Portugal, October 2011.

Roberts, W: Continuing Education Award, Department of Paediatrics, The Hospital for Sick Children, June 2012.

**Publications**


**BOOKS AND CHAPTERS**


**GRANTS AND FUNDING**


Active video games for promotion of physical activity in children and youth with disabilities: Risks and benefits. Bidulski E, McKeever P, Wright V, Chau T, Fehlings D. Canadian Institutes of Health Research. $147,272 CAD. Feb 2010 to Jan 2013

Advancing vocational opportunities for persons with autism spectrum disorder. Workshop “Brain Camp”. Nicholas D, Roberts SW. NeuroDevNet. $15,000 CAD 2011


Case formulation in developmental paediatrics: Seeing the process through the eyes of the expert. Kawamura A, Orisio A, Mylopoulos M. Pediatric Consultants Medical Education Research Grant, Hospital for Sick Children. $4,878 CAD. 2012 to 2013


Delineating the neurodevelopmental phenotype and health outcomes in microduplication 22q11.2 syndrome. Carter M, Welsberg R, Dromic I, Butcher D, Roberts W, Anagnostou E, Scherer SW, Cytrynbaum C, Shugar A, Fishman L. Rare Disease Foundation Microgrant. $1,090 CAD 2011 to 2012


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**CP fit n fun project equipment grant. Fehlings D, Switzer L, Graham N. TELUS. $17,500 CAD Apr 2012 to Mar 2013


2011–2012 was another productive year for the Division of Endocrinology with ongoing development of existing programs and new innovations. We continued our efforts to train future endocrinologists from Canada and from around the world. This year, we had 11 trainees in our subspecialty training program: Seven Canadians, two from Israel, one from Kuwait, one Australian and one from United Arab Emirates.

Our areas of largest clinical volume continue to be: (i) Diabetes: our comprehensive program provides ongoing care to over 1,000 children and teens with diabetes, including patients with type 1 and type 2 diabetes; patients with diabetes that results from treatment of other disorders with agents such as glucocorticoids that lead to insulin resistance; and patients with diabetes secondary to cystic fibrosis. We also have a program that provides comprehensive assessment and treatment of adolescents with chronically poor diabetes control. (ii) General Endocrinology: emphasizing the areas of growth, thyroid disease, disorders of sex development, pubertal disorders and reproductive health. (iii) Calcium/Bone: the Calcium-Bone and Bone Health Clinics assess children with abnormal bone health from a wide variety of causes as part of the multidisciplinary Bone Health Centre. (iv) Gynaecology: the Section of Paediatric and Adolescent Gynaecology provides care to pre-teen and adolescent girls across a wide spectrum of disorders and also provides care to pregnant adolescents.

We also developed further our pathways for the care of children with thyroid cancer in collaboration with Oncology, Otolaryngology and Nuclear Medicine and expanded our programs to care for children with other endocrine tumors, such as adrenal cortical carcinoma and pheochromocytoma in collaboration with Oncology and Genetics. We also continued to provide care to survivors of paediatric cancer who develop endocrine abnormalities.
HONORS AND AWARDS

Allen, L. National Faculty Teaching Award; American College of Obstetricians and Gynecologists. The Council on Resident Education in Obstetrics and Gynecology, 2012.

Daneman, D. Fellow, Canadian Academy of Health Sciences.

Hamilton, J. Award for Excellence in Clinical Teaching, Hospital for Sick Children, Department of Paediatrics, 2012.

Kives, S. Chair’s Award for Research Facilitation, Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Toronto (Continuing Education), 2011.

Kives, S. Paul McCleary Award, St Michael’s Hospital Medical Education Award, Toronto, (Distinction), 2011.

Klip, A. Canada Research Chair in Cell Biology of Insulin Action, Tier I 2011-2018

Palmert, M. Elected President of the Canadian Pediatric Endocrine Group 2011-2013.

Palmert, M. Elected to Board of Directors, Pediatric Endocrine Society (formerly LWPES) 2012-2015

PUBLICATIONS


Celiac Disease and Diabetes: Dietary Intervention and Evaluation Trial (CD-DIET). Mahmud FH, Marcon M. Juvenile Diabetes Research Foundation (JDRF). $3,000,000 CAD. May 1-2012 to Apr 1-2014


Interplay between fatty acids and macrophages in the genesis and relief of muscle cell insulin resistance. Principal Applicant: Klip A. Canadian Diabetes Association. $255,000 CAD. Jul 1-2009 to Jan 31-2012


TIME Trial: RCT of sensor-augmented pump vs standard pump initiation. Mahmud FH, Curtis J. Juvenile Diabetes Research Foundation (JDRF). $250,000 CAD. Sep 1-2011 to Aug 1-2014

Type 1 Diabetes TrialNet. Toronto Clinical Centre. Wherrett DK. National Institutes of Health. $545,348.45 CAD. May 1-2011 to Apr 30-2012

Understanding the importance of newly identified diabetes risk factors among Aboriginal Canadians. The Sandy Lake Health and Diabetes Project. Principal Applicant: Hanley A. Co-Applicants: Hamilton J, Harris S, Rae J, Zimman B. Canadian Institutes of Health Research. $100,000 CAD. Aug 1-2011 to Jul 31-2012

Use of ACASI to gather information on risk behaviours in a referral population of pregnant Canadian adolescents. Spiteri R, Alles L. Physician Services Incorporated. $37,800 CAD. Mar 1-2010 to Feb 28-2013


TIME Trial: RCT of sensor-augmented pump vs standard pump initiation. Mahmud FH, Curtis J. Juvenile Diabetes Research Foundation (JDRF). $250,000 CAD. Sep 1-2011 to Aug 1-2014

Type 1 Diabetes TrialNet. Toronto Clinical Centre. Wherrett DK. National Institutes of Health. $545,348.45 CAD. May 1-2011 to Apr 30-2012

Understanding the importance of newly identified diabetes risk factors among Aboriginal Canadians. The Sandy Lake Health and Diabetes Project. Principal Applicant: Hanley A. Co-Applicants: Hamilton J, Harris S, Rae J, Zimman B. Canadian Institutes of Health Research. $100,000 CAD. Aug 1-2011 to Jul 31-2012

Use of ACASI to gather information on risk behaviours in a referral population of pregnant Canadian adolescents. Spiteri R, Alles L. Physician Services Incorporated. $37,800 CAD. Mar 1-2010 to Feb 28-2013
The Division of Gastroenterology, Hepatology and Nutrition provides subspecialty clinical care to children and adolescents with gastrointestinal, pancreatic, hepatologic and nutritional disorders, including those who have undergone liver and/or small bowel transplantation. Clinical volumes and patient complexity have increased steadily over the past few years, with busy in-patient, ambulatory, and procedural practices.

The past five years have seen a lot of changes in Divisional faculty related to transitions and new opportunities. Incoming faculty are highly valued by the Division and Department, as recognized this year by the receipt by relatively new faculty of two key Department of Pediatrics awards. Dr. Aleixo Muise received the 2012 Early Career Research Award and Dr. Yaron Avitzur, the 2012 Early Career Clinical Excellence Award. Specialty nursing and allied health professionals play a valuable and increasing role in patient care, including organization of patient support groups (e.g. IBD teen support group) and family education days (e.g. Claire Smith IBD day for families and Liver Transplant Family Education Day).

Divisional faculty conduct research which spans the spectrum from basic and translational to patient-based in such areas as inflammatory bowel disease, exocrine pancreatic diseases, liver diseases, GI microbiology and immunology, nutritional metabolism and nutrient requirements. Faculty members collaborate in or lead large multi-centre North American and international research consortia addressing both pathogenesis and treatment of childhood liver disease, cystic fibrosis and inflammatory bowel disease. Locally, the establishment of the Northbridge Financial Corporation Chair in Inflammatory Bowel Disease recognizes the importance of IBD clinical care, education and research at SickKids and will undoubtedly enhance the activities of the IBD team.

The paediatric GI/Nutrition fellowship training program has been directed by Dr. Simon Ling since early 2010, and has always been central in the Division. Divisional faculty with varied subspecialty interests unite around the common goal of providing optimal training for the next generation of clinical scientists and researchers.
for the next generation of colleagues. The program, which usually accepts four new fellows annually, consists of one year of intensive clinical training and two or more years of training in basic or clinical research. The clinical component includes training in endoscopic procedures, in-patient management of complex patients including those awaiting and undergoing liver transplantation and those with inflammatory bowel disease; ambulatory clinics (including general GI, IBD, hepatology, transplantation, feeding disorders, and nutrition). To complement their clinical or basic science research training, fellows are encouraged to complete a post-graduate degree (MSc or PhD) at either the Faculty of Health Promotion, Management and Epidemiology (HPME) or the Institute for Medical Sciences at the University of Toronto. The emphasis placed on academic scholarly work during training is aimed at continuing to prepare fellows for careers in academic paediatric gastroenterology both in Canada and around the world.

HONORS AND AWARDS

Staff

Avitzur, Y: Junior faculty award for clinical excellence in paediatric medical care, The Hospital for Sick Children, Toronto, June 2012.

Muise, A: Junior Faculty Research Award Department of Pediatrics, University of Toronto, 2012.


Kanath, B: Teaching and Mentorship Award, Division of Gastroenterology, Hepatology and Nutrition, The Hospital for Sick Children, Toronto, June 2012.

Muise, A: Winner of Junior Faculty Research Award, Department of Pediatrics, University of Toronto, March 2012.

Walters, T: Winner of Visiting Lecturer Runner-up, Division of Paediatric Emergency Medicine, Faculty of Medicine, University of Toronto, 2012.

Trainees

Church, P: Resident Research Award, Takeda Canada and the Canadian Association of Gastroenterology, Toronto, 2012.

Church, P: Trainer Travel Award, The Hospital for Sick Children, Research Institute, Toronto, 2012.

Wahl, C: Postgraduate Medical Trainee Leadership Award, Postgraduate Medical Education, University of Toronto, June 2012.


PUBLICATIONS


Helmholtz Institute for Infection Research in the Tübingen region (Helmholtz Zentrum für Infektiologie Tübingen) and Tübingen University Hospital. This work is part of the SPLIT experience. Journal of Pediatrics 2012: 160 (5): pp 1091-1097.


Immunogenetic determinants of linear growth in pediatric BDNF Denos LA, Walters TD, Griffiths AM. Crohn’s and Colitis Foundation of America. $100,000 USD/year Jul 1-2011 to Jun 30-2014


IPS stem cell models of Alagille syndrome. Kamath B. Rare Disease Foundation Microgrant. $350,000 CAD Dec 1-2011 to Dec 31-2012


Predicting response to standardized pediatric colitis therapy: The PROTECT Study. Hyams J, Denonf L, Kugathasan S, Sylvester F, Gupta N, Walters TD. National Institutes of Health (NIDDK) U34 Multi-centre Clinical Study Implementation Planning Grant. $250,000 USD Sep 1-2010 to Apr 30-2012

Predicting response to standardized pediatric colitis therapy: the PROTECT Study. Hyams J, Denonf L, Kugathasan S, Sylvester F, Gupta N, Walters TD. National Institutes of Health (NIDDK) U31 Multi-centre Clinical Study. $1,500,000 USD May 1-2012 to Apr 30-2017

Prediction by ultrasound of the risk of hepatic cirrhosis in cystic fibrosis (‘PUSH’). Ling SC, Durie IT, Navarro O. Cystic Fibrosis Foundation and National Institutes of Health. $73,000 USD/year. 2009 to 2013

Research topics in GI disease. Jones NL. Canadian Association of Gastroenterology. $25,000 CAD Jan 1-2012 to Dec 31-2012

Risk stratification and identification of immunogenic and microbial markers of CD. Kugathasan S, PRO-KIDS Consortium, Walters TD. Crohn’s and Colitis Foundation of America Special Purpose Grant. $5-600,000 USD Jul 1-2009 to Jun 30-2012

Risk stratification in newly diagnosed children with Crohn disease. Kugathasan S, Griffiths AM. Crohn’s and Colitis Foundation of America. $225,000 USD 2010 to 2013

Role of ATG16L1 in Crohn disease. Jones NL. Crohn’s and Colitis Foundation of Canada. $125,000 CAD/year Jan 1-2012 to Dec 31-2014


Start-up Operating Fund. Gonska T. Research Institute and Department of Pediatrics, Hospital for Sick Children. $90,000 CAD Aug 1-2011 to Mar 31-2013

Sweat rate sub study as part of the GS15D Observational Study (GOAL). Gonska T. Cystic Fibrosis Foundation Therapeutics Inc./Seattle Children’s Research Institute. $16,016 USD Sep 1-2011 to Aug 31-2012


The gut microbiota in pediatric inflammatory bowel disease. Srintra A. Canadian Institutes of Health Research. $432,000 CAD 2011 to 2014

The gut microbiota in pediatric inflammatory bowel diseases. Srintra A, Mack D, Figelys D, Griffiths AM, Hjibhaheb M, Muise A, Walters TD. Canadian Institutes of Health Research Operating Grant. $150,000 CAD/year Sep 1-2011 to Aug 31-2014

The role of Crohn’s disease genes in intestinal failure and allo graft rejection. Muise A, Avitzur Y Transplant Center Grant. $12,500 CAD 2009 to 2011


Tier 1 (new) Canada Research Chair. Sherman PM. Canada Research Chairs. $1,400,000 CAD Jul 1-2008 to Jun 30-2015

Translational studies of the liver disease in autosomal recessive polycystic kidney disease. Rosenblum N, Kamath B. Lumi’s Light Foundation. $95,000 CAD/year Dec 1-2010 to Dec 31-2012

Understanding the genes involved in inflammatory bowel disease. Muise AM. Ontario Ministry of Research and Innovation (ER08-05-087) - Early Researcher Award. $140,000 CAD Mar 16-2009 to Dec 31-2013
The Division of Haematology/Oncology provides diagnostic services and specialist care for children < 18 years of age with cancer (paediatric oncology) and non-malignant blood disorders (paediatric hematology). The Division is the largest of its kind in Canada and among the largest such programs worldwide, with approximately 327 new cancer cases registered in the paediatric oncology program this year. The Division is the designated centre for haematopoietic stem cell transplantation for patients <18 years of age in the Province of Ontario; the majority of the approximate 105 transplants performed this year were for children with cancer, with others performed for children with benign hematologic disorders, severe immunodeficiency disorders or genetic diseases. The number of in-patient days for paediatric haematology/oncology/BMT cases this year was approximately 14,500, a slight decline due to the transition of some inpatient services to the day hospital setting, and the number of ambulatory care visits was stable at 22,500. In contrast, day hospital visits were significantly increased at 11,750.

Reflecting the size and diversity of its clinical services, the Division is organized into six sections and three programs: the leukemia/lymphoma section (Section Head, Dr. Johann Hitzler); the solid tumor section (interim Section Head, Dr. Meredith Irwin); the neuro-oncology (brain tumor) section (Section Head, Dr. Eric Bouffet); the blood and marrow transplantation section (Section Head, Dr. Sylvain Baruchel); and the new agents and innovative therapies program (Program Head, Dr. Paul Nathan); the long-term follow-up (Aftercare) program (Program Head, Dr. Paul Nathan); the new agents and innovative therapies program (Program Head, Dr. Sylvain Baruchel); and the cancer genetics program (Program Head, Dr. David Malkin). Dr. Sarah Alexander serves as the program’s Clinical Director. The haematology section has large clinical and research programs in haematology and the inherited and acquired paediatric marrow failure syndromes. The Division is an active member of the Children’s Oncology Group (COG), the largest paediatric hematology/oncology/BMT cases this year was approximately 14,500, a slight decline due to the transition of some inpatient services to the day hospital setting, and the number of ambulatory care visits was stable at 22,500. In contrast, day hospital visits were significantly increased at 11,750.

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The Division is the largest Royal College of Physicians and Surgeons of Canada accredited training program for the specialty of paediatric haematology/oncology in Canada. The Division’s Training Program Director is Dr. Michaela Cada. The Education Program in the Division also includes a very large international training program in paediatric haematology/oncology and offers subspecialty training opportunities in areas such as the paediatric leukemias/lymphomas, neuro-oncology, cancer genetics, blood and marrow transplantation and paediatric thrombosis and hemostasis.

Research in the Division spans basic science to clinical care with a special focus on translational research. Approximately one-half of the Division’s 30 full-time faculty have appointments as clinician scientists or clinician investigators in the Department of Paediatrics with parallel appointments in the Research Institute. Research in the Division is multidisciplinary, involving health-care professionals with expertise in a variety of areas (e.g. nursing, psychology, social work, pharmacy). The Division is committed to facilitating knowledge exchange through international partnerships with a particular focus on countries lacking the health-care resources available in Canada. Two such initiatives are currently underway in collaboration with SickKids International: the Global Sickle Cell Disease Network, under the leadership of Dr. Isaac Odamme, and the Caribbean Collaboration in Paediatric Cancer and Blood Disorders, under the leadership of Dr. Sylvain Baruchel.

The administrative team for the Division comprises Dr. Jim Whitlock (Division Head), Judy van Cleef (Executive Director, Child Health Services) and Denise Ferreira (Supervisor, Business Operations).

HONORS AND AWARDS

Alexander, S, Alvin Zipursky Teaching Award, The Hospital for Sick Children, 2012.

Blanchette, V: Distinguished Career Award, American Society of Pediatric Hematology/Oncology; 2012.

Bouffet, E: Garron Family Chair in Childhood Cancer Research, The Hospital for Sick Children, 2011.


Egeler, M: Dutch Childhood Oncology Group Award, Utrecht, 2012.

Egeler, M: Garron Family Chair in Childhood Cancer Research, Hospital for Sick Children, 2012.

Gupta, A: Winner of Academic Half Day Teaching Award, Haematology/Oncology, Department of Paediatrics, The Hospital for Sick Children, Toronto, 2011.


Malkin, D: Schwwarz-Riesen Visiting Scholar Award, Tel Aviv University, 2011.

Malkin, D: POGO Chair in Childhood Cancer Control, University of Toronto, 2011.

Malkin, D: Best Doctors America, 2011.

Odame, J: Ghanaian-Canadian Award for Professional Excellence, 2012.


PUBLICATIONS


department of paediatrics


A program of “Paediatric Pharmacogenomics Medicine (PPPM)”.


A prospective non-interventional study to describe health-related quality of life of young and adults with moderate or severe hemophilia A using recombinant factor VIII (Floloxate SFS). St. Louis J, Young N, Blanchette V. CSL Behring. $296,388 CAD 2009 to 2013

A randomized controlled mult-center non-inferiority trial of twice daily low dose dexamethasone versus high dose dexamethasone for symptom control in children undergoing cranial or craniospinal radiation after complete or near complete resection of a brain tumour. Bartels U. C17 Research Network. $120,000 CAD. 2009 to 2011


Applying biomarkers to long-term effects in child and adolescent cancer treatment (ABLE Team). Schultz CJHR, ABLE Team Grant. $4,076,000 CAD 2010 to 2015


Correcting the defect in blood cell formation from Shwachman-Diamond syndrome induced pluripotent stem cells. Drot Y. Butterfly Guild, Seattle Children’s Hospital Research Foundation. $30,000 USD 2012 to 2013

Cross-cultural validation of the CHO-KLAT (Canadian Hemophilia Outcomes-Kids’ Life Assessment Tool). Blanchette V, Young N, McCusker P. Bayer HealthCare Canada. $260,000 CAD 2006 to 2012

Development and evaluation of an internet-based program to promote self-management and transitional care for teens with hemophilia. Breakey V, Stinson J. Canadian Hemophilia Society. $75,000 CAD 2011 to 2012


Development and usability testing of an online self-management and transitional care program for youth with cancer. Stinson J, Dettmer E, Dick B, Dupuis F, Gupta A, Lavendiere C, LeMay S, Sung L. Canadian Institutes of Health Research Disease Management Program. $200,000 CAD 2011 to 2012

Development and usability of electronic children’s international mucositis evaluation scale (e-ChiMIES) for children with cancer. Sung L, Tomilinson D. Gannon Family Cancer Centre. $49,905 CAD 2011 to 2012


Development of international guidelines for the management of pediatric febrile neutropenia. Sung L. Canadian Institutes of Health Research Meeting, Planning and Dissemination Grant: Cancer Research. $12,500 CAD 2012

Discovery and characterisation of C19MC a novel oncogenic miRNA locus in malignant brain tumors. Huang A. Canadian Institute of Health Research. $520,000 CAD 2010 to 2014
DNA copy number variation in Li-Fraumeni Syndrome. Malkin D. Canadian Institutes for Health Research. $784,000 CAD 2009 to 2013

Establishing and validating a Shwachman-Diamond syndrome induced pluripotent stem cell model. Dvor Y. Donor Directed Research Funds. $30,000 CAD 2011 to 2012


Ex vivo expanded hematopoietic progenitors for AML supportive care. Delaney AM, Sung L, Meschinschi S. St. Baldrick’s Foundation. $250,000 CAD 2011 to 2013

Examining the relationship between white matter integrity and the speed of neural processing in children with brain tumours. Mahboub D, Tahoori U, Bourret E. Canadian Institute of Health Research. $640,915 CAD. 2012 to 2017

Exome sequencing to identify novel genes causing inherited bone marrow failure. Dvor Y and 17 Canadian co-investigators. Canadian Pediatric Genetic Disorder Sequencing Consortium. $45,000 CAD. 2011 to 2012


Integrative genomics for health research – Phase II. Scherer S, Mabbott D, Tabori U, Bouffet E. Canadian Institute of Health Research. $30,000 CAD. 2011 to 2013

International rare histiocytic disorders registry-IRHDDR. Abia O. Histiocytosis Association of America. $20,000 USD. Dec 2011

In vivo anti-tumor and anti-metastatic activity and functional imaging of Palifosfamide in preclinical neuroblastoma models. Ziopharm/C17. $125,000 CAD 2012 to 2013

In vivo anti-tumor and anti-metastatic activity of administration of ABRaxane and low-dose chemotherapy in preclinical neuroblastoma and sarcoma mouse model. Baruchel S, Zhang L. Celgene Inc. $107,000 CAD 2012 to 2014

Investigating the relationship between white matter integrity and genes. Dvor Y. March of Dimes. $330,000 CAD 2011 to 2012

Molecular determinants of Li-Fraumeni Syndrome-associated cancers. Malkin D. Canadian Institutes for Health Research. $750,150 CAD 2010 to 2015


National study of prophylaxis in adolescents and young adults with inherited severe bleeding disorders. Carcao M, Ziopharm/C17. $200,000 CAD 2011 to 2013


One retinoblastoma world – A global proposal for saving children with retinoblastoma. Gallie B, Chan H. TUYF Charitable Trust. $1,000,000. 2011 to 2014

Parent and provider perspectives of investigational interventions for fertility preservation in pre-pubertal boys with cancer: Measuring preferences and exploring the factors influencing decisions. Gupta A. Creative Professional Activities Grant – The Hospital for Sick Children. $9,969 CAD May 2012 to May 2013


Phase II study of high dose chemotherapy with cyclosporin for vision-threatening intracranial retinoblastoma. Chan HSL, Galie BL. Terry Fox Research Institute. $75,908 CAD 2010 to 2012


Pilot study of once-a-day prophylaxis for youth and young adults with severe hemophilia. Feldman B, Rvidar G. Bayer - Canadian Blood Services - Henna-Quebec Partnership Fund. $151,422 CAD 2008 to 2012

Post-marketing observational study on children treated with Exjade. Kirby-Allen M, Odame I. Novartis. $20,000. 2008 to 2011

Predicting late effects of individual cancer survivors. Yasui Y, Greenberg M. Canadian Institutes of Health Research. $151,422 CAD 2010 to 2012


Pregnancy complications, perinatal outcomes and use of health care resources in adult survivors of childhood cancer. Nathan PC. Ontario Ministry of Research and Innovation Early Researcher Award. $100,000 CAD Mar 2010 to Mar 2013

Professional skills development: A program to develop non medical expert CanMEDS roles for Pediatric Hematology-Oncology fellows. Wijetjo M, DeSouza C, Punnnett A. CIHR Education Grant Competition. $3032 CAD 2011 to 2012

Prospective analysis of a standardized treatment and follow-up protocol for pediatric non-medullary thyroid cancer. Wiesmann J, Gupta A, Hamilton J. Rare Disease Foundation. $3,500 CAD 2011

Prospective surveillance of resistance in colonizing bacteria from stool or peri-recital swab cultures in bacterial isolates from sterile cultures in pediatric patients receiving levofloxacin for AL or undergoing SickKidT. Fisher B, Alexander S, Guat A, Zaatous T, Sung L. Biomarker, Imaging and Quality of Life Studies Funding Program. $913,202. 2011 to 2015

Randomized study of first TIME Immunotolerance Induction in patients with severe type A hemophilia with inhibitor at high risk of failure: Comparison of induction of immune tolerance with FVIII concentrates with or without Von Willebrand factor. Carcao M, City of Hope Medical Centre. FDA/pt. 2009 to present


SickKid MBIG and phase I leukemia programs. Whitlock JA. Alex's Lemonade Stand Foundation for Childhood Cancer. $233,280 CAD Jul 1-2011 to Jun 30-2014

Silent Infarct Transfusion (SIT) Trial in Patients with Sickle Cell Disease. Kirby M. National Institutes of Health. $1,900/patient. 2006 to 2012

Stratifying and targeting pediatric medulloblastoma through genomics. Malkin D, Taylor M, Marra C. Genome Canada. $9,724,200 CAD 2011 to 2014


Studies of alpha granule formation in human megakaryocytes and platelets. Kahr WHA. Canadian Institutes of Health Research Canada. $689,721 CAD Apr 2010 to Mar 2015

Studying the blood cell defects in Swacchman-Diamond syndrome using an induced pluripotent stem cell disease model. Dru Y, Butterfly Guild - Seattle Children's Hospital and Research Foundation. $30,000 USD 2011 to 2012

Targeting the integrin-linked kinase (ILK) in rhabdomyosarcoma. Malkin D. Canadian Institutes for Health Research. $381,270 CAD 2011 to 2014

Targeting thrombomodulin-1 in medulloblastoma. Huang A, Zadeh G. Canadian Institute of Health Research. $762,000 CAD 2012 to 2017

TCD s/i Transfusions Changing to Hydroxyurea (TWITCH): A Phase III randomized clinical trial to compare standard therapy (erythrocyte transfusions) with alternative therapy (hydroxyurea) for the maintenance of lowered TCD velocities in pediatric subjects with sickle cell anemia and abnormal pre-treatment TCD velocities. Kirby M, Williams S, Odame I. National Heart, Lung, and Blood Institute (Amount under negotiation). 2011 to 2014


Tumour-associated macrophages as predictors of survival in paediatric hodgkins lymphoma. Gupta S, Punnnett A, Chung C. Canadian Institutes of Health Research Canada. $13,000 USD 2010 to 2012

Understanding body image dating relationships and sexuality in adolescents with cancer. Stinson J, Gupta A, Marra B, Greenberg M. Pediatric Oncology Group of Ontario Seed Funding Grant. $14,963 CAD 2012

Up regulation of Epstein-Barr virus activity by plasmidium falciparum: Determinants of host control. Allen U, Weitzman S. Canadian Institutes of Health Research. $700,000 CAD 2011 to 2014


Dr. Grunebaum was appointed Head of the Division of Immunology and Allergy in May 2012, replacing Dr. Chaim M. Roifman who led the division for more than 20 years. During this period, the Division had become a world-leading centre for the diagnosis, understanding and management of primary immune deficiencies as well as some of the complex allergic conditions that affect children.

The Primary Immunodeficiency (PID) Program in the Division of Immunology and Allergy at The Hospital for Sick Children is the largest of its kind in Canada and is considered to be one of the largest in the world. Medical services are provided to more than 2000 outpatients, referred from physicians and hospitals locally, nationally and internationally. The number of referred patients has steadily increased by 30 per cent over the last decade. This year the division expanded its consultation and management services for children and adults with primary immune deficiencies to 10 clinics per month. Some clinics focus on caring for patients with complex immune abnormalities and genetic defects, while other clinics are dedicated to the short- and long-term management of patients following bone marrow transplantation or gene therapy for severe inherited immune deficiencies. The Division is also responsible for the Immunology Isolation Unit, where on average 5-10 patients with severe immune defects receive hematopoietic stem cell transplantation every year. The innovative efforts and experience of our division in transplantation for patients with PID was recently summarized (Grunebaum and Roifman. Hematology/Oncology Clinics of North America).

In 2011-12 members of the Division made major contributions to the advancement of the diagnosis and management of PID. We provided the first definition of combined immune deficiency (Roifman et al., JACI 2012), which is crucial for further understanding and managing patients with varying severities of inherited immune defects (Modell et al., Immunological research 2011). In addition, Dr. Roifman has led a revolutionary Canadian neonatal screening initiative for the early diagnosis of severe combined immunodeficiency, a program that will clearly save lives of many infants. Indeed, we have shown that early diagnosis and proper supportive management of...
patients with SCID lead to improved outcome (Barron et al., J. Peds 2011 and Nicholas et al., Clin Immununo 2011) while delay in diagnosis is associated with devastating consequences (Newell et al., JACI 2011).

The Hypogammaglobulinemia Program at SickKids is recognized globally for its innovative approach and long-term follow-up of over 200 patients. We transformed the therapy of these patients from multiple hospital-based admissions, to visiting the short-stay unit and subsequently receiving treatment in their community. The proficiency of our team coupled with convenient care at a medical centre close to home, provides our patients with the personalized treatment they require.

To further enhance this program, implementation of a home therapy program is underway. Funding by the Canadian Immunodeficiency Society (CI Society) has permitted the completion of a provincial patient survey to assess such a model here in Ontario. Final analysis is underway and a clinical trial is under development. As a leader in immunoglobulin replacement therapy, Dr. Roifman acted as the lead investigator in multiple international clinical trials (Borte M, et al., Clin Exp Immunol 2011). Currently members of the divisions are involved in an international study assessing the safety and efficacy of a new brand of immunoglobulin (IVgSN-TM) and next year we plan to study a novel concept of immunoglobulin administration combined with hyaluronidase.

The Allergy Program in our Division is a referral-based clinic for the diagnosis and management of children with complex allergic diseases. These conditions include multiple or difficult-to-manage drug allergies, latex allergy, anaphylaxis, food challenges, urticaria and asthma. More than 1,000 patients with complex allergic diseases are seen each year in the Division’s clinics and similar numbers of patients are referred to the Division’s community affiliated clinics. The allergy program also offers inpatient consultation for allergic diseases, with specific expertise in adverse reactions to drugs and biologics in medically complex children, including those suffering from cancer or receiving blood and organ transplants. For children with complex medical conditions suffering also from adverse drug reactions, the DART (Drug, Adverse Reaction and Toxicology Clinic) clinic provides targeted diagnostic and management strategies, while collecting important data about this vulnerable population. This clinic has demonstrated significant clinical impact in this vulnerable population.

Importantly, with the increasing frequency of influenza impact in this vulnerable population, the Division is establising a program dedicated to food allergy and is in the process of recruiting a leader in this field.

Education remains a major focus for every member of the Division. In September 2011, Dr. Grunebaum was appointed as Director of The Pediatric Immunology and Allergy Training program – Royal College stream, while Dr. Roifman continues to head the Advanced Immunology Fellowship Program. Importantly, the training program has had a flawless certification record by the Royal College of Physician and Surgeons of Canada since 1990. Our program provides exceptional training in clinical immunology and allergy as well as research and laboratory immunology. By preparing outstanding academic and non-academic specialists in immunology and allergy, we continue to attract brilliant candidates from Canada and across the world. We underwent an internal review of the program and achieved full marks and we are now preparing for the Royal College accreditations expected in 2013. To accommodate these additional demands, the training program continues to attract the brightest stars. In recognition of her achievements, Dr. Atkinson received the Sarita Verma award for mentorship and advocacy in the spring of 2010. Over the last year she has given invited presentations at international conferences in the areas of postgraduate medical education and faculty development including topics such as residency selection, professionalism, clinical teaching and feedback.

Dr. Adelle Atkinson is in her seventh year as Director of Postgraduate Medical Education in the Department of Pediatrics. She continues to excel as an outstanding educator, and the training program continues to attract the brightest stars. In recognition of her achievements, Dr. Atkinson received the Sarita Verma award for mentorship and advocacy in the spring of 2010. Over the last year she has given invited presentations at international conferences in the areas of postgraduate medical education and faculty development including topics such as residency selection, professionalism, clinical teaching and feedback.

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The Division has become a world-leading centre for the diagnosis, understanding and management of primary immune deficiencies.

Dr. Roifman research team has recently completed studies exploring the role of Lyp phosphatase, (a molecule that the lab had previously cloned and sequenced) in the normal immune system, autoimmunity and immunodeficiency. The studies by Dr. Roifman’s group illustrated subcellular localization of and its possible novel role in the nucleus and have defined the role of a lyp genetic variant in chronic mucocutaneous candidiasis (JACI 2011). Moreover, the research linked a genetic variant of TLR3 with a subgroup of patients with this disorder (Nahum et al., Autoimmun Rev 2012). In several international collaborative studies, Dr. Roifman also helped identify Tetratrace-resistant acid phosphatase mutations in Roifman-Costa syndrome (Bringiers et al, Nat Genet 2011), mutations in the IL-10R, gene as a cause for very-early-onset ulcerative colitis (Moran et al., Inflamm Bowel Dis 2012) and various genetic defects in patients with inherited bone marrow failure syndromes (Tangaris E, et al J Med Genet 2011). Dr. Roifman also led a multicentre study defining the best treatment for CD38 deficiency (Marcus et al., JACI 2011) and a study which characterized failure to thrive in patients with severe combined immunodeficiency (Baron et al., J. Pediatrics, 2011).

With such life altering advancements in the care and quality of life of patients, Dr. Chaim Roifman, continues to remain a member of the IUIS committee for primary immunodeficiency (previously WHO) who leads the field of PID (Al-Herz W, et. Frontiers in Immunology 2011). He was also invited to write a chapter on chronic mucocutaneous candidiasis in the prestigious UpToDate series (Roifman. UpToDate, 2011). Under his guidance, The Jeffrey Modell Research Laboratory for the Diagnosis of PID (Canadian Centre for PID) continues to thrive.

Dr. Eyal Grunebaum's laboratory further advanced the understanding of the mechanisms and treatment for inherited purine defects, which are amongst the most common causes for death in children. Following the identification of a severe lung abnormality unique to patients with adenosine deaminase (ADA) deficiency (Grunebaum et al., JACI 2012), Dr. Grunebaum's lab has begun elucidating some of the mechanisms for these abnormalities as well as the optimal management options. Dr. Grunebaum's group provided some alarming information about outcome of patients who received gene therapy for adenosine deaminase (ADA) deficiency. The incomplete immune reconstitution and the persistent abnormalities in purine metabolisms following gene therapy seemed to predispose patients to tumour development and could also contribute to increased long-term susceptibility to infections and autoimmunity in these patients (Grunebaum et al., JACI, 2011).

In contrast, Dr. Grunebaum's lab, with a grant that they received in 2011 from the Canadian Immunodeficiency Society, were able to develop an ADA protein replacement therapy that could prevent the early lung and immune abnormalities in ADA-deficient mice. Moreover, with the support of the Food Research Jeffrey Modell/NIH research grant, Dr. Grunebaum's team showed that delivering normal PNP protein into thymocytes could prevent the apoptosis of these cells in purine nucleoside phosphorylase (PNP) deficiency and corrected the immune abnormalities associated with this disease (Papazanath et al., JACI, 2011). Importantly, early initiation of this treatment also prevented the development of neurological abnormalities associated with PNP deficiency (Mansouri et al., Neurology of Dis 2011). The ADA and PNP novel enzyme replacement treatments options for purine defects developed by Dr. Grunebaum's team are attracting international recognition, with invitations for presentations at prestigious international conferences such as the JMF First World Immunology Conference held at Rockefeller University, NY, and The Editors Choice in the Journal of Allergy and Clinical Immunology.


**PUBLICATIONS**


BOOKS AND CHAPTERS


GRANTS AND FUNDING

An open label, single arm, historically controlled, prospective, multicenter Phase III study to evaluate the safety, efficacy and pharmacokinetics of immune globulin intravenous IVIG-SN-T. Roifman CM, Grunebaum E, Vy K, Reid B, Kasprzak A Atlantic Research Group – Greencross study. $100,000. 2011 to 2012

CI Society Talercio Treatment and Bone Marrow Transplant Centre for primary immunodeficiency. Roifman CM. Canadian Immunodeficiency Society. $150,000. 2009 to 2012

Contribution of T cell dysregulation to the development of food allergy. Development of an animal model. Grunebaum E. Sickkids Foundation. $15,000. 2011 to 2012

Determinants of the microbiome in IBD by the Harvard/Broad Institute - Toronto IBD Consortium. Snapper, Scott, Notarangelo, Geha, Mune et al. Crohn’s and Colitis Foundation America with support from the Helmsley Foundations. $500,000. 2011 to 2014

Development of therapeutic inhibitors for treatment of multiple myeloma. Roifman CM. Multiple Myeloma Research Foundation (MMRF). $200,000. 2010 to 2012


Home immunoglobulin therapy. Roifman CM. Canadian Immunodeficiency Society. $430,000. 2007 to 2011


Improving the management of patients with severe inherited immune deficiencies. Grunebaum E. Canadian Immunodeficiency Society (CI Society). $40,000. 2011 to 2012

Immunoe and non-immune abnormalities associated with purine nucleoside phosphorylase deficiency. Grunebaum E, Roifman CM. Jeffrey Modell Foundations and the National Institute of Health and the National Institute of Allergy and Infectious Diseases. $250,000. 2010 to 2012

Optimizing hematopoietic stem cell transplantation - The cord advantage. Grunebaum E. Elizabeth Rose Herman Endowment Fund. $29,000. 2010 to 2011

PNP deficiency - A multicenter study. Grunebaum E. Jeffrey Modell Foundation $60,000. 2012 to 2015

EPD77239, in situ hybridization, and mutation analysis. Roifman CM. Jeffrey Modell Centres Network National Institute of Health. $250,000. 2009 to 2012

Resources and environment. Roifman CM. Jeffrey Modell Centres Network National Institute of Health. $250,000. 2009 to 2012


*Grants and funding*
The Division of Infectious Diseases is a leader in the academic practice of infectious diseases nationally and internationally. The Division has active inpatient as well as ambulatory consultant services that include teams that focus on general infectious diseases and infectious diseases in immunocompromised infants, children and youth. We are a resource for issues that relate to infectious disease outbreaks, including new and emerging infections, paediatric infection control and the specialized areas of HIV, congenital infections, management of the infectious complications of organ transplantation, and the ever-increasing problem of multi-drug resistant tuberculosis.

Division members have leading roles in national and international epidemiological, clinical, research advisory and related committees (e.g., the Infectious Diseases Society of America, the Canadian Paediatric Society, Health Canada, the American Society for Transplantation, the International Pediatric Transplant Association, the Canadian AIDS Research Group and the Government of the Bahamas).

Our research initiatives are structured around themes that include host susceptibility and related factors and innovative antimicrobial and associated therapies. Specific research initiatives include multicentered paediatric HIV studies that relate 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 EBV-related post-transplant lymphoproliferative disorder (PTLD), influenza illness, infections in patients with cystic fibrosis, HIV and encephalitis. Multicentred 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 Paediatric Investigators Collaborative Network on Infections in Canada (PICNIC).


Effect of omega-3 fatty acid supplementation on hypertriglyceridemia in HIV-infected children taking highly active antiretroviral therapy (HAART): A randomized cross-over study. Bitnun A, Read SE, Brophy J, Abbott Laboratories. $40,500 CAD Sep 2008 to Sep 2011


Exploring the experiences of paediatric residents with the hidden curriculum using narrative reflections. Matlow A, Atkinson A, Martimianakis T. Pediatric Consultants, Hospital for Sick Children, Education Grant. $4,750 CAD 2011 to 2013


PanCanadian study to describe the epidemiology of adverse events in children hospitalized in Canada. Matlow A, Baker R, Flintoff V. Canadian Pediatric Safety Institute. $120,000 CAD. Canadian Academic Hospitals. $500,000 CAD 2009 to 2012


Pilot study of genetic determinants of severe influenza in children. Tran D, Paterson A, Beyene J, Richardson S, Schuah S. University of Toronto: Dean’s Fund — New Staff Grant. $10,000 CAD. 2007 to 2012

Preclinical characterization of multimeric ribozymes as potential preventive and therapeutic agents for HIV infection. Joshi S, Read SE. Canadian Institutes for Health Research (CIHR). $236,234 CAD. 2009 to 2012


Predictors of vildans group streptococcal bacteremia in pediatric acute myeloid leukemia. Science M. CIHR, Master’s Award, Frederick Banting and Charles Best Graduate Scholarship. Canadian Institutes of Health Research (CIHR). $17,500 CAD. 2010 to 2011


Randomized double blind controlled trial of the use of a biofilm antimicrobial susceptibility assay to guide antibiotic therapy in chronic pseudomonas aeruginosa infected cystic fibrosis patients. Waters V. Innovotech Inc. and National Research Council Industrial Research Assistance Program (NRC-IRAP). $513,603 CAD 2009 to 2012


The role of clonal pseudomonas aeruginosa in cystic fibrosis patients in Canada. Waters V. Team Grant, Cystic Fibrosis Canada. $170,000 CAD. 2012 to 2014

Trainee perceptions of the educational value of clinical cases on an inpatient ward: An exploration of patient and trainee-level predictors. Cohen E, Mahant S, Wadhwa A, Basniala Z. Pediatric Consultants Education Research Grant, Hospital for Sick Children, University of Toronto. $5000 CAD 2011 to 2012
The three level III NICUs continue to experience excessively high occupancy rates and difficulties with retro-transfers to community hospitals, despite the additional level II beds provided by the province to community hospitals. The NICU at Sunnybrook Health Sciences Centre opened eight additional NICU beds. Mount Sinai is building a new NICU which is scheduled to open in early 2014. SickKids has commissioned an architectural firm to begin planning for rebuilding the NICU.

The Ontario Human Donor Milk Bank was funded by the Ontario government and construction is in progress at Mount Sinai Hospital. The bank is a partnership of three hospitals – Mount Sinai Hospital, Hospital for Sick Children and Sunnybrook Health Sciences Centre. It will begin providing milk in April 2012, and will provide human donor milk to all eligible babies in Toronto during the first year, and then to all eligible babies in Ontario during the second year. A major donor has provided funding of $1.2M for building the milk bank.

The newborn follow-up clinics at Mount Sinai Hospital, Sunnybrook Health Sciences Centre and The Hospital for Sick Children utilize a common protocol and are developing a shared database, to facilitate monitoring of outcomes and research.

The Division of Neonatology welcomed Dr. Boriana Parvez to the Faculty at the Hospital for Sick Children and Dr. Martin Offringa to the Faculty at Mount Sinai Hospital. Dr. Gerda Meijler briefly joined the Faculty at Mount Sinai Hospital but then decided to return to the Netherlands. The Division of Neonatology wishes to thank Dr. Adrian Zino for his service and significant contributions at Sunnybrook Health Sciences Centre.
The Division’s Neonatal-Perinatal Fellowship Training Program will undergo external review in 2013. The Division thanks Dr. Martin Skidmore for his leadership and significant contributions to the program over the past 10 years and welcomes Dr. Emer Finan as the new Fellowship Program Director. The Clinician-Scientist Scholar Training Program, under the direction of Dr. Robert Jakuov, expanded with the recruitment of Dr. Sandra Leibel, who has enrolled in the PhD program at the University of Toronto in Lung Physiology. The Division congratulates Dr. Afif El-Khuffash and Dr. Connie Williams for completing the program and obtaining staff appointments at Dublin and McMaster University respectively.

The Division continues to be well supported by major funding agencies for its various foci at the three sites, including lung biology, epidemiology, outcomes-based research and clinical trials. This year we had 146 publications, and received grant funding of $119,938,373.

### Publications (2008-2012)

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100% increase since 2008

### Grants (2008-2012)

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100% increase since 2008

### HONORS AND AWARDS

Barozzino, T: Award for Excellence in Clinical Teaching, Undergraduate and Postgraduate Teaching in Pediatrics, Education Achievement Award, St. Michael’s Hospital, Toronto, 2012.

Barozzino, T: Director of Community Outreach and Ambulatory Services, Department of Pediatrics, St. Michael’s Hospital, Toronto, 2012.

Campbell, D: Winner of 2011-2012 Marvin Gerstein Award as chosen by the Pediatric Residents of University of Toronto for outstanding teaching.


Finan, E: Program Director, Neonatal-Perinatal Medicine Fellowship Program, University of Toronto.

Hellmann, J: The Institute of Medical Science (IMS) Course Director Award, University of Toronto, 2012.

Jain, A: Winner of 2011 Exceptional Trainee Award in program of Physiology and Experimental Medicine, Research Institute, Hospital for Sick Children, Toronto, Canada.

Jamal, B: Winner of Basic Science – Senior Trainee Award, Department of Paediatrics Annual Research Day, University of Toronto, June 2012.

Lee, S: Appointed Professor, Dalla Lana School of Public Health, University of Toronto, December 2011.

Lee, KS: Nominee, President’s Award, Hospital for Sick Children, June 2011.

Lee, S: Appointed Scientific Director, Institute of Human Development, Child and Youth Health, Canadian Institutes of Health Research, January 2012.

Lee, S: Researcher of the Month, Canadians for Health Research, February 2012.


McNamara, P: PAS Travel Award 2012 (D Weisz). Non-invasive Cardiac Output Monitoring in Neonates Using Bioimpedance: A Comparison with Echocardiography.

McNamara, P: Recipient of Canadian Paediatric Society Emerging Leader in Neonatology Award, Canada, May 2012.

Meijler, G: Assistant Professor of Paediatrics, University of Toronto, 2011.

Moore, A: Deputy Division Head of Neonatology, The Hospital for Sick Children and University of Toronto, January 2012.

O’Brien, K: Award for Excellence in Innovation - The Teach Learn Care program team – Karen McGibbon Award of Excellence 2011, Mount Sinai Hospital, Toronto, 2011.

Offringa, M: Professor of Pediatrics, University of Toronto, 2012.


Parvez, B: Assistant Professor of Pediatrics, University of Toronto, 2011.

Parvez, B: Clinical Director, Neonatal Intensive Care Unit, The Hospital for Sick Children, November 2011.

Pugh E: Winner of SickKids Foundation Student Humanitarian Award, June 2012.

Sgro, M: Chief of Pediatrics, Department of Pediatrics, St. Michael’s Hospital, Toronto, 2012.

Shah, P: Emerging Leader in Neonatology Award from the Canadian Pediatric Society, Canada, May 2012.


You, J: Associate Professor, Department of Paediatrics, University of Toronto, 2011.

Whyte, H: Acting Clinical Director, NICU, The Hospital for Sick Children, April 2012.

Williams, C: Canadian Institutes of Health Research Doctoral Award – Frederick Banting and Charles Best Canada Graduate Scholarship, 2011.

Williams, C: Canadian Institutes of Health Research Douglas Kinsella Doctoral Award for Research in Bioethics, 2011.

Young, J: Associate Professor, Department of Paediatrics, University of Toronto, 2011.


Shah V, Jefferies A. Preterm infants receiving heel lance procedures have slightly lower pain scores and quicker time to return to baseline heart rate when held in kangaroo care by the mother than by the father Evidence-Based Medicine 2012 Mar 7 (Epub ahead of print).

Shah VS, Ohlsson A, Halliday HL, Dunn M. Early administration of inhaled corticosteroids for preventing chronic lung disease in ventilated very low birth weight preterm neonates. Cochrane Database of Systemic Reviews 2012 May: pp CD001969.


CHIPS-CHILD: Testing the developmental origins hypothesis. Magee L, Autzalos E. Canadian Institutes of Health Research. $1,190,436 CAD 2011 to 2015


CIHR team in maternal-infant care. Lee S. Canadian Institutes of Health Research $3,640,990 CAD 2008 to 2013


Clinical prediction models for critically ill pregnant women: MEOWS and CIPHER. Von Dadelez P, Lee S, et al. Canadian Institute of Health Research. $100,000 CAD 2011 to 2012

Comparison of 2% chlorhexidine in 70% isopropyl alcohol versus 2% aqueous chlorhexidine for skin antisepsis prior to venepuncture in very low birth weight infants: A planned non-inferiority trial. Shah V, Jam A, Desphande P, McGee A. Physicians Services Incorporation Foundation. $136,000 CAD 2011


Creating bone and joint health from the bedside to the bench. Frank C, Lee S, et al. Alberta Heritage Foundation for Medical Research. $5,000,000 CAD 2008 to 2013

Creating an innovative problem oriented documentation system to enhance clinical documentation for level 3 NICUs. Lee SK, James A, Ng E. AlScKiiKidz AFP Innovation Fund. $300,000 CAD 2011 to 2013

Developing and testing a prediction model for neurodevelopmental outcomes for the extremely preterm infant. Auztalos E. Alfa Foundation. $250,000 CAD 2010 to 2015


Development of a targeted neonatal ecochocardiography teaching application for smart phones and tablet PCs. El-Khuffash A. Ikraa Educational Grant. $35,000 CAD 2011

DO IT: Vitamin D outcomes and interventions in toddlers. Maguire JL, CIHR – INMD Startup (Bridge) Funds. $100,000 CAD 2011 to 2012


Echocardiography and persistent pulmonary hypertension of the newborn. McNamara P. (Supervising Investigator). School of Graduate Studies Fall Grant. $400 CAD. 2011


Enhanced surveillance of Canadian street youth. Barozzino T, Sgro M. Public Health Agency of Canada. $10,000 CAD. 2011 to 2012

Enhancing breast milk production with domperidone in mothers of preterm neonates (EMPPOWER Trial). Auztalos E. Canadian Institutes of Health Research. $599,454 CAD. 2011 to 2016

EPIQ-II Project. James A (Site investigator, The Hospital for Sick Children site). Canadian Institutes of Health Research (Canadian Neonatal Network). $42,215 CAD. 2009 to 2011

EPIQ-II Project. James A (Site investigator, The Hospital for Sick Children site). Canadian Institutes of Health Research (Canadian Neonatal Network). $10,000 CAD 2011 to 2012

Establishment of a Canadian-based international research network to improve quality of life, communication, and economic outcomes in head and neck cancer survivors. Rieger J, Lee S, et al. Canadian Institutes of Health Research. $10,000,000 CAD. 2010 to 2011

Electronic problem–oriented documentation (ePOD) for Level III neonatal intensive care. Lee S, Ng E, James A. Academic Health Sciences Alternative Funding Plan Innovation Fund 2010-11: Ontario Ministry of Health and Long Term Care. $196,000 CAD 2011 to 2013

Enhanced documentation for level 3 NICUs: streamlining the electronic medical record for care of the critically ill neonate. Lee S. Canadian Institutes of Health Research. $4,054,611 CAD. 2006 to 2011

Grants and FundinG
Evaluation of the education impact of debriefing post simulated neonatal resuscitation. Campbell D. Neonatal Resuscitation Program Grant, Canadian Pediatric Society. $16,200 CAD 2011


Hypercapnia as therapy for neonatal pulmonary hypertension. Jankov RP, McNamara PJ. Canadian Institutes of Health Research. $315,186 CAD 2011 to 2013

Improving parental opinion on retromer transfer through effective discharge planning. Duambomba Y. SickKids Innovation Funds. $62,000 CAD 2011

Improving safety in the insertion and care of percutaneously inserted central catheters (PICCs) and umbilical catheters (UCs) in 3 neonatal intensive care units (NICUs). Lee KS, Dunn M, Jefferies A, Gibbins S, Doctor S. Canadian Medical Protective Association Collaborative Research Grant. $49,750 CAD 2009 to 2011

Inhibition of physiological apnoea as a major component of chronic neonatal lung injury. Tusonell AK, Jankov RP. Canadian Institutes of Health Research Open Grants Program. $477,180 CAD 2007 to 2012


Late preterm births: Meeting planning and dissemination. Basu K, Lee KS, Shah PS. Canadian Institutes of Health Research. $10,000 CAD 2011


Maternal-Infant Care (MiCare) Research Centre. Lee S. Ministry of Health and Long-Term Care. $15,000,000 CAD 2009 to 2013

Measuring late preterm health and developmental outcomes through TAKGetKids! Maguire JL, Sgro M, Campbell D, St. Michael's Hospital Innovation Fund. $18,694 CAD 2011 to 2012

Measurement of brain volumes by MRI segmentation in infants born preterm: Relation with mental outcome. Mejgler G, Bicenter study University Medical Center Utrecht and Leiden University Medical Center. ZonMW, the Netherlands Organization for Health Research and Development. €125,000. 2008 to 2011

Milk intake, vitamin D deficiency and fracture risk in young children. Maguire JL, Dairy Farmer's of Canada. $90,000 CAD 2011 to 2012

MiTy Kids (Metform in women with type 2 diabetes in pregnancy Kids Trial). Feig D, Lee S, Aztalos E, et al. Canadian Institutes of Health Research. $1,290,072 CAD 2012 to 2018

MiTy Kids (Metform in women with type 2 diabetes in pregnancy trial). Feig D, Lee S, Aztalos E et al. Canadian Institutes of Health Research. $1,735,119 CAD 2010 to 2015


Non-invasive cardiac output monitoring in neonates using bioresonance. A comparison with echocardiography. El-Khuffash A. School of Graduate Studies Conference Grant, University of Toronto. $500 CAD 2012

Non-invasive cardiac output monitoring in neonates using bioresonance. A comparison with echocardiography. El-Khuffash A. Pediatric Academic Society Young Investigator's Travel Awards Program. $500 CAD 2012

Nutrition research trainee support. O'Connor D, Unger S. The Hospital for Sick Children Foundation. $40,000 CAD 2011 to 2013

Ontario CASE (congenital anomalies surveillance enhancement) initiative submission. Moore AM, Fell D. PHAC. $80,000 CAD annually. 2010 to 2013

Oxidative stress and neonatal pulmonary vascular resistance control. Belik J. Canadian Institutes of Health Research 5 year operating grant: $597,193 CAD 2010 to 2014


Post graduate medical education research award winner. El-Khuffash A. University of Toronto. $9,900 CAD 2012


Non-invasive cardiac output monitoring in neonates using bioresonance. A comparison with echocardiography. El-Khuffash A. School of Graduate Studies Conference Grant, University of Toronto. $500 CAD 2012

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Oxidative stress and neonatal pulmonary vascular resistance control. Belik J. Canadian Institutes of Health Research 5 year operating grant: $597,193 CAD 2010 to 2014


Post graduate medical education research award winner. El-Khuffash A. University of Toronto. $9,900 CAD 2012

Predicting neurobehavioral outcome in preterm neonates. Taylor M, Whylie HE, Moore A, Shroff M, Raybould C, Donner E, Fink V. Canadian Institute of Health Research. $929,910 CAD 2007 to 2012

Predictive value of biochemical and echocardiography markers in neonates with PLCS. McNamara P, El-Khuffash A, Jain A. Physicians Services Incorporated. $15,900 CAD 2008 to 2011

Preterm birth and healthy outcomes. Olson D, Lee S, et al. Alberta Heritage Foundation for Medical Research. $5,000,000 CAD 2008 to 2013

PROMOTE: Preschoolers at risk – Obesity and cardiometabolic risk factors: Towards early identification. Maguire JL. CIHR Startup Grant. $100,000 CAD. 2010 to 2011

PROMOTE: Preschoolers at risk – Obesity and cardiometabolic risk factors: Towards early identification. Maguire JL. PSI Operating Grant. $168,000 CAD 2010 to 2012

Role of reactive oxygen/nitrogen species in normal and aberrant postnatal lung growth. Tanswell AK. Canadian Institutes of Health Research. $570,339 CAD. 2009 to 2012


Simulation in perinatal reuscitation, a quality improvement project. Campbell D. Innovation Fund, Physicians Services Association, SMH. $20,460 CAD 2011

Surveillance of early-onset neonatal sepsis and meningitis. Sgro M, Campbell D. AFP Innovation Fund $42,000 CAD 2011 to 2012

Surveillance of early-onset neonatal sepsis and meningitis. Sgro M, Campbell D. Department of Pediatrics University of Saskatchewan. $5,000 CAD 2011 to 2012

Surveillance of early-onset neonatal sepsis and meningitis. Sgro M, Campbell D. Duccheg Medical. $10,000 CAD 2011 to 2012

Surveillance of early-onset neonatal sepsis and meningitis. Sgro M, Campbell D. Mi-CARE Sub-Grant. $20,000 CAD 2010 to 2011

Surveillance of severe hyperbilirubinemia. Sgro M, Campbell D. Public Health Agency of Canada. $40,000 CAD 2011 to 2013


TARGet Kids! Maguire JL. Operating Grant St. Michael’s Foundation. $30,000 CAD. 2010 to 2011

TARGet Kids! A primary care research network in obesity prevention. Maguire JL. CIHR Emerging Team Grant in Childhood Obesity. $2,452,000 CAD. 2008 to 2013

The Artemis Project: Real-time streaming of high volume, high fidelity physiological data for clinical decision support. James A, McGregor C. TD Bank Information Technology Group Annual Fund Raising Event. $150,000 CAD. 2011 to 2012


The development of an interactive web based educational module for neonatal functional echocardiography. Finn E, McNamara P. Drake Education Development Fund. $10,000 CAD. 2008 to 2011


The initiative for translational hypertension research: Tackling hypertension-related health management through knowledge translation, system re-design and direct translation of bench research to practice. Bramen B, Lee S, et al. University of Alberta. $300,000 CAD 2008 to 2011

The MASC (Medical and Social Complexity) screening tool derivation study phase 1 – Tool construction and pilot testing. Maguire JL, Norman Saunders Complex Care Initiative. $43,000 CAD. 2010 to 2012


The use of echocardiographic and biochemical markers to predict low cardiac output following patent ductus arteriosus ligation in preterm infants. El-Khuffash A, McNamara P. The Physicians’ Services Incorporated Foundation Grant Award. $15,900 CAD 2010 to 2012

The use of NICOM in assessing the hemodynamic state of premature infants. Weisz D, Jain A, El-Khuffash A, McNamara P. Hospital for Sick Children Research Start-Up Grant Award. $3,000 CAD 2011

The Women’s Auxiliary Chair in Neonatology. Lee S. The Hospital for Sick Children Research. $350,000 CAD. 2009 to 2013


What is the impact of early childhood education and care (ECEC) program quality on children’s developmental health? Perlman M, Shah PS. Canadian Institutes of Health Research. $56,040 CAD 2011 to 2012


The use of echocardiographic and biochemical markers to predict low cardiac output following patent ductus arteriosus ligation in preterm infants. El-Khuffash A, McNamara P. The Physicians’ Services Incorporated Foundation Grant Award. $15,900 CAD 2010 to 2012

The use of NICOM in assessing the hemodynamic state of premature infants. Weisz D, Jain A, El-Khuffash A, McNamara P. Hospital for Sick Children Research Start-Up Grant Award. $3,000 CAD 2011

The Women’s Auxiliary Chair in Neonatology. Lee S. The Hospital for Sick Children Research. $350,000 CAD. 2009 to 2013


What is the impact of early childhood education and care (ECEC) program quality on children’s developmental health? Perlman M, Shah PS. Canadian Institutes of Health Research. $56,040 CAD 2011 to 2012
In 2011–2012, the number of patients cared for by the Division of Nephrology, and the complexity of the care provided, continued to grow. The Nephrology Fellowship Training Program provides a unique combination of comprehensive clinical training and exposure to state-of-the-art scientific inquiry, and it attracts trainees from across the world.

The Division is uniquely poised to lead in clinical, epidemiological, and translational research, and in basic scientific discovery.
HONORS AND AWARDS
Rosenblum, ND: Inaugural Visiting Professor, Centre for Molecular and Cellular Intervention (CMCI) and Department of Pediatrics, University of Utrecht, October 2011.

PUBLICATIONS


BOOKS AND CHAPTERS


GRANTS AND FUNDING

Alport Syndrome Treatments and Outcomes Registry (ASTOR). A prospective study of microalbuminuria in untreated boys with Alport syndrome. Licht C, Kashtan CE. ASTOR Study – University of Minnesota. $36,000 USD. Jan 2009 to Dec 2012


Canada Research Chair (Tier II). Robinson LA. Canada Research Chair Program. $500,000 CAD Jan 2010 to Jan 2015

Canada Research Chair in Developmental Nephrology (Tier I). Rosenblum ND Canada Research Chairs Program. $150,000 CAD Jun 2012 to Jun 2017

Canadian Child Health Clinician Scientist Program. Rosenblum ND Strategic Training Initiative in Health Research (STIHR) Program. $3,000,000 CAD 2002 to 2012

Canadian Paediatric Clinician Scientist Program. Rosenblum ND The Hospital for Sick Children Foundation. $3,000,000 CAD 2002 to 2012

Canadian Paediatric Clinician Scientist Program. Rosenblum ND B.C. Research Institute for Children’s and Women’s Health. $1,500,000 CAD 2002 to 2012

Canadian Paediatric Clinician Scientist Program. Rosenblum ND Women’s and Children’s Health Research Institute. $140,000 CAD 2008 to 2012

Canadian Paediatric Clinician Scientist Program. Rosenblum ND Manitoba Institute of Child Health. $200,000 CAD 2008 to 2012

CIHR MD/PhD Grant. Rosenblum ND Canadian Institutes of Health Research. $660,000 CAD 2007 to 2013

CIHR MD/PhD Grant. Rosenblum ND Canadian Institutes of Health Research. $660,000 CAD 2008 to 2014

CIHR MD/PhD Grant. Rosenblum ND Canadian Institutes of Health Research. $660,000 CAD 2009 to 2015

CIHR MD/PhD Grant. Rosenblum ND Canadian Institutes of Health Research. $660,000 CAD 2010 to 2016

CIHR MD/PhD Grant. Rosenblum ND Canadian Institutes of Health Research. $660,000 CAD 2011 to 2017

Control of cerebellum cell specification, migration and organization by SUFU. Rosenblum ND Canadian Institutes of Health Research. $734,120 CAD Jun 2011 to Jun 2016

Control of complement-mediated platelet activation in aHUS via Eculizumab. Licht C. Alexion Pharmaceuticals, Inc. $15,000 USD Jan 2012 to Dec 2013

Control of kidney cell determination and morphogenesis by BMPs and beta-catenin. Rosenblum ND Canadian Institutes of Health Research. $767,080 CAD Jan 2008 to Sep 2013


Dysregulated hedgehog signaling and the pathogenesis of nonobstructive and obstructive hydrourethrosis. Rosenblum ND. The Kidney Foundation of Canada. $100,000 CAD Jul 2010 to Jun 2012

Eculizumab in Alport Syndrome. Licht C. The Kidney Foundation of Canada (Alport Syndrome Research Grant). $100,000 CAD Jan 2012 to Dec 2013

Genetic screening of children with nephrotic syndrome. Parekh RS. Physician Services Incorporated. $170,000 CAD May 2011 to Apr 2013

Idiopathic reperfusion injury therapeutic agonistic anti-Robo 1 antibody. Robinson LA, MaRs Innovation Proof of Principle Program. $100,000 CAD Mar 2012 to Mar 2013

Idiopathic reperfusion injury therapeutic Agonistic anti-Robo 1 antibody. Robinson LA. MaRs Innovation Proof of Principle Program. $50,000 CAD Jun 2011 to Mar 2012


Longitudinal study. Hébert D, Robinson LA. Canadian Institutes of Health Research. $616,945 CAD Jul 2011 to Jun 2016


The role of single nucleotide polymorphisms of iron regulatory genes in chronic kidney disease and cancer treatment induced anemia susceptibility and response to therapy. DeAngelis C, Parekh RS. McLaughlin Centre (Accelerator Grant). $509,125 CAD Apr 2010 to Oct 2014


Regulation of leukocyte-endothelial interactions. Robinson LA. Natural Sciences and Engineering Research Council of Canada. $70,000 CAD Jun 2012 to Jun 2017


The nephroprotective potential of eculizumab using COL4A3 knockout (nephrosclerotic) mice in a proof-of-concept study. Licht C. Alexion Pharmaceuticals, Inc. $65,000 CAD. Jan 2011 to Dec 2013

Regulation of leukocyte-endothelial interactions. Robinson LA. Natural Sciences and Engineering Research Council of Canada. $70,000 CAD Jun 2012 to Jun 2017

The nephroprotective potential of eculizumab using COL4A3 knockout (nephrosclerotic) mice in a proof-of-concept study. Licht C. Alexion Pharmaceuticals, Inc. $65,000 CAD. Jan 2011 to Dec 2013

The role of single nucleotide polymorphisms of iron regulatory genes in chronic kidney disease and cancer treatment induced anemia susceptibility and response to therapy. DeAngelis C, Parekh RS. McLaughlin Centre (Accelerator Grant). $40,000 CAD May 2012 to Apr 2013

Translational studies of the liver disease in autosomal recessive polycystic kidney disease. Rosenblum ND, Kamath B, Lam’s Light Foundation. $190,000 CAD May 2011 to Jun 2013
The major foci of the clinical activities of the Division of Neurology have traditionally been epilepsy, stroke, headache, neurometabolic disease, neuromuscular disease, neurogenetics, sleep disorders, movement disorders, demyelinating diseases, functional neuroimaging and neurointensive care. While maintaining these strengths, the Division of Neurology will add a significant strength in Neonatal Neurology with the arrival of our new Division Head, Dr. Steven Miller, and a new assistant professor in the Division, Dr. Emily Tam. Drs. Miller and Tam will bring remarkable expertise in neonatal neurology to the Division and make that a world-class domain immediately.

The Division of Neurology has a Royal College accredited training program in Child Neurology as well as postdoctoral training programs in epilepsy, stroke, neurometabolic disease and demyelinating diseases. In addition, there are a number of graduate students and postdoctoral fellows in clinical neurophysiology, neurogenetics, molecular and cellular neurobiology.

The research foci of the Division of Neurology is epilepsy (both clinical and basic research), magnetoencephalography, stroke, dyslexia, burden of disease and quality of life, muscular dystrophy, multiple sclerosis, fatty acid oxidation disorders, molecular and cellular neurobiology, and as noted above, neonatal neurology.
Anz, A: The CanMEDs Trainee Award, Division of Neurology, The Hospital for Sick Children, June, 2012.

Banwell, B: The CanMEDs Faculty Award, Division of Neurology, The Hospital for Sick Children, June, 2012.


Cortez, MA: Appointed for a second term, Chairman, Canadian Board of Registration of EEG Technologists, 2009 to 2015.

Donner, E: Winner of the Division of Developmental Paediatrics, Dept. of Paediatrics Teaching Award, University of Toronto, June, 2012.

Donner, E: Appointed Secretary Treasurer, Canadian League Against Epilepsy, January, 2012.

Donner, E: Steering Committee Member (Planned the inaugural meeting June 2012), PAME (Partners Against Mortality in Epilepsy) International, 2012.

Hahn, C: Elected Fellow, American Clinical Neurophysiology Society, 2011.


Hahn, C: Elected Councilor, American Clinical Neurophysiology Society, San Antonio, TX, 2011.

Kobayashi, J: 27 Years Service, SickKids Pediatric Consultants, June 2012.


Moharir, M: Junior Faculty Award for Clinical Excellence in Paediatric Medical Care, Department of Paediatrics, University of Toronto, the Hospital for Sick Children, 2012.


Nita, D: Prichard Day Award for Residents, April, 2012.

Payne, E: Prichard Day Award for Fellows, April, 2012.


Tein, J: Winner of John H. Menkes Award, Endowed Memorial Lectureship in Pediatric Neurology, Dept. of Pediatric Neurology, Ronald Regan Medical Center, UCLA, California, USA, March 2012.

Tein, J: Co-Chair, Scientific Program Committee (responsible for entire Congress program), XIth International Child Neurology Congress, Brisbane, Australia, June 2010 to June 1, 2012.


Weiss, S: Elected President, Canadian Sleep Society, Sept 2011 (3 year term).

Weiss, S: Nominated to University of Toronto Academic Board – representative for Faculty of Medicine, April 2011 (2 year term).


PUBLICATIONS


Hahn CD, Manlhiot C, Schmidt MR, Nielsen TT, Redington Central PMCID: PMC3225493.


Pang EW. Practical aspects of running development studies in the MEG Brain Topography 2011; 24 (3-4): pp 253-260.


BOOKS AND CHAPTERS


Creating a novel mentorship program for junior faculty at a pediatric academic health sciences center – The role of a modified developmental evaluation (MDE) model. Weiss SK, Parker K, Marimanakis T, Schneider R, Leslie K. SickKids Pediatric Consultants Education Research Grant. $4,800 CAD. Nov 1-2011 to Oct 31-2012

Demographic, environmental and genetic factors that modify pediatric multiple sclerosis course. Wauthier E, Yeh EA. NIH R01. $2,000,000 USD 2011 to 2016

Developing instructional approaches suited to the cognitive and motivational needs of struggling adult readers. Center for the Study of Adult Literacy. Greenberg D, Lovett MW, Graesser A, Frijters JC, Braumun-Martin L. The first National Research and Development Center on Cognition and Adult Literacy. Institute of Education Sciences (US Department of Education). $10,000,000 USD. 2012 to 2017

Development of an MEG-compatible articulography system for the assessment of brain function and oromotor dynamics. Donner EJ, Cheyne D, Chau T, Pang EW, Steele CM, Van Lieshout P. Natural Sciences and Engineering Research Council of Canada and Canadian Institute of Health Research. $390,000 CAD. 2010 to 2013

Development of an MEG-compatible articulography system for the assessment of brain function and oromotor dynamics. Taylor MJ, Doenecke S, Anagnostou E, Pang EW, Donner E. Collaborative Health Research Projects, Canadian Institutes of Health Research. $875,000 CAD. 2010 to 2013


Development of frontal lobe cognitive functions: Timing, structure and connectivity. Pang EW, Cheyne D, De Nil L, Roberts SW. Canadian Institutes of Health Research ISC. $872,000 CAD. 2012 to 2017

Developmental investigation of memory capacity using functional neuroimaging. Taylor MJ. NSERC Discovery Grant. $150,000 CAD 2009 to 2014


Disregulation of fatty acid oxidation by defective SMMN1 gene: Implications for therapy. Tein I. Rare Diseases Foundation Grant. $3,500 CAD May 2012 to Apr 2013

Effects of creatine supplementation on muscle pathophysiology in children with dermatomyositis. Stephens S, Feldman B, Tein I, Wells G, Schulze A. Rare Diseases Foundation Grant. $3,500 CAD May 2012 to Apr 2013

Efficacy of L-arginine therapy on vasodilatation and mitochondria in MELAS syndrome. Tein I. United Mitochondrial Diseases Foundation. $75,000 CAD Jul 2010 to Mar 2013

Efficacy of the ketogenic diet. Donner EJ. Ontario Brain Institute. $47,268 CAD. 2012 to 2013

End MS – RRTC, Ontario, Manitoba: Yeh A, Harrazu G, Gaffhir O. OS Society of Canada. $300,000 (Stage 1) CAD. Apr 2012 to Apr 2015


Epilepsy genetics: Seizing the advances. A Plenary Session of the 2012 Canadian League Against Epilepsy Meeting. Minassian BA. Canadian Institutes of Health Research. $17,175 CAD. Nov 2011 to Oct 2012

Epilepsy mechanisms: Seizing the advances. A Plenary Session of the 2012 Canadian League Against Epilepsy Meeting. Minassian BA. Canadian Institutes of Health Research. $17,175 CAD. Nov 2011 to Oct 2012

Ergometric training in mitochondrial myopathies. Tein I. Knights of Columbus Fund for Mitochondrial Disorders. $1000 CAD Jan 2012 to Dec 2012

Exploring stochasticity in the spatio-temporal patterns of coordinated brain activity. Perez-Velazquez JP. NSERC Discovery Grant. $155,000 CAD 2012

Feasibility of international biological sample research in pediatric MS. Banwell B, Bar-Or A, Tardieu M, Chitnis T, on behalf of the International Pediatric Multiple Sclerosis Study Group. Multiple Sclerosis International Federation. $52,856 CAD Jan 2011 to Jan 2013

Genes, reading and dyslexia. Grauer J. Subcontracted sites: Lovett MW, Wolf M, Pennington B, Willcutt E, Buda R. The Manton Foundation to Yale University. $5,000,000 USD 2009 to 2014


Genetics and reading disabilities. Barr CL, Lovett MW, Kerr EN. Canadian Institutes of Health Research. $1,053,327 CAD. Jan 2008 to Jul 2013


How does the brain's clockwork help it to reorganize old memories while we sleep? Richards B, Frankland P, Cozart MA. Spring CIBR Team Research and Training Program in Sleep and Biological Rhythms Competition. $4,000 CAD Aug 2011 to Jul 2012

Identifying juvenile myoclonic epilepsy genes through whole-genome sequencing in large families. Andre D, Delgado-Escueta A, Minassian B. University of Toronto McLaughlin Centre. $200,000 CAD Jul 2011 to Jun 2013

Identifying the disease genes for the prototypical and most common generalization and focal epilepsies of children through whole exome sequencing. Minassian BA, Andre D, University of Toronto McLaughlin Centre. $50,000 CAD May 2011 to Apr 2012

Impact of seizures in infants and children with intractable stroke. deVeber G. The Pediatric Epilepsy Research Foundation. $198,000 USD Jul 2011 to Jun 2013

Infantile spasms in Down syndrome: Correction of the epileptic phenotype. snead OC, Cortez MA, Eubanks J, SALTER M. Canadian Institutes of Health Research. $755,000 CAD. Jan 4-2011 to Mar 31-2016

Intrasural oxytocin for social cognition/function in adults with autism. Anagnostou E, Szatmari P. Canadian Institutes of Health Research. $1,080,000 CAD. 2012 to 2016


Long-term outcomes of pediatric epilepsy surgery. Sub project in Integrated Discovery System for Epilepsy (New Approaches to Intractable Seizures). Smith ML. Ontario Brain Institute. $69,000 CAD 2011 to 2013


MEB Diseases Vajjar J. SickKids Foundation. $37,000 CAD Dec 2006 to Jul 2012


Quantitative neuroimaging markers of executive dysfunction in children with frontal lobe epilepsy. Wijgga J, Svead OC. AUR. GE Radiology Research Academic Fellowship (GERRAF) Award. $140,000 CAD 2011 to 2013

Quantitative non-invasive MRI measures of cerebral blood flow and cerebrovascular reactivity in children with sickle cell disease. Kasner A, deVeber G. Canadian Institutes of Health Research. $360,000 CAD. Oct 2010 to Sep 2013

RCT of melatonin to improve sleep in children who have both epilepsy and neurodevelopmental disorders. Weiss S. Complementary and Alternative health care in Pediatrics. Hospital for Sick Children. $121,000 CAD May 2010 to May 2012


Regulation of expression of organic cation/carnitine (OCTN/ Cn) transporter family in developing murine heart. Tein I. Mead-Johnson Grant. $60,000 CAD. Apr 2011 to Mar 2012


Towards the correction of the Rett-like phenotype of MeCP2-deficient mice. Svead OC. Canadian Institutes of Health Research. $150,000 CAD Oct 2010 to Sep 2014

Towards the correction of the Rett-like phenotype of MeCP2-deficient mice. Svead OC. Canadian Institutes of Health Research. $150,000 CAD. Sep 2011 to Aug 2016

Validation of monitoring changes in brain synchrony to anticipate seizures and implement feedback stimulation to stop seizure occurrence. Perez-Velazquez JP. Ontario Brain Institute. $155,700 CAD. 2011 to 2013


Vitamin D clinical trial. Yeh EA, Dairy Farmers of Canada. $80,000 CAD Jan 2012 to Apr 2013


Typical and atypical development of frontal lobe systems and the maturation of social cognitive function. Taylor M, Anagnostou E. Canadian Institutes of Health Research. $450,000 CAD. 2012 to 2016

Unravelling the pathogenesis of the autophagic vacuolar myopathies. Minassian BA, Ackerley C, Manolou MF. Canadian Institutes of Health Research. $775,393 CAD Apr 1-2007 to Mar 31-2012

Validation of the role of actigraphy in assessing sleep patterns and sleep disorders in children with epilepsy. Weiss S, Sakada Y. SickKids Funding from Chase an Idea in Pediatric Neuroscience. $29,000 CAD Aug 2011 to Jul 2012

Validation of changing monitored brain synchonry to anticipate seizures and implement feedback stimulation to stop seizure occurrence. Perez-Velazquez JP. Ontario Brain Institute. $155,700 CAD. 2011 to 2013


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The 2011-2012 academic year for the Division of Pediatric Emergency Medicine can be summarized in two words — “busy” and “productive.” We certainly were busy — busy with patients (over 63,000 visits) and busy with the training of undergraduates and post-graduate learners (more than 450 in the art and science of paediatric emergency medicine) and the academic year was certainly productive, both in terms of scholarly output and grants awarded to our faculty.

The story for clinical operations in 2011-2012 was the story of SPEED – Streamlining the Patient Experience from Entry to Discharge. The department made substantial gains in efficiency through the improvement ideas generated and put into practice by a multi-disciplinary group of ED and hospital leaders, including our operations director Dr. Trent Mizzi. The SPEED initiative conceptualized and proved the value of a rapid assessment zone model of care to focus attention on our largest segment of patients – those judged as too sick for urgent care, but not so sick as to require immediate resuscitation and care. These efficiency gains translated into the hospital gaining close to a million dollars in variable funding awarded by the Ministry of Health.

Grant funding exceeded 3 million dollars and was achieved across 10 different faculty and fellows within the Division

Academic success was visible on many fronts. Dr. Kathy Boutis was promoted to Associate Professor of Paediatrics on the strength of her clinical research program in musculoskeletal injuries. Dr. Jason Fischer was awarded the outstanding clinical teacher prize from the University of Toronto Emergency Medicine Program. Dr. Fischer was also established the first emergency ultrasound fellowship training program for PEM in Canada in fall 2011. Divisional faculty published more than 35 scientific papers and contributed to five different books defining best practice in our field. Grant funding exceeded 3 million dollars was achieved across 10 different faculty and fellows within the Division, and that figure does not include the federal grant awarded to a consortium of academic PEM centers and general emergency medicine departments entitled TREKK (Translating Emergency Knowledge to a consortium of academic PEM centers and general emergency medicine departments to a consortium of academic PEM centers and general emergency medicine departments).

The 2011-2012 annual report of the Department of Paediatrics can be summarized in two words — “busy” and “productive.” The story for clinical operations in 2011-2012 was the story of SPEED – Streamlining the Patient Experience from Entry to Discharge. The department made substantial gains in efficiency through the improvement ideas generated and put into practice by a multi-disciplinary group of ED and hospital leaders, including our operations director Dr. Trent Mizzi. The SPEED initiative conceptualized and proved the value of a rapid assessment zone model of care to focus attention on our largest segment of patients – those judged as too sick for urgent care, but not so sick as to require immediate resuscitation and care. These efficiency gains translated into the hospital gaining close to a million dollars in variable funding awarded by the Ministry of Health.

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PUBLICATIONS


Learning retention and the optimal timing of refreshers in specialty education. Boutis K, Psac M, Pecaric M, Beckstead J, Babyn P. Royal College Medical Education Research Grant. $40,000 CAD Apr 2011 to Dec 2014


Ondansetron use in children with dehydration in a developing country. Freedman SB, Bhutta Z. Gates Foundation. $100,000 CAD Jan 2012 to Dec 31-2013

Ondansetron use in children with dehydration in a developing country. Freedman SB, Bhutta Z. Thrasher Research Foundation. $40,000 CAD Jan 2012 to Dec 31-2015

Pediatric Research and Clinical Summer (PeRCS) Program Award. Hospital for Sick Children. (Student: Hatun J) $2,500 CAD Jan 2012 to Dec 31-2012


Pharmacogenomic determinants of ketamine neurotoxicity in young children. Finkelstein Y, Boutis K, Hutchison J, Post M, Soriano S, Kim R. McLaughlin Centre for Genomic Medicine 2012 Accelerator Grant, University of Toronto. $50,000 CAD Jan 2012 to Dec 31-2013


Paramedics attitude towards death notification in the field. Douglass L, Chleskes S, Feldman M, Rattanapalan S. Paramedics Research Consortium $14,074 CAD 2011 to 2013

Population based cohort to determine effect of ED pediatric gastroenteritis strategies on admission and return visit rates. Baham A, Freedman SB, Guttmann A. Physicians Services Incorporated. $20,000 CAD Jan 2011 to Dec 31-2013

Prognosticators of persistent concussion symptoms following pediatric minor traumatic head injury. Zemek RL, Osmund M, Vasiliadis M, Freedman SB. Canadian Institutes of Health Research. $25,000 CAD Jan 2012 to Dec 31-2013

Rectal amoxicillin—An alternative route for pediatric delivery? Tesser M, Finkelstein Y, Scolnik D. Apothe. $15,000 CAD 2011 to 2012


The association between parental literacy and language fluency, understanding of discharge instructions and outcomes of care for children with respiratory illness. Stack A, Damian F, Samuels-Kalow M, Megnin A, Nolan M, Porter S. Quality Improvement Grant (PPSQ, Children's Hospital Boston) $16,959 US Jan 2010 to present

The pharmacokinetics of antibiotics delivered in the emergency department setting. Scolnik D, Finkelstein Y, Tesser M. Apothe. $15,000 CAD Jan 2011 to Dec 31-2013

The learning curve of elbow radiograph interpretation. Boutis K, Psac M, Pecaric M. Pediatric Consultants, Medical Education. $5,000 CAD Feb 2011 to Mar 2012

The Division (comprising General Paediatrics, Community Paediatrics, SCAN, Dermatology and Palliative Care) continues to play an integral role in the core activities of the Department of Paediatrics. On the inpatient unit we continue to see increases in patient volumes (3,626 discharges in 11/12). This amounts to more than 22 per cent of the total hospital discharges and over 50 per cent of the admissions from the ED. Despite the increases in volume and an ongoing gradual increase in acuity and complexity, the statistics for time spent in the ED waiting for a bed have improved dramatically. There has been a slight increase in funded nursed beds but these results have been achieved primarily through some excellent innovations including reorganization of our existing resources with the opening of a streamlined care unit and an ambulatory daycare program, and improving the process for bed management. This increased efficiency has been achieved without sacrificing quality, as evidenced by continued excellent results in the Picker patient satisfaction survey. This is the result of an active group working in Quality Improvement led by Trey Coffey. The group has focused particularly on family-centered rounds, medication reconciliation, development of CPGs (bronchiolitis, asthma) and has just begun a project aimed at improving the discharge process.

The Complex Care Program continues to develop into a national and international model of care for children requiring complex care. The program was recognized by Accreditation Canada as a “leading practice” and the number of visiting delegations from the US, Europe and elsewhere speaks to the innovative work being done by the team. Academic productivity, publications and grant funding continues to increase and educational opportunities continue to be developed. This is a tremendously engaged and passionate group with a great commitment to the vision and mission of the hospital and the department.
The Division's role in education has continued its excellence at all levels of training: medical students, core residents and fellows. Much attention has been paid and will continue to be required to ensure that the inpatient experience remains the most highly ranked clinical rotation for both junior and senior residents at SickKids. Individual faculty continue to win a significant number of the departmental teaching awards. While Susan Tallett has just retired as the Director of the SickKids Learning Institute, Stacey Bernstein has been appointed as the University of Toronto Clerkship Director. The fellowship program has grown in size, scope and stature with 25 fellows in various fellowship tracks for the 2012-13 year. Graduates of the program have left to take up faculty positions in general paediatrics across the country and internationally.

Research in the Division has grown in leaps and bounds. The focus is primarily through the two arms of the divisional research group (PORT): community-based paediatric outcomes (eg vitamin D, obesity, iron deficiency) and hospitalist research (eg complex pneumonia, IV fluids, complex care). TARGET Kids!, an initiative of the PORT group, is breaking new ground in community-based research and has been highly successful in rapidly building a network of primary care researchers and achieving grant funding and publications. In addition, we have faculty doing outstanding research in areas which include Population Health Science, Global Health, and Paediatric Dermatology. Funding through major grants is in the millions of dollars through external granting agencies like CIHR, PSI, Thrasher Foundation, Bill and Melinda Gates Foundation etc. Publications in high-impact journals have grown exponentially.

A new focus for the Division over the last three years is the area of child health policy, through the hiring of Charlotte Moore Hepburn to lead this initiative with strong support from other faculty involved in population health, complex care and global health. This initiative is in its early stages but promises to add a strategically important piece to the Division in terms of advocacy and evidence-based research into policy changes, as well as promoting new models of care delivery.

Individual faculty have excelled and shown leadership on the national and international stage in the clinical, educational, research and advocacy spheres. Just a few examples from the last few years include Astrid Guttman’s many achievements in population health research; Patricia Parkin, Jonathon Magnise and Catherine Birken’s exciting leadership and successes in building a community research network through TARGET Kids!; Eyal Cohen’s research and leadership in developing new models of care for children with complex needs; Sanjay Mahant’s leadership of the hospitalist section in Canada and his involvement in the new PRIS initiative in North America; Michelle Shouldice’s leadership and development of collaborations on the Canadian SCAN scene; and Stacey Bernstein’s dynamic leadership in undergraduate medical education culminating in her appointment as the new clerkship director at the University of Toronto.

In addition to all the individual awards and accolades, what remains clear is the tremendously high morale and camaraderie amongst divisional faculty. This is a tremendously engaged and passionate group with a great commitment to the vision and mission of the hospital and the department.

HONORS AND AWARDS

Barozzino, T: Awarded the Postgraduate Community Paediatric Teaching Award (excellence in teaching community-based paediatric residents), Department of Paediatrics, University of Toronto, June 2012.

Birken, C: Awarded the Dr. William Feldman Award for Excellence in Paediatric Medicine Research, Division of Paediatric Medicine, Hospital for Sick Children, Toronto, October 18, 2011.

Campbell, D: Awarded the Marvin Gerstein Award, Postgraduate Teaching (nominated by core paediatric residents for excellence in teaching), Department of Paediatrics, University of Toronto, June 2012.

Cohen, E: Promote: Associate Professor, Department of Pediatrics, University of Toronto, June 2012.

Friedman, J: Promotion: Professor, Department of Pediatrics, University of Toronto, June 2012.


Ipp, M, Taddio A: 2012 Noni MacDonald Award - Paediatric and Child Health Journal Award for published article that made an important contribution to paediatric practice. 2012 "Pain management during vaccination: Recommendations from a Canadian clinical practice guideline”.

Jacobson, S: Awarded the R.H.A. Hadam Preclerkship Teaching Award (excellence in preclerkship teaching), Department of Paediatrics, University of Toronto, June 2012.

Kupfert, B,Yang: Awarded the Lionel Weinstein Clerkship Award (excellence in clerkship teaching), Department of Paediatrics, University of Toronto, June 2012.

Parkin, P: Physician Research Award for Career Excellence, Department of Paediatrics, Hospital for Sick Children, June 2012.

Peer, M, Shouldice, M, Silver, S: Winner of POWER Teacher Award (for outstanding contributions to postgraduate teaching), Department of Paediatrics, University of Toronto, June 2012.

Pope, E: Awarded Clinical Excellence Award 2011, Division of Paediatric Medicine, Hospital for Sick Children, October 18, 2011.


Shouldice, M: Winner of Robert Hillard Award for Excellence in Paediatric Medicine Education, The Hospital for Sick Children, Division of Paediatric Medicine, October 18, 2011.
Weinman, M. Awarded the Claus Wirsig Humanitarian Award, Toronto, June 2012.

Wiensnot, J. Awarded the Undergraduate Community Teaching Award (excellence in teaching medical students), Department of Paediatrics, University of Toronto, June 2012.

PUBLICATIONS


A randomised clinical trial to evaluate the impact of a fact sheet about childhood immunization pain management on parental knowledge. Ipp M, Tadido A, Stephens D, Shah V. Pediatric Consultants Education Grant, Hospital for Sick Children. $5,000 CAD 2012 to 2013

A randomized, controlled, multi-site, multi-centre, adaptive Phase II/III Study in infants with proliferating infantile hemangomas requiring systemic therapy to compare four regimens of Propanolol (1 or 3 mg/kg/day for 3 or 6 months) to placebo (double blind). Pope E, Bradley T, Chakkitakandiyal A, Lara-Corrales I. Pierre Fabre Dermatology. $373,044 CAD 2010 to 2020


Dating fractures on radiographs: How accurate is this compared to post-mortem histopathology? Shouldice M, Keppcon C, Chiasson D, Stimec J, Lobos-Mueller E, Boule K, Moharir M. Pediatric Consultants Creative Professional Activities Grant, Department of Pediatrics, the Hospital for Sick Children. $7,455.00 CAD 2012

Canadian Paediatric Surveillance Program: Severe iron-deficiency anemia in infants and young children. Zlotnik S, Parkin PC, McCourt C, Wong S, Grabowsk J, Carasco M, Bellerturm M. In-kind Grant provided by the Canadian Paediatric Surveillance Program, a partnership between the Canadian Paediatric Society and the Public Health Agency of Canada. 2009 to 2011


Dating fractures on radiographs: How accurate is this compared to post-mortem histopathology? Shouldice M, Keppcon C, Chiasson D, Stimec J, Lobos-Mueller E, Boule K, Moharir M. Pediatric Consultants Creative Professional Activities Grant, Department of Pediatrics, the Hospital for Sick Children. $7,455.00 CAD 2012


Development and validation of toddler NutriSTEP. Randall-Simpson JA, Keller HH, Byers JE, Birken CS. Canadian Institutes of Health Research, Operating Grant. $200,809 CAD 2010 to 2012


Food insecurity, nutrition and body mass index in early childhood: A TARGet Kids! Study. Fuller A (Resident), Cohen E, Mahant S, Richardson S, Anvari Y. Pediatric Consultants Partnership Creative Professional Activities Grant, University of Toronto. $10,000 CAD. 2011 to 2012

Integration of pulse oximetry into the routine assessment of sick young children at first-level clinics in Karachi, Pakistan. Roth D, Mir F, Zaich A. Grand Challenges Canada. $113,000 CAD. 2011 to 2012


Is electrolyte maintenance solution administration required in low-risk children with gastroenteritis? Freedman S, Schuh S, Friedman J, Berry J, Guttman A. Paediatric Consultants Partnership Creative Professional Activities Grant, Department of Pediatrics, Hospital for Sick Children. $6,032 CAD 2012 to 2013


Patient-level predictors of adverse events in children: What is the role of complexity? Cohen E, Coffey T, Mathow A, Flautt V, Friedman J, Berry J, Guttman A. Paediatric Consultants Partnership Creative Professional Activities Grant, Department of Pediatrics, Hospital for Sick Children. $8,920 CAD 2010 to 2011

Pediatricians as managers: A needs-based assessment of the CanMEDS “Physician as Manager” role in post-graduate pediatric medicine training programs. Moore Hepburn C, Schwartz S, Atkinson A, Anderson G. Paediatric Consultants Partnership Creative Professional Activities Grant, Hospital for Sick Children. $6,032 CAD 2010 to 2011


Pregnancy and the role of complexity? Cohen E, Coffey T, Mathow A, Flautt V, Friedman J, Berry J, Guttman A. Paediatric Consultants Partnership Creative Professional Activities Grant, University of Toronto. $10,200 CAD 2010 to 2011


Short and long-term outcomes of complicated pediatric pneumonia. Cohen E, Weinstein M, Dell S, Mahant S, Traub J, Mekki M. Faculty of Medicine New Faculty Grant, University of Toronto $10,000 CAD. 2008 to 2013


The impact of skin camouflage on the quality of life of children with skin disease and their parents. Salbergh J, Pope E, Weinstein MG, Shear N. Canadian Dermatology Foundation. $5,000 CAD 2011 to 2012


The medical home of children and youth in Canada. Guttmann A, Cohen E, Brownell M, Barwick M. Canadian Institutes for Health Research and the Canadian Child and Youth Health Coalition. $104,000 CAD 2010 to 2012


The TARGet Kids! research study. Maguire JL, Birken CS, Parkin PC. St. Michael's Hospital Foundation. $489,650 CAD 2012 to 2015


Trainee perceptions of the educational value of clinical cases on an inpatient ward: An exploration of patient- and trainee-level predictors. Cohen E, Mahant S, Wadhwa A, Bomilla Z. Department of Paediatrics Education Research Grants. $5,000 CAD 2011 to 2012


Vitamin D deficiency in pediatric patients with atopic dermatitis and psoriasis: Prevalence and risk factors. Pope E, Lara-Corrales I. Canadian Dermatology Foundation. $10,000 CAD 2010 to 2012

Vitamin D deficiency in pediatric patients with atopic dermatitis and psoriasis: Prevalence and risk factors. Lara-Corrales I, Pope E, Maguire J, Parkin P. Weston Research Award, Society for Pediatric Dermatology $20,000 USD 2010 to 2012

Vitamin D supplementation for preschoolers: A TARGet Kids! randomized controlled trial. Maguire JL, Mamdani M, Birken CS. Dean’s Fund New Staff Competition, Fall 2009, University of Toronto, Faculty of Medicine. $9,976 CAD 2010 to 2012

NON-PEER-REVIEWED GRANTS

The Division of Respiratory Medicine continues to provide comprehensive care for patients affected by such pediatric pulmonary diseases as asthma, cystic fibrosis (CF), interstitial lung diseases, primary ciliary dyskinesia (PCD), hereditary hemorrhagic telangiectasia (HHT), sleep-related breathing disorders, complex respiratory care requiring ventilatory support, as well as congenital malformations involving the respiratory tract. We provide consultation support for the hospital in all areas of pediatric respiratory disease. The division also provides various diagnostic services including flexible bronchoscopy. In 2011-12, we broadened our diagnostic spectrum of tests to assess diseases with airway inflammation, including test of nitric oxide in exhaled air, as well as gas-mixing techniques as more sensitive tests for obstructive airway diseases such as multiple breath washout. The infant pulmonary function laboratory offers a unique spectrum of tests that are not available at any other centre in Canada. This has led to the potential for diagnostic tools to objectively assess lung disease in infants and young children. The service is available for the assessment of both patients in the hospital and outpatients. We are currently in the process of developing pulmonary function tests for pre-school children and have started to use incentive spirometry in pre-school children in our CF clinic.

As part of the Toronto Lung-Transplantation Program, the Division provides pre- and post-transplantation care for children with end-stage lung disease. Dr. Melinda Solomon continues to be the medical director of the largest pediatric lung transplant program in the country. The program is now open for performing infant lung transplantation as the only centre in the country in select patients. Recent achievements of the program include the first successful ABO incompatible lung transplantation in an infant (Grasemann H, Solomon M, et al, American Journal of Transplant 2012;12:pp 779-81).
Dr. Melinda Solomon continues to chair the Transplant Centre Education Committee. The committee is responsible for educating the Transplant Centre faculty, allied health professionals, trainees, paediatric transplant patient and their families. The committee organizes weekly education rounds to the Transplant Centre members, develops education guideline for families and is revising patient handbooks.

Under the direction of Dr. Melinda Solomon, our paediatric cystic fibrosis clinic was one again accredited through CF Canada. The paediatric flexible bronchoscopy service continues to grow under Dr. Solomon’s leadership, with over 100 procedures performed annually.

The training program is led by Dr. Melinda Solomon and has independent Royal College of Physicians and Surgeons of Canada accreditation. It is the largest training program for paediatric respiratory medicine in the country and provides the full range of training that is required for Royal College of Physicians and Surgeons of Canada certification.

Dr. Sharon Dell has become Program Director for the Clinical Epidemiology & Health Care Research program within the Faculty of Medicine at the University of Toronto, the first SickKids staff member to take on this role. The program offers both a master’s degree and a doctoral-level degree and has an international reputation for excellence in training clinicians in clinical, health services and decision sciences research. Dr. Dell is involved in an international program to develop a new classification for interstitial lung diseases and a NIH-sponsored study on primary ciliary dyskinesia. Dr. Dell, in collaboration with scientists from Health Canada, Environment Canada and Berkeley University, leads a research program examining effects of environmental exposures on asthma outcomes in Toronto school children. She also conducts multi-centre research in primary ciliary dyskinesia in the NIH sponsored Genetic Diseases of Mucoctiliary Clearance Consortium and in interstitial lung disease with the Children’s Intestinal Lung Disease Consortium.

Dr. Padmaja Subbarao is Deputy Director of the Canadian Healthy Infant Longitudinal Development (CHILD) Study, the largest birth cohort in Canadian history. The role of the study is to elucidate the factors involved in the development of asthma and allergies in early childhood; it is supported by CIHR and AllerGen. Dr. Subbarao is leading this project as a co-principal investigator with Dr. Malcolm Sears from McMaster University. She has also been successful in attracting additional private funding for the infant pulmonary function cohort in this study that will provide the largest study using lung function measurements in this age group to date. In addition, Dr. Subbarao has continued to work on pioneering new methods of lung function assessment such as multiple breath washout technology under her leadership SickKids has become a leader in infant pulmonary function testing. She has also successfully received funding for multiple research studies, as well as salary support from the CIHR, the Young Investigator Award.

Dr. Theo Moraes, a clinician scientist, has a broad interest in reducing the pathology associated with respiratory viruses and was part of a group of investigators that identified a receptor for RSV, one of the most common reasons for admission to hospital in infancy. His ongoing work relates to exploiting this new knowledge and in addition he is examining ways to alter the immune response to RSV.

Dr. Indra Narang continues to direct clinical care and clinical research related to sleep disordered breathing. Currently, Dr. Narang is leading a large clinical trial evaluating cardiovascular and metabolic function in obese children following treatment of obstructive sleep apnea with continuous positive airway pressure. Furthermore, Dr. Narang is collaborating with many colleagues across Canada and the USA in research studies evaluating sleep disorders in children, including the validation of a portable sleep monitor to facilitate the early diagnosis and management of children with sleep disorders.

Dr. Narang is also interested in the control of breathing in children. She has received external funding to evaluate the role of opioids on the control of breathing and its impact on the development of sleep apnea.

Dr. Narang plays a leading role in the education and awareness of sleep disorders in children and she is the course director for the SickKids Paediatric Sleep Symposium which is an internationally recognized event.

Dr. Sweezy, in collaboration with Dr. Feige Kaplan at McGill, is studying cellular and molecular aspects of the roles of novel and known glucocorticoid responsive genes in lung development. Dr. Sweezy is funded by the Canadian CF Foundation to study the effects of sex hormones on airway inflammation in CF.

Dr. Reshma Amin brings expertise in both clinical research related to CF lung disease as well as clinical expertise in sleep-related breathing disorders. She focuses her clinical and research activities on technology-dependent children and continues studies to look at new outcome measures in cystic fibrosis. This is highlighted by a recent publication in Radiology on using PET scanning as a marker of airway inflammation in CF and she currently needs a project to use multiple breath washout technology as an outcome measure in early phase trials.

The paediatric cystic fibrosis clinic is the largest training program for paediatric respiratory medicine in the country.

Dr. Ratjen’s main research interest areas are to conduct multi-centre trials and to develop new outcomes measures to assess CF lung disease. This includes a recent collaborative study with researcher at the Royal Brompton Hospital in London to study CFTR potentiator therapy in CF patients with normal lung function. Dr. Ratjen is leading a emerging team grant funded by CIHR bringing together basic scientists, including stem cell researchers with clinical scientists. This has recently resulted in a seminal work published in Nature Biotechnology demonstrating that skin stem cells can be reprogrammed into airway epithelium and serve as a potential renewable source assay to study CFTR directed therapy.

Hartmut Graeumann continues to pursue his major research interest, which is a better understanding of the role of nitric oxide (NO) in lung diseases. Most recent publications from his laboratory show that the endogenous NO synthase inhibitor asymmetric dimethylarginine (ADMA) contributes to NO deficiency and airway obstruction in patients with cystic fibrosis (Graeumann H et al American Journal of Respiratory and Critical Care Medicine 2011: 183: pp 1363-8) and plays an important role in airway obstruction in asthmatics (Scott JA et al, American Journal of Respiratory and Critical Care Medicine 2011: 184: pp 779-85). Other work done under his supervision in the Division of Respiratory Medicine, using comprehensive exhauled NO analyses, revealed abnormalities in airway NO homeostasis in patients with sickle cell disease (RadhaKrishnan DK et al Journal of Pediatrics 2012: 160: pp 93-7), and in lung transplant recipients (Bendik GN et al, Transplantation. 2011; 91:276-7).
In addition, members of the Division are key partners of the team that forms the Cystic Fibrosis Centre, highlighting the longstanding and ongoing excellence in both clinical care and research at SickKids in this area. The CF Centre in co-led by Christine Bear, Senior Scientist, Molecular Structure & Function, and Dr. Felix Ratjen. Newborn screening for CF was started last year and the team at SickKids was a major driving force in getting it off the ground. Dr. Ratjen acts as medical advisor to the screening group in Ottawa, and a collaborative study funded by the Canadian CF Foundation has been initiated to evaluate the clinical course of patients with an unclear diagnosis within the Newborn Screening Program. Dr. Ratjen and the CF group are involved in multiple studies in a leading (PI) role. These include multi-centre studies on hypertonic saline in CF funded by the US CF Foundation and National Institutes of Health (NIH) (themain study results were published in JAMA), a study to evaluate the efficacy of CFTR modulation using novel outcome measures, and multi-centre studies on pseudomonas eradication strategies and novel approaches of bronchodilator therapy. Other studies supported by research grants, as well as generous support by individuals such as the Irwin family, are ongoing. The CF group is also involved in other clinical studies of drugs targeting the basic defect in CFA a close collaboration exist with the adult CF program at St Michael’s Hospital led by Dr. Tullis in both clinical care and many areas of research, and with the lung transplant team at Toronto General Hospital led by Dr. Keshavjee.

The Division continues to be involved in the NIH-funded Childhood Asthma Management Program Continuation Study (Dr. Graesemann, Dr. Solomon, and Dr. Subbarao). There has also been a growing interest in assessing the pulmonary sequelae of sickle cell disease that are being addressed in a number of patients with asthma and CF, translational studies on sickle cell disease that are being addressed in a number of patients with asthma and CF, are ongoing. The CF program at St, Michael’s Hospital led by Dr.Tullis in both adult clinical care and research. There is a broad spectrum of both basic science and clinical studies on pseudomonas eradication strategies and novel approaches of bronchodilator therapy. Other studies supported by research grants, as well as generous support by individuals such as the Irwin family, are ongoing. The CF group is also involved in other clinical studies of drugs targeting the basic defect in CFA a close collaboration exist with the adult CF program at St Michael’s Hospital led by Dr. Tullis in both clinical care and many areas of research, and with the lung transplant team at Toronto General Hospital led by Dr. Keshavjee.

HONORS AND AWARDS
Solomon, M Winner of the POWER Teacher Award, Department of Paediatrics, The Hospital for Sick Children, Toronto, September 2011.

PUBLICATIONS


Canadian birth cohort; Indoor air and the development of asthma and allergy (CHILD) study. Subbarao PJ, Dell S, Sears M. Canadian Institutes of Health Research. $12,000,000 CAD. Dec 01-2007 to Mar 31-2013

Canadian birth cohort; Indoor air and the development of asthma and allergy (CHILD) study. Toronto Site. Subbarao PJ. SickKids Foundation. Private donations from Bothwell Accurate and Golden Thread Charitable Foundation. $1,100,000 CAD. Aug 01-2009 to Oct 31-2013


Collaboration between the CHILD Study and the START Study. Subbarao PJ. AllerGen NCE Inc. $90,000 CAD. Jan 1-2011 to Jun 30-2012

Correlation of Air Quality Health Index (AQHI) and chronic disease morbidities. To T, Licska C, Dell S, Stanoevic S, Fory R. Ontario Ministry of Environment. $50,000 CAD. Apr 01-2011 to Mar 31-2012

Cystic Fibrosis Foundation Therapeutics Inc. Inhaled Saline for asthma and allergy (CHILD) study. Subbarao PJ, Dell S, Fitzgerald JM, Clarke A, Elliott S. Allergen. $48,972 CAD per annum. Apr 01-2011 to Mar 31-2013

Pathogenesis of serious infections with influenza: Role and mechanisms of microvascular leak. Moraes T. Physicians’ Services Incorporated Foundation. $170,000 CAD. Jun 01-2011 to Jun 01-2013

Platform for Outcomes Research and Translation in Asthma and Allergy (PORTAL). Lynd L, Ungar W, Marra CA, Dell S, Fitzgerald JM, Clarke A, Elliott S. Allergen. $9 520 CAD. May 01-2012 to May 01-2013

Cystic Fibrosis Fibrosis Therapeutics Inc. Inhaled Saline for Infants Study (ISIS-002). Ratjen F, Subbarao P, Solomon M. National Institutes of Health Research. $1,794,674 US. Apr 01-2008 to Dec 31-2012

Cystic fibrosis and pseudomonas aeruginosa in cystic fibrosis airways. Sweezey N. Canadian Institutes of Health Research. $12,000,000 CAD. Jul 01-2009 to Mar 31-2012

Modulation of pulmonary L-arginine metabolism by endogenous NOS inhibitors in cystic fibrosis. Graesemann H. Cystic Fibrosis Canada. $170,000 CAD. Apr 01-2011 to Mar 31-2013

New investigator award in area of clinical research. Subbarao PJ. Canadian Institutes of Health Research. $300,000 CAD. Apr 01-2009 to Mar 31-2014


RHEUMATOLOGY

The Division of Rheumatology provides comprehensive care for children with rheumatic diseases. The ambulatory clinics have approximately 5,500 patient visits a year at The Hospital for Sick Children. In addition to the general rheumatology clinics, there are unique multidisciplinary subspecialty clinics for children with autoinflammatory diseases, dermatomyositis, inflammatory brain disease, morphea, systemic JIA, systemic and neonatal lupus erythematosus, spondylitis, and vasculitis. Many children have benefited from treatments in the medical day care unit, where children receive joint injections, therapeutic infusions or undergo investigations that would normally require in-patient admission.

Rheumatology provides clinical care and undertakes research studies in systemic inflammatory disorders and inflammatory diseases of the bones and joints.

Our program offers a comprehensive range of services for the evaluation and treatment of children with the vast range of paediatric rheumatic and inflammatory diseases. Rheumatology provides clinical care and undertakes research studies in systemic inflammatory disorders and inflammatory diseases of the bones and joints.

The Division of Rheumatology has one of the largest paediatric rheumatology fellowship training programs in North America and is fully accredited by the Royal College of Physicians and Surgeons of Canada. This academic year, our fellows came from Canada, the Netherlands, Australia and Saudi Arabia. Our graduates have been successful in obtaining academic placements around the world and trainees have been productive in the research arena.

Research foci include the development of a trial design for the study of rare diseases, outcome, prognosis and treatment studies in juvenile idiopathic arthritis, systemic lupus erythematosus, neonatal lupus, scleroderma, dermatomyositis, vasculitis and CNS vasculitis.

Basic research focuses on the immunopathogenesis of Kawasaki disease using an animal model.


<table>
<thead>
<tr>
<th>Project Title</th>
<th>Investigator(s)</th>
<th>Source(s)</th>
<th>Grant Amount (CAD)</th>
<th>Duration</th>
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<tr>
<td>Understanding Childhood Arthritis Network (UCAN): Towards a harmonized approach to the conduct of research in childhood arthritis worldwide.</td>
<td>Yeung RSM. Canadian Arthritis Network</td>
<td>Sustained Impact Platform Program Supplemental Funding.</td>
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<td>Whole body MRI in juvenile spondyloarthropathy.</td>
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<td>Pharmacogenetics of juvenile idiopathic arthritis – A genome wide association study on the efficacy and toxicity of methotrexate therapy.</td>
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The Clinical Teams include members of the Departments of Nephrology, Gastroenterology, Hepatology & Nutrition, Cardiology, Respiratory Medicine, Psychiatry, Psychology, General Surgery and Infectious Diseases. The success of the transplant programs can also be attributed to strong contributions by interdisciplinary team members from occupational and physiotherapy, nutrition, social work and pharmacy.

We have become one of the busiest pediatric transplant centres in North America and a world leader in innovative care.

CENTRE OVERVIEW AND CLINICAL ACTIVITY

SickKids made history in 1969 by performing Canada’s first pediatric kidney transplantation. We have become one of the busiest pediatric transplant centres in North America and a world leader in innovative care, improving the health of children by integrating care, research and teaching. The Centre provides the best in complex and specialized care through scientific and clinical research, sharing knowledge and expertise, and advocacy for children who need transplant care.

Our transplant and intestinal rehabilitation case volumes have grown to within the top five to 10 per cent of centres in North America. Our outcomes match or exceed the best programs. This past year, our Centre completed a record number of transplants, 73 in total including 29 transplants by the Kidney and Liver Transplant Programs which were both unusually busy. As innovators in transplantation, during this past year our lung transplant program completed the first infant lung transplant in Canada and the first ABO-incompatible lung transplant in the world.
In January 2012, The Transplant Centre was re-branded as the Transplant and Regenerative Medicine Centre (TRMC). Our immediate mission is to enhance the quality of life of pediatric transplant recipients through innovative research, education, and care. To do this, we aim to enhance long-term graft function and quality of life by using stem cells and other novel therapies to transplant organs without maintenance immune suppression and 2) improve the function of deceased donor organs. Our longer term vision is to harness the unique regenerative capacity of pediatric tissues to repair organs, making transplants unnecessary.

RESEARCH HIGHLIGHTS

Research and new knowledge dissemination are major priorities for the Centre. Centre members are the principal or co-investigators for CIHR, and/or disease-specific philanthropic extramural awards to conduct basic, translational and clinical research. All of our clinical transplant programs are actively recruiting patients to NIH-sponsored clinical trials. Currently there are over 40 active REB-approved research projects underway. In the past year, members published upwards of 87 publications around the issues of transplantation and graft management, end-stage organ diseases, inflammation or repair and intestinal and liver failure and gut repair. A selection of TRMC publications are provided at the end of this report.

Successful fundraising by the Centre has substantially enhanced research. We are currently provided with more than $400,000 for multi-year research support. In 2011-12 our Research Committee chaired by Dr. Binita Kamath facilitated four grant competitions to support clinical innovations and provide seed-funding for high-risk / high-gain innovative scientific research. In addition, we are stewarding targeted research funding from the Lumi’s Lights Foundation and The Gift Gala to support multidisciplinary research on liver, kidney and intestinal organ failure.

An example of innovative research is a study recently completed by The Group for the Improvement of Intestinal Function and Nutrition (GIFT) led by Dr. Paul Wales. Liver failure is the most common cause of death in intestinal failure patients due to chronic parental nutrition-associated liver disease (PNALD) in infants with Inestinal Failure/Short Bowel Syndrome (SBS) and early liver dysfunction. Preliminary data suggest that administration of this new nutritional produce will dramatically reduce the incidence of fatal liver disease in this highly vulnerable pediatric population. Patient recruitment has finished and the study outcomes are now being analyzed for reporting and publication.

EDUCATION HIGHLIGHTS

Five eLearning Modules: Second Year Paediatric iLearn Modules

SickKids is responsible for training the next generation of physicians who will care for pediatric transplant recipients. A working group led by Dr. Yaron Avitzur and Dr. Paul Kantor has developed five e-learning modules to educate trainees about paediatric transplantation. This initiative has enhanced awareness of transplant-related issues and will improve the efficacy of self-education of second-year paediatric residents. These modules will be presented in national and international academic meetings as examples of the TRMC’s innovations in medical care and education.

CENTRE ADVOCACY

High School Outreach Initiative

The TRMC Strategic Initiatives Working Group chaired by Dr. Vicky Ng launched a unique, teen-focused educational outreach program to educate youth about organ donation. This innovative pilot project partnered the three University of Toronto transplant programs and Trillium Gift of Life Network (TGLN) to educate high school students about the lifesaving impact of organ and tissue donation and transplantation. For this project pilot nearly 100 health-care providers from SickKids, St. Michael’s Hospital and University Health Network volunteered and attended training workshops. Between March and June 2012, a health-care provider, a transplant recipient and a TGLN representative visited 35 high schools from the Toronto Catholic District School Board and Toronto District School Board, presenting to over 6,000 high school students at 54 class assemblies. Plans are underway for expansion of this partnership into the 2012-2013 school year. The project highlights the ongoing efforts of the TRMC for patient advocacy through collaborations with partners at TGLN and Toronto Transplant Institute.

SELECTED HONORS AND AWARDS

Anthony A. ISHLT Nursing and Social Sciences Excellence in Research Award.

Cowory, J. ISHLT Transplant Registry Junior Faculty Award; IPTA Young Investigator Award.

Courtney-Martin, G. 2011 CST Associate Member’s Research Grant.

Mouzaki, M. 2011 Travel Award for AASLD Single Topic Symposium on Pediatric Liver Transplantation.

Vanderlaan, R. SickKids Resident Research Day Award; IPTA Distinguished Abstract Award.

Yu, D. Awarded the inaugural Canadian Society of Transplantation Fellowship for his research on signaling axes regulating cell migration with Dr. Lisa Robinson.

SELECTED PUBLICATIONS


GRAND ROUNDS

The Department of Paediatrics Grand Rounds carries on a time-honoured tradition of academic excellence. Every Wednesday morning at 9 a.m. the Daniels Hollywood Theatre is filled with a variety of learners including medical students, residents and fellows, medical staff, research staff as well as other SickKids staff. Grand Rounds topics cover a multitude of issues that address the broad determinants of child health as they relate to the University of Toronto’s Department of Paediatrics.

The Grand Rounds committee, chaired by Ron Laxer, is comprised of the following members: Eyal Cohen, Elizabeth Donner, Marvin Gans, Jamie Hutchison, Laila Nourimand, Evelyn Rosenblum, Rayfel Schneider, Lillian Sung and Neil Sweezey. The committee seeks input from members of the Department, as well as the hospital at large, to develop an exciting series of presentations for the academic year (see list below). The summer Grand Rounds series coordinated by the chief residents, allows senior trainees and subspecialty fellows to provide updates within specific specialties and sub-specialties.

In 2011-12, a new initiative, entitled “Daneman and Friends” was extremely well received. In these sessions, our Department Chair invites several staff to address a specific theme. As in past years, the chief residents’ rounds, entitled “Cases from the Ward,” remain a highlight where three to four senior paediatric residents present unique cases that they have come across.

Profound in their Rounds are delivered by individuals who have been promoted to full Professor in the Department of Paediatrics within the previous year. Professors’ Rounds were covered by Dr. Jamie Hutchinson, Dr. Ann Jeffries, Dr. Patricia Parkin and Dr. Hilary Whyte.

The Department is fortunate to be able to host a number of named lectures. This past year, Dr. Roger Strasser, Dean of the Northern Ontario School of Medicine, delivered the Harry Bain Lecture. SickKids’ own Dr. Brian Robinson gave the Jacob’s ladder Lecture; Dr. Berent Prakken from the Netherlands gave the Abe Shore Lecture; Dr. Carter Snead gave the Robert H. A. Haslam Lecture, and Dr. Shai Izraeli from Tel Aviv gave the Daniel Burton Leukemia Lecture.

The Medical Education Day was a tribute to Dr. Sue Tallett for her many years of dedication and contribution to the Department of Paediatrics. A very provocative and stimulating lecture was given by Dr. Nuala Kenny from Dalhousie University. The Andrew Sass-Kortsak Award Lecture was delivered by Dr. Tuan Trang.

Once again, the Department of Paediatrics’ Grand Rounds Committee acknowledges the tremendous help and support of a number of individuals who do the vast majority of the behind-the-scenes work, specifically Valerie Brown in Department of Paediatrics and Frank Ferrari and Sam Mendola in the AudioVisual Department at SickKids.

GRAND ROUNDS SCHEDULE 2011-2012

<table>
<thead>
<tr>
<th>DATE</th>
<th>NAME</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>Jul 6</td>
<td>Dr. Sarah Schwartz</td>
<td>General Paediatrics</td>
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<tr>
<td>Jul 13</td>
<td>Drs. Johan Van Limbergen and Peter Church</td>
<td>GI/Haematology/Nutrition</td>
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<tr>
<td>Jul 20</td>
<td>Drs. Alene Toulany and Trisha Talosh</td>
<td>Adolescent Medicine</td>
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<tr>
<td>Jul 27</td>
<td>Dr. Deepali Mankad and Dr. Andrea Hoffman</td>
<td>Developmental Paediatrics</td>
</tr>
<tr>
<td>Aug 3</td>
<td>Dr. Al-Naimi</td>
<td>Respiratory Medicine</td>
</tr>
<tr>
<td>Aug 10</td>
<td>Drs. Gordon Soon, Senq Lee and Marinka Twilt</td>
<td>Rheumatology</td>
</tr>
<tr>
<td>Aug 17</td>
<td>Drs. Janice Tijssen and Vijay Anand</td>
<td>Critical Care Medicine</td>
</tr>
<tr>
<td>Aug 24</td>
<td>Drs. Wajid Ali, Shalini Jain and Ramses Badilla-Perras</td>
<td>Clinical Genetics and Metabolics</td>
</tr>
<tr>
<td>Aug 31</td>
<td>Dr Cecilia Herbst, Dr Enas Eijgendaery and Dr Edward Pugh</td>
<td>Neonatology</td>
</tr>
<tr>
<td>Sep 7</td>
<td>Dr. Roger Strasser</td>
<td>Dean, Northern Ontario School of Medicine</td>
</tr>
<tr>
<td>Sep 14</td>
<td>Dr. Patricia Parkin</td>
<td>Division of Paediatric Medicine, Professor, University of Toronto</td>
</tr>
<tr>
<td>Sep 21</td>
<td>Dr. Daniel Wechsler</td>
<td>Chief, Pediatric Hematology-Oncology, Duke University Medical Center, Durham, NC</td>
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</tbody>
</table>

“Current Issues in the Care of Children with Medical Complexity”
“Beyond Symptoms: Crohn’s Disease Treatment in 2011”
“Ending the Food Fight Before our Kids FAED Away”
“Neuroplasticity in the Developing Brain”
“A to Zzz of pediatric sleep”
“More than just skin deep - Childhood vasculitis”
“Management of Acute Asthma: Owl’s Blood, Chicken Soup, 1500 years of progress – what about the last 15?”
“The Bedside Sherlock Holmes: Lessons from array, peroxisomes and blood spots”
“Recent Changes in Neonatal Resuscitation”
“Bain Lecture: “Education for Child Health in the North””
“Building Academic General Pediatrics at SickKids and Beyond”
“Keep CALM and Carry On”: The Role of CALM Translocations in Leukemogenesis”
## GRAND ROUNDS SCHEDULE 2011-2012 CONTINUED

<table>
<thead>
<tr>
<th>DATE</th>
<th>NAME</th>
<th>TITLE</th>
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</thead>
<tbody>
<tr>
<td>Sep 28</td>
<td>Dr. Victor Blanchette</td>
<td>“Childhood Immune Thrombocytopenic Purpura (ITP): What is Appropriate Care?”</td>
</tr>
<tr>
<td>Oct 5</td>
<td>Dr. Joanne Wolfe</td>
<td>“Easing Suffering in Children with Life-Threatening Illness”</td>
</tr>
<tr>
<td>Oct 12</td>
<td>Dr. Leona Cuttler</td>
<td>“Controversies in the Management of Childhood Short Stature: Evidence, Practice, and Policy”</td>
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<tr>
<td>Oct 19</td>
<td>Dr. Peter Scal</td>
<td>“Building Rheumtowog.org: An Internet Based Program for Youth with Arthritis”</td>
</tr>
<tr>
<td>Nov 2</td>
<td>Dr. Denis Daneman and Friends</td>
<td>“Changing Life’s Trajectory: Scratching the Surface of Personalized Medicine”</td>
</tr>
<tr>
<td>Nov 9</td>
<td>Dr. Eric D. Kolidis</td>
<td>“Context Matters: Informed Consent in Childhood Cancer Research”</td>
</tr>
<tr>
<td>Nov 16</td>
<td>Dr. John Englehardt</td>
<td>“Mutations to Stem/Progenitor Cell Niches in the Cystic Fibrosis Airway”</td>
</tr>
<tr>
<td>Nov 23</td>
<td>Dr. Brian Robinson</td>
<td>Jacob’s Lecture: “How the brain regulates its energy supply: Clues from the many genetic defects affecting the pyruvate dehydrogenase complex in children”</td>
</tr>
<tr>
<td>Nov 30</td>
<td>Dr. Ewaine Alessandri</td>
<td>“The Acute Care Model: A New Framework for Improving the Quality of Emergency Care”</td>
</tr>
<tr>
<td>Dec 7</td>
<td>Dr. Melissa Chan</td>
<td>“Cases from the Ward”</td>
</tr>
<tr>
<td>Dec 14</td>
<td>Residents and Fellows</td>
<td>Holiday Grand Rounds</td>
</tr>
<tr>
<td>Jan 4</td>
<td>Dr. Jamie Hutchison</td>
<td>“Neuroprotection in Brain Injury”</td>
</tr>
<tr>
<td>Jan 11</td>
<td>Dr. Anne Maltoe</td>
<td>“In OurOwn Backyard: Adverse Events in Children Hospitalized in Canada”</td>
</tr>
<tr>
<td>Jan 18</td>
<td>Dr. Maria Isabel Achatz</td>
<td>“IP3 Gene, Li-Fraumeni Syndrome and the Treaty of Tordesillas: The High Frequency of a Founder Mutation”</td>
</tr>
<tr>
<td>Jan 25</td>
<td>Dr. Debbie O’Connor</td>
<td>“Not Enough Mother’s Own Milk?” The Case for Donor Human Milk for the Vulnerable Infant.”</td>
</tr>
<tr>
<td>Feb 1</td>
<td>Dr. Berent Pocken</td>
<td>Abe Shore Lecture: “Understanding Childhood Arthritis: A Continuous Inspirational Journey from Bench to Bedside”</td>
</tr>
<tr>
<td>Feb 8</td>
<td>Dr. Ann Jeffries</td>
<td>“You Want Me to Assess Advocacy?: Assessing Multiple Physician Competencies During Residency Training”</td>
</tr>
<tr>
<td>Feb 15</td>
<td>Dr. Joy Lawn</td>
<td>Global Health Day: “Newborn Survival Around the World: Progress and Future Priorities”</td>
</tr>
<tr>
<td>Feb 22</td>
<td>Clinical Pathology Conference</td>
<td>“More Cases from the Ward”</td>
</tr>
<tr>
<td>Feb 29</td>
<td>Dr. Melissa Chan</td>
<td>“Cases at the Edge…”</td>
</tr>
<tr>
<td>Mar 7</td>
<td>Denis and Friends</td>
<td>“Epigenetics, Nutrition, and Disease Susceptibility”</td>
</tr>
<tr>
<td>Mar 14</td>
<td>March Break</td>
<td>Medical Education Day: “The Possibility of Professionalism in a Globalized World”</td>
</tr>
<tr>
<td>Mar 21</td>
<td>Dr. Randy Jittle</td>
<td>“The Acute Care Model: A New Framework for Improving the Quality of Emergency Care”</td>
</tr>
<tr>
<td>Mar 28</td>
<td>Dr. Nuala Kenny</td>
<td>Duke University Medical Center, Durham, NC</td>
</tr>
<tr>
<td></td>
<td>Residents and Fellows</td>
<td>“Cases from the Ward”</td>
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<tr>
<td></td>
<td>Residents and Fellows</td>
<td>Holiday Grand Rounds</td>
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### GRAND ROUNDS SCHEDULE 2011-2012 CONTINUED

<table>
<thead>
<tr>
<th>DATE</th>
<th>NAME</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>Apr 4</td>
<td>Dr. Carter Sned</td>
<td>Haslam Lecture: “Symphony of the Brain: Dissonance in the Melody”</td>
</tr>
<tr>
<td>Apr 11</td>
<td>Dr. Phylis A. Donnelly</td>
<td>Barry Smith Lecture: “A tale of two oxygen: How a small molecule defined Neonatology”</td>
</tr>
<tr>
<td>Apr 18</td>
<td>Dr. Hilary Whyte</td>
<td>“A transport system - the ‘instrument’ of regionalized health care.”</td>
</tr>
<tr>
<td>Apr 25</td>
<td>Drs. Brian Feldman, Etienne Sochett, Leanne Ward, Steven Teitelbaum</td>
<td>“Steroids and Bones: Glucocorticoid Osteotoxicity in Children with Chronic Disease”</td>
</tr>
<tr>
<td>Apr 18</td>
<td>Dr. Hilary Whyte</td>
<td>“Decision Making in Pediatric Oncology: Evaluation and Incorporation of Patient and Parent Preferences”</td>
</tr>
<tr>
<td>May 9</td>
<td>Dr. Steven Miller</td>
<td>Paediatric Update: “Newborn brain injury: More than meets the eye” (Videoconference from Board of Trade Centre)</td>
</tr>
<tr>
<td>May 16</td>
<td>Dr. Shai Izraeli</td>
<td>Daniel Burton Leukemia Lecture: “Pediatric syndromes as experiments of Nature: Lessons from the leukemias of Down Syndrome”</td>
</tr>
<tr>
<td>May 23</td>
<td>Dr. Mary Mattz</td>
<td>Metherel Lecture: “Breaking the Cycle: Advances in Secondary Prevention of In Utero Alcohol and Drug Exposure”</td>
</tr>
<tr>
<td>May 30</td>
<td>Pediatric Research Day</td>
<td>No Rounds</td>
</tr>
<tr>
<td>Jun 6</td>
<td>Dr. Richard Weinshilbom</td>
<td>DLPM Symposium Day: “Pharmacogenomics: Beyond Biomarkers”</td>
</tr>
<tr>
<td>Jun 13</td>
<td>Winner of the 24th Annual Andrew Sasi-Kortask Award: Dr. Tuan Trang</td>
<td>“P2X Receptors, Chronic Pain, and the Poppy”</td>
</tr>
<tr>
<td>Jun 20</td>
<td>Awards Day</td>
<td>“Antenatal and childhood origins of COPD”</td>
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### AWARDS DAY

<table>
<thead>
<tr>
<th>FACULTY</th>
<th>TEACHING/EDUCATION AWARDS</th>
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<tbody>
<tr>
<td>Dr. Sheila Jacobson</td>
<td>R.H.A. Haslam Preclerkship Teaching Award to the faculty member who has demonstrated excellence in preclerkship teaching</td>
</tr>
<tr>
<td>Dr. Heather Yang and Dr. Beverley Kupfer</td>
<td>The Lionel Weinstein Clerkship Teaching Award to the faculty member who has demonstrated excellence in clerkship teaching</td>
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<tr>
<td>Dr. Jeff Weisbrut</td>
<td>The Undergraduate Community Teaching Award in recognition of excellence in the teaching of medical students within community-based hospitals and offices</td>
</tr>
<tr>
<td>Dr. Briseida Mema</td>
<td>Harry B lain Award to a full-time member of the Department of Paediatrics who has demonstrated excellence in teaching as nominated by core paediatric residents</td>
</tr>
<tr>
<td>Dr. Douglas Campbell</td>
<td>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</td>
</tr>
<tr>
<td>Dr. Tony Barozzino</td>
<td>Postgraduate Community Teaching Award in recognition of excellence in the teaching of paediatric residents within community-based hospitals and offices</td>
</tr>
<tr>
<td>Dr. Walid Farhat and Dr. Martin Koyle</td>
<td>PERLS Award (Paediatric Educational Resident Lecture Series Award) to the faculty member who has demonstrated commitment to excellence in teaching at the Paediatric academic sessions</td>
</tr>
<tr>
<td>Dr. Jill Hamilton</td>
<td>Subspecialty Teaching Award to the faculty member who has demonstrated commitment to excellence in teaching the subspecialty residents and clinical fellows</td>
</tr>
<tr>
<td>Dr. Wendy Roberts</td>
<td>Continuing Medical Education Award to the faculty member who has demonstrated excellence in course coordination or teaching in a Department of Paediatrics/University of Toronto Continuing Education sponsored event</td>
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### FACULTY | CLINICAL AWARDS |
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<tr>
<td>Dr. Katherine Verbeeten</td>
<td>The Saunders Prize to a senior resident who has demonstrated excellence in clinical paediatrics</td>
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### RESEARCH AWARD – CORE PAEDIATRICS |
<table>
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<tr>
<th>FACULTY</th>
<th>RESEARCH AWARD – JUNIOR TRAINEE CLINICAL SCIENCE</th>
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<tbody>
<tr>
<td>Kathleen Neiligan</td>
<td>Dr. Michelle Battish</td>
</tr>
<tr>
<td>Dr. Alisa Kassam</td>
<td>Dr. Dr. Trisha Tott &lt;br&gt; Dr. Ziad Al Adham</td>
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### TEACHING/Education AWARDS |
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<tr>
<th>FACULTY</th>
<th>TEACHING/Education AWARDS</th>
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<tbody>
<tr>
<td>Dr. Jennifer Harrington</td>
<td>Badilla-Porras</td>
</tr>
<tr>
<td>Dr. Ramses Oluwafemi</td>
<td>Dr. Sanjukta Basak (PGY3) &lt;br&gt; Dr. Melissa Chan (PGY4) &lt;br&gt; Dr. Christopher Orlandi Award to a senior resident for excellence in clinical teaching, as nominated by core paediatric residents</td>
</tr>
<tr>
<td>Dr. Charles Larson (PGY4)</td>
<td>Dr. Rameses Badilla-Porras &lt;br&gt; Dr. Jennifer Harrington</td>
</tr>
<tr>
<td>Dr. Melanie Penner</td>
<td>PEMILS Teaching Award</td>
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### RESIDENT AND FELLOW AWARDS AND ACHIEVEMENTS |

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<tr>
<th>FACULTY</th>
<th>RESIDENT AND FELLOW AWARDS AND ACHIEVEMENTS</th>
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<tbody>
<tr>
<td>Dr. Melisa Chan (PGY4)</td>
<td>CarMEDS Award – Subspecialty Trainee</td>
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<tr>
<td>Dr. Jennifer Harrington</td>
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</table>
PROMOTIONS

Congratulations to the 10 members of our faculty promoted to Full (five) and Associate (also five) Professor in 2012:

FULL PROFESSORS
Brenda Banwell Neurology
Jeremy Friedman Paediatric Medicine
Irena Nulman Clinical Pharmacology
Rayfel Schneider Rheumatology
Ray Young Rheumatology

ASSOCIATE PROFESSORS
Kathy Boutis Paediatric Emergency Medicine
Eyal Cohen Paediatric Medicine
Roberto Mendoza Clinical and Metabolic Genetics
Jennifer Russell Cardiology
Uri Tabori Haematology/oncology

And a huge thank you once again to Mel Freedman and all of the members of the Departmental Promotions Committee for their sterling work.

MEDICAL EDUCATION TRAINING & SCHOLARSHIP

Education is one of the core strengths of the Department of Paediatrics, University of Toronto. This report serves to recognize the dedication of our teachers and educators. It documents their achievements and outlines promising new directions for research, innovation, teaching and development in medical education.

ORGANIZATION

Educational activities in the Department of Paediatrics are led by Dr. Rayfel Schneider, the Associate Chair (Education) and the Medical Education Advisory Committee (MEAC) (see org. chart below). The MEAC works to enhance excellence in teaching and education and increase the recognition of the educational achievement of trainees and faculty. The MEAC participates in career development activities for faculty. It also serves to establish mentorship opportunities for faculty engaged in educational activities, to foster collaborations and networks with other groups interested in education and to provide advice and guidance to the Chair with regard to educational priorities.

Our department works closely with the Learning Institute and the education scientists who work there. This year we welcomed Dr. Jonathan Kronick as the new Chief of Education for the Learning Institute and we look forward to both continued and new initiatives under his leadership. We also enjoy close relationships with the other education centres at the university, such as the Wilson Centre for Research in Education, the Centre for Faculty Development (CFD) and the Ontario Institute for Studies in Education (OISE). Details about some of our ongoing collaborations with these centres/groups can be found in the body of this report.
EDUCATIONAL TRAINING & LEADERSHIP

Undergraduate Education
Director: Dr. Stacey Bernstein

Members of the Undergraduate Education Committee
Hoanna Au, Glenda Bendik, Nirit Bernhard, Stacey Bernstein, Zia Bismilla, Sohail Cheema, Mark Feldman, Einer Finan, Sheila Jacobson, Kate Gwaizda, Miriam Kaufman, Bill Mounstephen, Seetha Radhakrishnan, Sarah Schwartz, Shwana Silver, Susanna Talarico, Ethel Ying, Jennifer Young; U of T medical students: Jessica Lynch, Jaisy Yang & Navneet Binepal; Chief Pediatric Residents: Melissa Chan & Charles Larson

Number of Students (Preclerkship)
First Year 254
Second Year 248

Number of Teachers (Preclerkship)
First Year
SickKids 28
Community 22
Mississauga 16

Second Year
SickKids 22
Fellows 12
Residents 12
Community 27

Number of Students (Clerkship)
Third Year 224

Number of Teachers (clerkship)
SickKids 45
Community Office 43
Community Hospital 164

Preclerkship
The new Pediatric Research and Clinical Summer Program (PeReCS) supported 12 first and second year medical students. This program was extremely competitive in its inaugural year. We had 63 student applicants and funded 2 more projects than we had originally intended. This fantastic new program was led by Dr. Seetha Radhakrishnan in collaboration with Stacey Bernstein, Lisa Robinson, Paul Nathan and two second year medical students. Thanks also to Bianda Khamath who seamlessly and passionately assumed the lead when Seetha began her maternity leave. The objectives of the program are to increase undergraduate medical experience in clinical pediatrics, to provide exposure to academic pediatric research and to provide mentorship. The students conducted 8-12 week research projects, spent time shadowing in clinical areas and also attended a lecture series organized by the program committee on career and research opportunities in Paediatrics. At the end of the summer each student presented their research.

Last year a program was launched for 1st and 2nd year medical students, supported by Dr. Denis Daneman and led by Dr. Tony Barozzino with the participation of Drs. Leo Levin and Lee Ford-Jones. The Social Pediatrics Research Summer Studentship (SPReSS) provided 8 students with a research experience in the broad field of social pediatrics, in order to study the importance of the social determinants of health (in health, disease management and outcomes, resource utilization) and encourage the role of child health advocacy. These students participated in a research project led by a member of the Department of Paediatrics and engaged in a clinical experience in a related field. The program ran from June to August. Students participated in either an 8- or 12-week experience. To provide foundational learning and encourage community building, the SPReSS committee organized a weekly seminar series for participating students, related to social paediatrics. On completion of the program, students presented their work and several have gone on to present at other forums.

Highlights from 2011-2012
As the Director of Undergraduate Medical Education, Stacey Bernstein oversees activities associated with enhancing the programs for the medical students with the Clerkship assistance of Mary Antonopoulos and Preclerkship assistance of Joanna Barnes. The Office of Undergraduate Medical Education works closely with the Pediatric Undergraduate Medical Education Committee (PuGMEC) to implement the numerous undergraduate programs.

The Undergraduate program underwent Accreditation in May 2012. Many new policies were written that apply to undergraduate training. These can be found on the University website (http://www.medicine.utoronto.ca/policies.htm). There is also a wealth of information about the Undergraduate Program in the Teacher Handbook (http://www.medicine.utoronto.ca/handbook.html).

The Program in the Teacher Handbook (http://www.md.utoronto.ca/handbook.html). The Undergraduate program underwent Accreditation in May 2012. Many new policies were written that apply to undergraduate training. These can be found on the University website (http://www.medicine.utoronto.ca/policies.htm). There is also a wealth of information about the Undergraduate Program in the Teacher Handbook (http://www.medicine.utoronto.ca/handbook.html).

Number of students per year at Participating Sites (Clerkship)
Credit Valley Hospital 12
William Osler Health Centre-Brampton 12
William Osler Health Centre-Etobicoke 0
North York General Hospital 24
Toronto East General Hospital 12
St. Michael’s Hospital 6
St. Joseph’s Health Centre 18
Scarborough General Hospital – Birchmount 6
Scarborough General Hospital - General 3
York Central Hospital 6
Humber River Regional Hospital 6
Rouge Valley Health System 6
Community office/SickKids 113

Education Advisory Committee Membership
2011-2012
Rayfield Schneider (Chair) Jonathan Pirie
Adelle Atkinson Angela Punnett
Stacey Bernstein Lisa Robinson
Ann Jefferies Suzan Schneeweiss
Sue Jenkins Michelle Shouldice
Karen Leslie Shelly Weiss
Tina Martimianakis

Educational Administrative Staff
Mary Antonopoulos, Undergraduate Education
Joanna Barnes, Undergraduate Education
Susan Jenkins, Administrative Supervisor
Sandra Layno, Postgraduate Education
Nicole Winters, Continuing Medical Education
Ramona Zacharias, Faculty Development/Education Scholarship

Education Researchers
Adam Dubrowski, PhD; Education Researcher, Learning Institute
Tina Martimianakis, PhD; Education Researcher, Department of Paediatrics
Maria Mylopoulos, PhD; Education Researcher, Learning Institute

Faculty pursuing formal training in education
2011-2012
Angela Punnett (Masters in Education)

Faculty who completed formal training in education
2011-2012
Michelle Shouldice (Masters in Education)

Trainees pursuing formal training in education
2011-2012
Clare Hutchinson (Masters in Education)
Catherine Welsh (PhD in Education)

Trainees who completed formal training in education
2011-2012:
Ely Berger (Masters in Education)
Sarah Schwartz (Masters in Education)
Vicky Breakey (Masters in Education)
Marie-Paule Morin (Masters in Education)
Clerkship

This year we held our first Clerkship OSCEs on March 7 and August 29, 2012. We are always looking for new invigilators and appreciate your time and contribution to this important evaluative component of the curriculum. This year we welcomed new Clerkship site supervisors to our community hospital notifications for the third year medical students. We look forward to working with Gagan Saund and Anna Selliah in Brampton and Jeff Wessbro at York Central. We held our annual retreat with representation from our 12 community hospital site supervisors from CVH, WHC- Brampton, WHC- Etobicoke, NYGH, TGH, SMH, JHC, SGH- Birchmount, SGH-General, YCH, HRH, RVCH.

On the national scene, we hosted our second Annual Pediatric Undergraduate Program Directors of Canada (PUPDPC) meeting. There were 19 Undergraduate Medical Education Paediatric leaders who attended from across the country representing almost the full cohort of Canadian medical schools. The two-day meeting was a great success and we worked on the Canadian National Undergraduate Curriculum called CANUC-Peds.

The program has accrued two new Convocation Awards for graduating UofT medical students, bringing our grand total to 4 awards. We would like to congratulate the following winners:

- Michelle Ryan
- Dr. Ray Simpson Scholarship in Paediatrics
- Amber Makino
- Dr. Yumin Li Access to Excellence in Paediatrics Award
- Adam Durbin
- Dr. Yumin Li Access to Excellence in Paediatrics Research Award
- Erica Burry
- Dr. Carl Winston Prize in Paediatrics

Farewell Message from Dr. Bernstein

It is hard to believe that 5 years as Undergraduate Director for Paediatrics are behind me. As I reflect on the incredible journey, the descriptors that are at the forefront of my mind are teamwork, fun and innovation. I had the incredible journey, the descriptors that are at the forefront of my mind for Paediatrics are behind me. As I reflect on the incredible journey, the descriptors that are at the forefront of my mind are teamwork, fun and innovation. I had the incredible journey.

...and too many friends and colleagues to mention.

The position never felt like a job. It was truly a joy to walk into the office every morning. Thank you so much for making it so easy. Good luck to Angela who will undoubtedly do a fantastic job and take the program to new heights.

SUBSPECIALTY EDUCATION

Chair: Dr. Rayfel Schneider

Members of the Subspecialty Program Directors Committees

Eudice Goldberg, Eyal Grunbaum, Jennifer Russell, Roberto Mendoza, Anne Kawamura, Anuma Lalani, Diane Whereatt, Simon Ling, Angela Pusnert, Anupama Wadliva, Emma Fasan, Malendranath Moharir, Michelle Shouldice, Melinda Solomon, Shirley Tse, Rulan Parekh

Number of Subspecialty Programs: 18
Number of Subspecialty Residents: 71
Number of Research Fellows: 23
Number of Clinical Fellows: 209

Highlights from 2011-2012

There are 18 subspecialty programs in the Department of Paediatrics: Adolescent Medicine, Cardiology, Clinical Genetics, Developmental Paediatrics, Emergency Medicine, Endocrinology, Gastroenterology/ Hepatology/ Nutrition, Haematology/ Oncology, Immunology/ Allergy, Infectious Diseases, Neonatology, Nephrology, Neurology, Paediatric Medicine, Respiratory Medicine, and Rheumatology. The Program Directors meet on a regular basis to discuss their programs and consider ways to better support fellowship training.

Much of the committee’s work in 2011-2012 focused on preparing for the upcoming Royal College program accreditation, which will take place in April 2013. A major initiative was the development of a series of CanMEDS training sessions for the Program Directors. In preparation for these sessions, a survey was conducted of all the Program Directors to identify the various strengths and gaps in teaching and evaluating the 7 CanMEDS competencies. The results of this survey highlighted that many programs have developed innovative ways of teaching and evaluating CanMEDS roles. Once these methods were identified, a curriculum was developed to allow the various programs to share and benefit from each other’s ideas.

On January 1, 2012, the Physician Credentials Registry of Canada was introduced. Under this new regulation, every international trainee’s credentials must be verified by the PCRC prior to CPSO licensing. This presented a challenge to new appointments by way of increased cost to the trainee and longer processing times for paperwork. This year the subspecialty education committee focused on preparing for and adapting to the change with minimal disruption to the international training program.

This year, all of our Royal College-accredited programs participated in the national subspecialty paediatrics match, attracting candidates from across the country. In addition, the subspecialty programs continued to attract excellent applicants from around the world.

POSTGRADUATE EDUCATION

Director: Dr. Adelle Atkinson

Members of the Postgraduate Education Committee:


Administrative support to the program is provided by Sandra Layno and Jennifer Bowden.

Number of Core Residents: 83
Number of Residency Training Programs accredited by RCPSC: 17
Number of Postgraduate Education Supervisors: 284 across 8 sites
Number of OSCE Examiners: Approximately 43

Highlights from 2011-2012

The program continues to be the largest training program in Canada with unparalleled resources both in the area of depth and breadth of patient experiences as well as an outstanding teaching and research faculty. The program attracts the most outstanding, sought after candidates in the country. Applicant numbers continue to increase yearly, including international medical graduates. The program is rich in diversity.

The success of the core training program is largely due to faculty engagement in the process. A very active Residency Program Committee oversees the administration and running of the training program, and various subcommittees exist to ensure that each part of the program (resident selection, international resident selection, academic curriculum, evaluation, research, mentoring, wellness, advocacy etc.) are delivered in an evidence-based fashion with scholarship as a natural part of the process.

The curriculum of the program is in constant evolution responding to resident feedback, Ministry of Health priorities and the changing landscape of our community. This year enjoys a significant amount of Distributed Medical Education which the residents have embraced.

Resident scholarship continues to be of a high standard with all residents being engaged in scholarly activities including clinical research, education, patient safety, quality assurance and patient advocacy. Some of our projects are initiated and led by our trainees and others by our teachers and educators. Some of the scholarly activities explore aspects of our programming and aim to improve our curriculum and teaching. Some exciting initiatives include: looking at how residents perceive work/life balance, tracking activities on call to look at improving patient care and the hidden curriculum.
A primary focus for the program continues to be a focus on teaching and evaluating the CanMEDS roles. There is a robust CanMEDS curriculum within the academic half day, which covers a wide variety of topics and a CanMEDS OSCE offered each spring with almost 100 trainees taking part in this evaluable Real time feedback during the OSCE was introduced over the last two years with tremendous success.

Advocacy continues to be a focus of the program. There are currently 4 major advocacy projects underway under the leadership of the resident group. In addition to the Rosedale Heights Secondary School both schools have at risk children and youth, and have found this collaboration beneficial. Other advocacy projects include classroom desks and newsletters for inpatients as examples. Residents have been involved at the ground level in implementing these projects in a scholarly way.

In October 2011 the program underwent a very successful internal review and was commended “for their many strengths and would recommend this program as a model to others”. The RCPSG comes to review all the programs in April 2013 and the program is busy preparing for this visit.

The postgraduate program is gearing up for another round of PGY-1 CaRMS and we are delighted to have a new program director for the program. The CEC also matched to the University of Toronto.

The program is a part of the University of Toronto, Office of Continuing Education and Professional Development and the Centre for Faculty Development. Dr. Schneeweiss also works with the Royal College of Physicians and Surgeons of Canada as a Regional Continuing Professional Development Educator to enhance fellows’ understanding about recent changes to the maintenance of certification program and support life-long learning.

Faculty members of the Department of Paediatrics have been very active in continuing education activities for the 2011-2012 academic year. The Department of Paediatrics continues to have a strong commitment to excellence in continuing education with ongoing courses, conferences and faculty development activities. City Wide Paediatric rounds, organized by Drs. Mark Feldman and Michael Peer from the Division of Paediatric Medicine, continues to be a very popular event attracting 120 community-based paediatricians and takes place 4 times annually. The Annual Paediatric Update (course director: Dr. Suzan Schneeweiss) was held May 9 – 12, 2012 and is the largest conference by the Department of Paediatrics attracting a local, national and international audience with over 250 participants. There was outstanding faculty contribution with 64 members of our faculty presenting at this event. This year, a Child Neurology Subspecialty Day, under the direction of Drs. Shelly Weiss and Jeff Kokobayashi, was presented.

Table: Highlights from 2011-2012

<table>
<thead>
<tr>
<th>Division</th>
<th>CE Leaders</th>
<th>Event</th>
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<tbody>
<tr>
<td>Haematology and Oncology</td>
<td>Dr. Regina Ponnert</td>
<td>Annual Paediatric Chemotherapeutics Update, July 11, 2012</td>
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<tr>
<td>Neurology – Centre for Brain and Behaviour</td>
<td>Dr. Carter Sneed</td>
<td>2nd Biennial Brain Injury in Children Conference, July 52 – 54, 2011</td>
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<tr>
<td>Paediatric Medicine</td>
<td>Dr. Charlotte Moore</td>
<td>Maternal and Newborn Care, September 20, 2011</td>
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<tr>
<td>Genome Heart Network</td>
<td>Dr. Seema Mittal and Dr. James Ellis</td>
<td>Personalized Medicine in the Genomics Era: An International Symposium on Childhood Heart Disease, October 17-18, 2011</td>
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<tr>
<td>Paediatric Emergency Medicine</td>
<td>Dr. Suzan Schneeweiss</td>
<td>Advanced Pediatric Life Support course – delivered three times over the course of the year</td>
</tr>
<tr>
<td>Paediatric Emergency Medicine</td>
<td>Dr. Suzan Schneeweiss</td>
<td>Paediatric Emergency Sedation Course – delivered three times over the course of the year</td>
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<tr>
<td>Paediatric Emergency Medicine</td>
<td>Dr. Jason Fischer</td>
<td>Paediatric Emergency Ultrasound Course, October 18, 2011</td>
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<tr>
<td>Child Development</td>
<td>Dr. Gilda Milo-Manson</td>
<td>Child Development Update, November 11 – 12, 2011</td>
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<tr>
<td>Paediatric Oncology Group of Ontario</td>
<td>Dr. Mark Greenberg</td>
<td>POGO 2011 Multi-Disciplinary Symposium on Childhood Cancer: Unraveling the Mysteries of Transplantation – November 18-19, 2011</td>
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<tr>
<td>Suspected Child Abuse and Neglect Program</td>
<td>Dr. Michelle Shouladt</td>
<td>Advanced Practices in Child Abuse Paediatrics – November 28, 2011</td>
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<tr>
<td>Suspected Child Abuse and Neglect Program</td>
<td>Dr. Michelle Shouladt</td>
<td>Medical Evaluation of Suspected Sexual Abuse/Assault – November 29, 2011</td>
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<tr>
<td>Suspected Child Abuse and Neglect Program</td>
<td>Dr. Michelle Shouladt</td>
<td>Canadian Paediatric Sexual Abuse/Assault Clinical Training Course, Dec 5-8, 2011</td>
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<tr>
<td>Neonatology</td>
<td>Dr. Hilary White and Ms Annette Martens</td>
<td>Neonatal Skills Course which was held in conjunction with the Annual Paediatric Update, May 11, 2012</td>
</tr>
<tr>
<td>Paediatric Emergency Medicine</td>
<td>Drs Arina Lalani and Sanjay Mehta</td>
<td>Collaborated with Canadian experts across Canada to develop a National Course - Pediatric Emergency Trauma Course, May 8 – 9, 2012</td>
</tr>
<tr>
<td>Clinical and Metabolic Genetics at The Hospital for Sick Children and Mount Sinai Hospital</td>
<td>Dr. David Chibakat</td>
<td>20th Annual Symposium on New Developments in Prenatal Diagnosis and Medical Genetics, May 16, 2012</td>
</tr>
<tr>
<td>Neurology – Centre for Brain and Behaviour</td>
<td>Dr. Carter Sneed</td>
<td>Brain and Behaviour Day, June 14, 2012</td>
</tr>
<tr>
<td>Haematology and Oncology</td>
<td>Dr. Eric Bouffet</td>
<td>15th International Symposium on Pediatric Neuro-Oncology, June 24 – 27, 2012</td>
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<tr>
<td>Neurology - Centre for Brain and Behaviour</td>
<td>Dr. Carter Sneed</td>
<td>Remodelling the Brain Symposium for the International Paediatric Brain Injury Society</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Dr. Paul Kantor</td>
<td>Paediatric Heart Failure Summit, June 6 – 7, 2012</td>
</tr>
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Faculty development

Director: Dr. Shelly Weiss

Members of the Faculty Development Committee:
Anne Dipchand, Catherine Berken, Rayfel Schneider, Tina Martimianakis, Mark Friedberg, Dennis Scolnick, Doug Campbell, Suzan Schneeweis, Nirit Bernhard, Nicola Jones

Number of Teaching in Paediatric Settings (TIPS)
Courses and average attendance: 10 sessions (14)
Number of OMA Workshops: 4
Mentorship Program:
Number of Matched Mentors/Mentees: 14
Medical Education Day (A Tribute to Sue Tallett):
Number of attendees: 80

Highlights from 2011-2012

In 2012, Medical Education Day was the forum for a day to honour Dr. Susan Tallett, and celebrate her on her retirement from the Hospital for Sick Children. A separate committee was organized for this day, which occurred on Wednesday, March 28, 2012. The guest speaker for Paediatric Grand Rounds was Dr. Nuala Kenny, from Dalhousie University, NS. The topic for Grand Rounds was “The Possibility of Professionalism in a Globalized World”. Following Grand Rounds, there was a curriculum for the day. The attendees included paediatric residents who were at SickKids when Dr. Tallett was the Paediatric Program Director who came for this special event. The Chair of the committee for this day, which was called “A Lifetime of Education - A Tribute to the Career of Dr. Susan Tallett”, was Ms. Kelly McCillen, Director of the SickKids Learning Institute.

The Department of Paediatrics’ mentorship program for junior faculty is ongoing. All faculty, upon their appointment to the Department of Paediatrics have been invited and the curriculum will include: research in education, program development, educational innovation and scholarly teaching. It also showcases faculty development initiatives, including the starting of a once-weekly running group. The Faculty Development Committee continued to evaluate these programs and consider other programs for physician wellness.

On October 16, 2012, the Faculty Development Committee organized a Paediatric Academic Career Day. All junior faculty within their first five years of appointment to the Department of Paediatrics have been invited and the curriculum will include presentations by Drs. Denis Daneman, Rayfel Schneider, Meredith Irwin, Jeremy Friedman, Melvyn Freedman, Shelly Weiss and Mr. Ben Vozzo.

In the academic year 2011-2012, there was a very successful program initiated, chaired by Drs. Sanjay Mehta and Shelly Weiss. Department of Paediatrics, UofT, is the Faculty Development Director. In this meeting, many issues regarding orientation and academic career development as well as mentorship are discussed. Each junior faculty is given the opportunity to be matched with a mentor outside of his or her division with a similar job profile. The mentors are also asked to review the reference articles and information about mentorship posted on the Faculty Development website.

In addition to this formal mentorship matching, there is also an Educational Scholarship project that is ongoing and funded by a Paediatric Consultants Education Research Grant, to examine a novel method of evaluating mentorship program. This project is a prospective study using qualitative methodology. The investigators are S. Weiss, K. Parker, R. Schneider, T. Martimianakis, and K. Leslie. Currently the first phase of this project has been completed with an online survey to the participating mentors and mentees. The results of this survey have been reviewed and the second stage, a qualitative interview, is going to be conducted in the fall of 2012 by a research assistant.

Another focus of the Faculty Development Committee is on physician wellness. In the past academic year, in addition to the workshops created jointly with Dr. Michael Kauffmann (Medical Director of OMA-PHP for Paediatric faculty), Dr. Kauffmann attended a Faculty Development meeting to discuss an ongoing program for physician wellness. In the next year, there are two new initiatives being organized by the Medical Staff Association. One initiative is a book club being chaired by Drs. Eyal Cohen and Jonathan Hellmann and the second initiative is the starting of a once-weekly running group. The Faculty Development Committee continued to evaluate these programs and consider other programs for physician wellness.

SCHOLARSHIP/RESEARCH

Director: Dr. Tina Martimianakis
Faculty and staff who contributed to scholarship office initiatives in 2011-2012: Anna Wadlowa, Adam Dubowski, Maria Mylopoulos, Nikkii Wood, Angela Punnett, Rayfel Schneider, Shelly Weiss, Joanna Barnes, Jennifer Bowden, Judith Speck, Sue Jenkins and members of the MEAC committee.

Administration and Coordination

The office of Medical Education Scholarship oversizes activities associated with enhancing the capacity of faculty; residents and fellows to engage in educational scholarship broadly defined to include: research in education, program development, educational innovation and scholarly teaching. It also showcases the Department’s education achievement and works to identify opportunities for future growth. In addition, the office oversees the adjudication of educational granting opportunities supported through the Paediatric Consultants Fund.

A number of administrative changes took place last year when Drs. Sanjay Mehta, Administrative Assistant to the Scholarship Office, left to pursue a position closer to home. Ramona Zacharias joined the Scholarship Office as its new Education Coordinator in June 2012. Ramona also supports the educational scholarship and an opportunity to think about the future of the Faculty Development Office.

A number of educational opportunities were opened by the Scholarship Office and the Office of Faculty Development.

In the fall of 2012, a research assistant was hired to support the activities of the Office of Faculty Development. This has allowed for closer coordination amongst the two programs.

Funding

Building on our longstanding support of education research, this past year we developed and launched a new funding opportunity that supports educational development and innovation. This new grant provides up to $5000.00 funding to 1 year projects led by members of the Department of Paediatrics, UofT (faculty and trainees) that have the capacity to contribute meaningfully to the educational mission of our programs. The competition for the Educational Research Grant and the Educational Development and Innovation Grant are offered twice annually, once in September and once in March. A committee of peers adjudicates the grants and provides applicants with feedback on their submission following the announcement of the competition results.

Programming

The Office of Medical Education Scholarship has continued to evolve its collaboration with the Learning Institute. Building on the previous year’s programming that focused on developing educational innovation, a three part educational series was launched.

MEDICAL EDUCATION SCHOLARSHIP ROUNDS

“Moving our ideas forward”

The rounds provide a forum for faculty and trainees to share their educational scholarship and an opportunity to think about methodological issues. The rounds are intended to have practical application to educational work. Resources are also shared at each session to provide participants with the opportunity for future learning.

EDUCATIONAL JOURNAL CLUB

“Integrating knowledge into practice”

At each session, participants are exposed to a selection of interesting articles published in the last couple of years on topics such as competency based teaching, assessment and evaluation, the hidden curriculum, professionalism, etc.

EDUCATIONAL CAFÉ

Building a community of practice

Through facilitated discussion, participants have the opportunity to consult peers, learn about what others are working on, and meet potential collaborators. Education Café is intended as a casual drop-in networking forum.

Number of Matched Mentors/Mentees: 14
Number of OMA Workshops: 4
Number of attendees: 80

In the second iteration of the TIPS program.
Our educational research and scholarship is disseminated regularly in leading clinical and educational journals. This past academic year our faculty and residents authored 36 peer reviewed publications and 1 book chapter.


BOOK CHAPTERS


EDUCATIONAL FUNDING

In the past academic year, our faculty, residents and fellows also had significant grant capture with 38 awards totaling $1,463,958 (multi-year funds have been adjusted to reflect monies allotted for one academic year in the calculation of this total) to pursue research in education.

PAEDIATRIC CONSULTANTS EDUCATION RESEARCH GRANTS, SICKIKIDS

In the 2011-2012 academic year 4 Paediatric Consultants Research Grants were awarded to faculty members pursuing research which promises to increase understanding of educational phenomenon and contribute to theory building on such topics as research methods, attitudes and perceptions to teaching, career decision-making and technologically enhanced learning. The projects awarded also hold potential to enhance our local educational practices.

Kimey L, Leslie K. Balance in residency: Understanding how residents conceptualize balance. $3668

Matlow A, Atkinson A, Martimianakis T. Exploring the experiences of paediatric residents with the hidden curriculum using narrative reflections. $4,750

Moor Hephurn C, Schwartz S, Atkinson A, Anderson G. Paediatricians as managers: A needs-based assessment of the CanMEDS “Physician as Manager” role in postgraduate pediatric medicine training programs. $4,975

OTHER FUNDING SOURCES

An important component of our educational research activity involves collaborations that span departments and institutions. Furthermore, our faculty were involved in collaborative research projects that were funded with funding from a variety of sources including the Royal College, CIHR, PSI, and NSERC.

Boutis K, Pusic M, Peciar M, Beckstead J, Baby P. Learning retention and the optimal timing of refresher education. Royal College Medical Education Research Grant. $40,000 CAD. Apr 2011 to Dec 2014

Campbell D Evaluation of the education impact of debriefing post simulated neonatal resuscitation. Neonatal Resuscitation Program Grant, Canadian Pediatric Society. $16,200 CAD. 2011

Church P, Shah V, Basl K, Luther J, Lee SK. Academic challenges for the preterm infant: Educator’s knowledge, attitudes and identified barriers to providing aid to this population. Physician Services Incorporated. $61,000 CAD 2011 to 2012


Dubrowski A. Self regulated motor learning: mechanisms and application. Natural Sciences and Engineering Research Council. $75,000. 2008-2013

El-Khoury A. Post graduate medical education research award winner. University of Toronto: $9,900 CAD 2012


Haj F, Dubrowski A (Co-PI), Drake J, deRhauzepierre S. The effect of simple-to-complex sequencing on skill acquisition, retention and cognitive load in surgical training. The Royal College of Physicians and Surgeons of Canada: Medical Education Research Grant. $37,080. 2012

Henry J. CIHR-Community Alliances for Health Research & Knowledge Exchange on Pain. $2,500,000. Theme 2: Watt-Jones NL, Stevens B, Han VKM, Lee SK, Chemtob S. Canadian Pediatric Research and Clinical Summer (PeRCS) Program Award, Hospital for Sick Children: $4,900 CAD. 2010 to 2011

Hutson J (Student). Pediatric Research and Clinical Summer (PeRCS) Program Award, Hospital for Sick Children: $5,000. June-August 2012.


Kwan C, Boutis K, Ratnapalan S, Lalau A. Health advocacy training in pediatric emergency medicine fellowships in Canada and the US. Division of Pediatric Emergency Medicine Research Fund: $3,875 CAD 2012


Leslie K, Ginsburg S, Egan-Lee E, Baker L, Reeves S. Understanding the role of “Coach” within faculty development. Royal College of Physicians and Surgeons of Canada Faculty Development Grant. $4,915. 2011

Leslie K, Law M, Ballon B, Yeung E, Shamji A, Lindzon G. Students and faculty as partners in innovation: The e-Faculty Development Project. University of Toronto Instruction Technology Incentive Fund (ITIF): ($15,000+matched funds of $15,000 from the Faculty of Medicine T-IME initiative): 2011 to 2013

Leyv DM. Canadian Child Health Clinical Scientist Program (CCHCSP). Career Enhancement Program Award. $10,000 CAD 2010 to 2012


McGeer A, Dubrowski A (Co-PI), Beduz MA. Partnerships for Health Improvement/Building Skills, changing practice: simulator training for hand hygiene protocols. Canadian Patient Safety Institute and the Canadian Institutes of Health Research. $425,616. 2009-2011

Morin, MP, Myopoulous, M, Bell, M, Schneider R, Dubrowski, A. Development of a novel strategy to teach the pediatric MSK examination: adolescent patient partners with Juvenile Idiopathic Arthritis (JIA): Phase 1: Exploring the teens’ perception and motivation to participate. PSI Foundation: $16,000. 2011-present


Myopoulous, M, Woods NN. Developing and Assessing ‘Preparation for Future Learning’ in Medical Students. Medical Council of Canada; Fund for Research in Clinical Assessment. $34,896.72, 2011-present

O’Connor D, Unger S. Nutrition research trainee support. The Hospital for Sick Children Foundation: $40,000 CAD. 2011 to 2013

Reeves S, Leslie K, Legare F, Silver I, Rosenfield J, Hodges B, Zwarenstein M, Arrison H, Curran VA. A pilot project to explore the determinants of knowledge use in a medical education context. KT Canada SEED Funding Grant: $30,000. 2011


Whitehead C, Martimianakis MA, Kuper A. A discourse analysis of 30 years of the journal of Medical Education. The Journal of Medical Education. $12, 440. September 2012-2013.

Wiletojo M, DeSouza C, Punnett A. Professional skills development: A program to develop non medical expert CanMEDS roles for Pediatric Hematology-Oncology fellows. CI7 Education Grant Competition. $3032 CAD 2011 to 2012

POWER TEACHING AWARDS

Peer, M Winner of POWER Teacher Award (for outstanding contributions to postgraduate teaching), Department of Pediatrics, University of Toronto, June 2012

Shouldice, M Winner of POWER Teaching Award, University of Toronto, The Department of Pediatrics, Toronto, 2012

Silver, S Winner of POWER Teaching Award, University of Toronto, The Department of Pediatrics, Toronto, 2012

Chan, K Winner of POWER Teaching Award, University of Toronto, The Department of Pediatrics, Toronto, 2012

Tse, S Winner of POWER Teaching Award, University of Toronto, The Department of Pediatrics, Toronto, 2012

OTHER TEACHING/EDUCATION AWARDS

International

Dr. Lisa Allen – National Faculty Teaching Award, American College of Obstetricians and Gynecologists. The Council on Resident Education in Obstetrics and Gynecology 2012

University

Dr. C. Walsh – Postgraduate Medical Trainee Leadership Award, Postgraduate Medical Education, University of Toronto, Toronto, June 2012.

Dr. Jason Fischer – Winner of the Outstanding Clinical Teacher Award. University of Toronto Emergency Medicine, Toronto, 2012.

Dr. Jonathan Hellieman – The Institute of Medical Science (IMS) Course Director Award, University of Toronto, 2012.

Dr. Anne Mathow – Winner of Colin R Woff Award for Excellence in Course Coordination, collaborator in curriculum development and coordination. Continuing Education, Faculty of Medicine, Centre for Patient Safety, University of Toronto, Toronto Ontario Canada (Continuing Education, 2012) Patient Safety and Quality Improvement Certificate Course. 2011/07 to 2012/06
Departmental: Faculty
Dr. Brisenda Mema – 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. Douglas Campbell – Marvin Greenstein Award
To a part-time member of the Department of Paediatrics who has demonstrated excellence in teaching as nominated by core paediatric residents

Dr. Sheila Jacobson – R.H.A. Haslam Pakeelekship Teaching Award
To the faculty member who has demonstrated excellence in preclinical teaching

Dr. Heather Yang and Dr. Beverley Kupfert – The Lionel Winston Clerkship Teaching Award
To the faculty member who has demonstrated excellence in clerkship teaching

Dr. Jeff Weisbrod – The Undergraduate Community Teaching Award
In recognition of excellence in the teaching of medical students within community-based hospitals and offices

Dr. Waldid Farhat and Dr. Martin Koyle – PERLS Award (Pediatric Educational Resident Lecture Series Award)
To the faculty member who has demonstrated commitment to excellence in teaching at the Paediatric academic sessions

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

Dr. Wendy Roberts – Continuing Medical Education Award
To the faculty member who has demonstrated excellence in course coordination or teaching in a Department of Paediatrics/University of Toronto Continuing Education sponsored event

Dr. Abha Gupta – Winner of Academic Half Day Teaching Award, Haematology/Oncology, Department of Paediatrics, The Hospital for Sick Children, Toronto, 2011.

Departmental: Residents/Fellows
Christopher Chaudhuri Award
To a senior resident for excellence in clinical teaching as nominated by core paediatric residents

Dr. Sanjukta Basak (PGY3)
Dr. Melissa Chan (PGY4)
Dr. Charles Larson (PGY4)

CanMEDS Award – Subspecialty Trainee
Dr. Ramses Badilla-Porras
Dr. Jennifer Harrington

Perls Teaching Award
Dr. Melanie Penner

Dr. Aly Aziz – The CanMEDS Team Award, Division of Neurology, The Hospital for Sick Children, June, 2012.

Dr. Naiha Makhani – William J. Logan Award
For Excellence in Clinical Teaching, Division of Neurology, The Hospital for Sick Children, 2012.

Divisional/Hospital
Dr. Brenda Barreall – The CanMEDS Faculty Award, Division of Neurology, The Hospital for Sick Children, June, 2012.

Dr. Brenda Barreall - The William A. Hawke Award,

Dr. Tony Banosino – Postgraduate Community Teaching Award
In recognition of excellence in the teaching of paediatric residents within community-based hospitals and offices

Dr. Tony Banosino – Award for Excellence in Clinical Teaching, Undergraduate and Postgraduate Teaching in Pediatrics, Education Achievement Day, St. Michael’s Hospital, Toronto, 2012.

Dr. Michelle Shouladice – Winner of Robert Hilland Award for Excellence in Paediatric Medicine Education, The Hospital for Sick Children, Division of Paediatric Medicine, October 18, 2011.

Dr. Sarah Alexander – Alvin Zipurkey Teaching Award,
The Hospital for Sick Children, 2012.

Dr. Elizabeth Donner – Winner of the Division of Developmental Paediatrics, Dept. of Paediatrics Teaching Award, University of Toronto, June, 2012.


Dr. Jason Fischer – Winner of the James C. Falls Teaching Award. Division of Emergency Medicine, The Hospital for Sick Children, 2012.

Dr. Johann Hitzler – Winner of the Division of Paediatric Haematology/Oncology, Academic Half Day Teaching Award, The Hospital for Sick Children, Toronto, 2012.


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HIGHLIGHTS OF OTHER FORMS OF EDUCATIONAL SCHOLARSHIP

The term education scholarship is used to comprise a variety of academic activities. These are not limited to research; they also include developing, delivering and disseminating educational programming. This section highlights forms of educational scholarship taking place in our Department including promising new directions in educational innovation, which have not been captured under the sections of awards, grants and publications.

Curriculum and Program Development

Educators in our department focus a lot of their energy on reviewing, revising and developing programming for all levels of trainees that is grounded in the most up to date basic and clinical research and is developed, delivered and assessed according to current educational theories and practices. Furthermore, members of our faculty are contributing to the development of educational programming and learning standards and objectives at the university, national and even international level. The following are only a few examples of activities that fall in this category:

Dr. Alvin Loh, Angelina Orsino and Elizabeth Jimenez created a new Developmental Disabilities Elective for Year 1, Year 2 University of Toronto medical students. The elective is comprised of 7 seminars which focus on the roles of communicator, collaborator, medical expert, and are contextualized in the important issues encountered in the care of children and adults with developmental disabilities.

Dr. Ann Jeffries developed and evaluated a curriculum for neonatal – perinatal residents and fellows. She also designed and organized with Brian Simmons and S Lawrence a structured oral examination for neonatal – perinatal medicine residents and fellows, for both the University of Toronto and University of Ottawa.

Dr. Rand Askalan, from the Division of Neurology is the Founder and Director of the Palestinian Healthy Child Fellowship Program, created in order to provide physicians from Gaza, the West Bank, and East Jerusalem opportunities to acquire skills in pediatric sub-specialties. In Palestine, there are a number of well-trained general paediatricians, but there is a significant shortage of paediatricians specializing in critical areas of child health. This lack of specialists means that children with specific and often complex health issues cannot access the care they need. The Palestinian Healthy Child Fellowship Program is designed to address this critical shortage, improve the quality of paediatric health care in Palestine, and ensure Palestinian children have the opportunity to lead longer, healthier lives. Four fellows in nephrology, neonatology, infectious diseases and genetics are currently supported by this program.

E-Learning

The use of electronically enhanced learning is on the rise, particularly as clinical training is becoming more and more distributed. Our faculty are exploring many ways to incorporate e-learning approaches into their educational practice.

This past year, a working group led by Dr. Yaron Avitzur and Dr. Paul Kantor, has developed five e-learning modules to educate trainees about paediatric transplantation. This initiative has enhanced awareness of transplant-related issues and will improve the efficacy of self-education of second-year paediatric residents.

Dr. Norman Rosenblum has continued his work in the development of CIPCorED. This e-learning module consists of 6 units and is geared towards clinical investigator trainees in the University of Toronto Clinician Investigator. Each unit contains information critical to the development of a body of knowledge and skills required for success as a clinical investigator. This online resource is designed to be easily accessible by trainees at any time.