“Your children will see what you’re all about by what you live rather than what you say.”

Wayne Dyer, American psychotherapist, author and lecturer
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In March 2011, on completion of my first five year term as Chair/Chief, the Department of Paediatrics at the University of Toronto and The Hospital for Sick Children underwent an external review by two department chairs, Drs. Alan Schwartz from Washington University, St. Louis, and Cheryl Greenberg from the University of Manitoba. The extremely positive review is testimony to the tremendous contributions that our faculty members continue to make locally, nationally and internationally, as well as to the enormous support afforded our department by Mary Jo Haddad, President and CEO of SickKids and Cathy Whiteside, Dean of Medicine, University of Toronto, and their teams. I would also like to acknowledge the contributions of our administrative support group across the department. Without their support, our faculty members would not have accomplished all they have over the past five years.

I am personally invigorated by the opportunity to continue to be involved in ensuring the continued upward trajectory of our department over the next five years. But the review is in the past and the future of health care and research are increasingly challenged by a fragile world economy.

What then were the major achievements of the past five years and how can we leverage them to ensure that the next five will be even better?

**Faculty recruitment, retention and renewal:** During this time eight divisions changed leadership, with Darcy Fehlings (Developmental Paediatrics); Mark Palmert (Endocrinology); Brian Feldman (Rheumatology); Anne Griffiths (Gastroenterology, Hepatology and Clinical Nutrition); Lisa Robinson (Nephrology); Shoo Lee (Neonatology); Jim Whitlock (Hematology/Oncology); and Stephen Porter (Paediatric Emergency Medicine) joining the Division Heads’ team; and searches continue in another three. Faculty recruitments occurred in almost all of the Divisions with more than 50 newcomers joining the department. Retention has also been excellent with few academic departures.
Faculty productivity: There has been ongoing productivity in all three pillars of academic excellence: research (both fundamental and applied), education (teaching and scholarship), and clinical care (access and excellence). From 2005 to 2009 we ranked in the top two or three paediatric departments in North America in terms of publications and citations; grant funding exceeds $40 million per annum; an increasing number of faculty members play pivotal roles in university, national and international affairs. New programs integrating clinical care, education and research (The SickKids Team Obesity Management Program or STOMP; the Complex Care Initiative; the Long-term Cancer Survivors, to name just a few) have had important impact in a short space of time.

Special Programs: New initiatives have been developed to enhance the medical student and staff experiences, e.g. the Social Pediatrics elective exposes undergraduate medical students to the most disadvantaged in society, while the Office of Faculty Development is providing improved mentorship and staff development programs.

Expansion of activities: With the expansion of medical school enrolment and opening of the Mississauga Academy of Medicine, our teaching commitments have expanded considerably as has our reach. This has required incorporation of virtually all paediatricians in the Greater Toronto Area. For example, success of the Department of Paediatrics at St Michael’s Hospital represents an increasing opportunity for collaborations across the academic spectrum.

Success and expansion bring new challenges to be faced over the next five years. This includes ensuring recruitment at all levels, into training programs and staff positions, of individuals with high potential for success in academic activities across the spectrum, ranging from fundamental science to clinical excellence (bench to bedside), to resourcing research in an increasingly difficult funding environment, meeting the career aspirations of outstanding young paediatricians across Canada, and improving collaboration with our partners locally and nationally.

Finally, I wish to publicly acknowledge the magnificent role played by Dr. Daune MacGregor during her time as Associate Chair, Clinical. Daune has limitless capacity for work, always in the interests of the greater good: her contributions are hugely appreciated and continue across a broad swath of activities.

These are indeed exciting and challenging times: I am convinced that our department is well positioned to keep moving forward and continuously evolve as one of the world’s leading paediatric academic departments.

Denis Daneman
Chair, Department of Paediatrics, University of Toronto
Paediatrician-in-Chief, The Hospital for Sick Children
RS McLaughlin Foundation Chair in Paediatrics
Global Pioneer

Isaac Odame: Leader in fight against sickle cell disease

Every day, about 1,000 children in Africa are born with sickle cell disease. Without proper treatment, many of them die early, from pneumonia, malaria and diarrheal diseases that may occur as SCD aggravates the associated complications.

If there’s one man suited to lead the fight against the disease it’s Dr. Isaac Odame, and if there’s one way he will be successful it’s by working with a large international network. A haematologist/oncologist at SickKids since 2007, a project investigator at SickKids Research Institute, and associate professor of pediatrics, Odame became director of the Global Sickle Cell Disease Network in September.

An estimated 100,000 people in North America and more than six million people in Africa have SCD. However, since no one dies directly from SCD, its contribution to mortality rates is imprecise. Moreover, and this may be difficult for Canadians to understand, there’s a stigma attached to the disease in some places, because it is an inherited condition which manifests itself in a child when both parents carry certain mutated genes.

SickKids has given Odame an opportunity to spend 50 per cent of his time on a global implementation plan for studying and treating SCD, and he is wasting no time. Three major challenges stand out: the need to raise awareness of SCD, to document its deadly path, and to implement treatment. Odame has accepted the whole range of challenges because he believes time is right to tackle the disease so it’s no longer a threat but a condition that can be managed.

New Faculty Member

Daniel Roth: New faculty member with global reach

Daniel Roth joins the Department of Pediatrics with solid credentials. Born in Calgary, he earned his undergraduate degree at McGill, his MD at the University of British Columbia, and his master’s degree at University of Alberta where he completed his residency in pediatrics. In 2006, after 13 years in the learner’s seat, he had all the qualifications you need to be a doctor, but he didn’t stop. Next came doctoral studies at Johns Hopkins Bloomberg School of Public Health in Baltimore whose Department of International Health awarded him a PhD in human nutrition this year.
“I wanted to get training in global health, biostatistics and epidemiology, and be immersed in a place where leaders in the field are clustered,” Roth said. Married to an American, he might have stayed in the U.S., but convinced his wife that they should move to Toronto so he could work at SickKids which had impressed him in several ways.

“SickKids is a great fit for me. I started working on the pediatric medicine inpatient wards part-time during the last couple of years of my PhD studies and found that I really liked the people and the energetic environment. The Division of Paediatric Medicine is very strong academically, and it became clear to me that the Hospital and Department of Paediatrics would provide a very supportive environment for a clinical researcher with my interests.”

SickKids is increasingly providing opportunities for staff to engage in global health. Roth is primarily focused on investigating how to combat vitamin D deficiency among pregnant women in Bangladesh. His other research is aimed at improving child health in what is referred to as “the first 1,000 days” – the in utero period plus the first two years of a child’s life when nutritional, infectious and psychosocial factors have the greatest impact on a child’s growth and development.

He is also working on the development of a prenatal micronutrient powder with an international team that includes Drs. Stan Zlotkin and Diego Bassani from SickKids. The powder, which will deliver calcium, iron and folic acid to pregnant women in low-income countries, is already attracting attention: Roth and his team won an international grant in July, sponsored by the “Saving Lives at Birth” partnership involving the Bill and Melinda Gates Foundation, USAID, The World Bank, Norwegian Ministry of Foreign Affairs and Grand Challenges Canada.

Promoted to Full Professor

Jamie Hutchison: Creating a better life for those with brain injury

If 53 seems a bit late for someone as accomplished as Dr. Jamie Hutchison to be promoted to full professor, there’s an explanation. He has been too busy and didn’t want to submit an application until he felt certain it would be successful. “It had to be a slam dunk,” he laughs.

Hutchison has published a large number of papers in high-impact journals about paediatric brain injury. An article on hypothermia therapy in the New England Journal of Medicine, of which he was senior author, was considered the most important paper internationally in paediatric critical care in 2008 by the editor of Pediatric Critical Care Medicine.

He has received more than $3 million in external peer reviewed funding as a principal investigator or co-principal investigator during his academic career – so far. As brain injury becomes one of three research priorities at SickKids, he and his colleagues are likely to receive millions more.

Brain injury had a personal and profound effect on Hutchison in 1978 when he was in first year of medical school at Queen’s University and his close friend Scott Finlay, a member of the Canadian ski team, injured his head in a crash that left him incapacitated. Hutchison later entered a fellowship in critical care at the University of Western Ontario where he was mentored by Dr. Tim Frewen, Director of Intensive Care and Chair of Paediatrics. This collaboration gave him an academic interest in traumatic brain injury (TBI) and the response of the immune system to injury.
He joined SickKids in 2002 as a lead physician in Neurocritical Care and a Scientist in Neuroscience and Mental Health. For several years, clinical work took up most of his time. Now it's research.

With the Research Tower nearing completion, excitement is growing about the improved facilities and the potential for new discoveries in child health. Hutchison, with colleagues Anne-Marie Guerguerian, Maureen Dennis and Colin Macarthur, representing a large group of accomplished TBI researchers at SickKids, have proposed to develop an outstanding system for Clinical Neurocritical Care with a strong focus on research and education.

He would also like to bring new biomarker blood tests to the bedside to better define brain injuries, predict outcome and monitor response to therapies. In addition he will continue to search for new therapies, in his laboratory, that can improve the outcome for those with acquired brain injury.

Nonetheless, she stayed in Canada and recalls 1981–82 as “my best year of training.” That year she was associate chief resident at SickKids and discovered the breadth of paediatrics, working in neurology, critical care, emergency medicine, cardiology and more. Next she was a fellow in neonatology at British Columbia Children’s Hospital where she had her first taste of transport medicine.

By then it was clear that Whyte was not a run-of-the-mill paediatrician. Although neonatology was her specialty, she liked all disciplines. Being on call was far from a burden, and she asked for shifts in Emergency “for fun” so she could stay on top of treatments and trends. At home, she kept busy nurturing her family of six boys.

Transportation is full of challenges and Whyte embraced them all when she became head of neonatal transport at SickKids in 1998. She expanded this team to include respiratory therapists and encompass the transportation of infants and toddlers, and a training ground for physicians in transport medicine. In 2004 she was appointed paediatric medical director for Ornge (Ontario air ambulance) and provides countless hours of on-call duty.

Teaching, research, advocacy, policy making – she does it all. She is medical director of Acute Care Transport Services at SickKids and holds a patent for Transport Remote Access Care, which allows you to monitor all vital systems of a patient en route to hospital. In 2010 she received two innovation awards, one from Ornge for her curriculum for paramedics, the other from the Ministry of Health for improving patient safety. Her energy and enthusiasm for her work are boundless.
Farid Mahmud: Diabetes work attracts large grant
SickKids is a leader in diabetes research and treatment and has been for almost 100 years, going back to the days when Nobel Prize winner Dr. Frederick Banting, the co-discoverer of insulin, was physician in charge of diabetes.

In June the hospital received $4.4 million from Juvenile Diabetes Research Foundation (JDRF) Canada and the federal government. The grant is part of a $33.9 million investment for a clinical trial network bringing together Canada’s top physicians and scientists to accelerate the development of treatments and a cure for Type 1 diabetes and its complications.

Dr. Farid Mahmud played a key role in securing the grant for SickKids. He and his team spent months on proposals and presentations, from early morning to late night. By last November, the final list of projects that would proceed was decided and it was clear that SickKids would play a major role.

The completion of the project coincided with the arrival of a new family member for Mahmud and his wife, Anika. “I sometimes say that looking at my son grow and mature mirrors the process by which the JDRF-CCTN network was established and is expanding.” Mahmud says. “Thankfully both are thriving.”

As principal investigator of the SickKids Multi-Study Clinical Trial Centre, Mahmud will lead several clinical studies. This includes expanding the Adolescent Type 1 Diabetes Cardio-Renal Intervention Trial (AdDIT) which is evaluating the potential impact of early medications (including angiotensin-converting enzyme inhibitors and statins) in adolescents at higher risk of kidney disease with Type 1 diabetes.

He is also leading a study evaluating the impact of celiac disease screening and treatment on outcomes in children and young adults with Type 1 diabetes, and he is engaged in a multicentre study investigating continuous glucose monitoring in combination with insulin pump therapy.

Although knowledge about diabetes and its treatment increase all the time, this is a complex disease that impacts both children and families. The number of new cases in Ontario grows by about three per cent a year, and Canada is among the top five countries in the world for diabetes incidence.

Is there a solution? “I think the cure will first be technological, so we can provide our diabetes patients with an artificial pancreas,” Mahmud says. “Our role is to improve treatments, outcomes, quality of life and pursue research into technologies that encompass the incremental steps needed to achieve this kind of cure.”
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, to increase the recognition of the educational achievements of our faculty within the department and beyond, to facilitate the academic promotion of faculty and the career development of clinical educators and teachers. 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.

Medical Education Advisory Committee Membership 2010-2011
Rayfel Schneider (Chair)
Adelle Atkinson
Stacey Bernstein
Ann Jefferies
Sue Jenkins
Karen Leslie
Tina Martimianakis
Jonathan Pirie
Angela Punnett
Lisa Robinson
Suzan Schneeweiss
Michelle Shouldice
Shelly Weiss

Educational Administrative Staff:
Mary Antonopoulos, Undergraduate Education
Joanna Barnes, Undergraduate Education
Susan Jenkins, Administrative Supervisor
Sandra Layno, Postgraduate Education
Eleanor Mitchell, Postgraduate Education/Education Scholarship
Nicole Winters, Continuing Medical Education
Education Researchers:
Adam Dubrowski, PhD, Education Researcher, Learning Institute
Tina Martimianakis, PhD, Education Researcher, Department of Paediatrics
Maria Mylopoulos, PhD, Education Researcher, Learning Institute
Kathryn Parker, PhD, Education Consultant, Learning Institute

Faculty pursuing graduate studies in education 2010-2011:
Angela Punnett (Masters in Education)
Michelle Shouldice (Masters in Education)

Faculty who completed graduate studies in education 2010-2011:
Melinda Solomon (Masters in Community Health - Health Professional Teacher Education)

Trainees pursuing graduate studies education 2010-2011:
Vicky Breakey (Masters in Education)
Elly Berger (Masters in Education)
Clare Hutchinson (Masters in Education)
Marie-Paule Morin (Masters in Education)
Sarah Schwartz (Masters in Education)
Catherine Walsh (PhD in Education)

Educational Training and Leadership

Undergraduate Education
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 Paediatric Undergraduate Medical Education Committee (PUGMEC) to implement the numerous undergraduate programs. Members have included full-and part-time faculty: Hosanna Au, Zia Bismilla, Mark Feldman, Emer Finan, Sheila Jacobson, Ethel Ying, Miriam Kaufman, Bill Mounstephen, Seetha Radhakrishnan as well as student representatives and the chief paediatric residents.

In preparation for the Mississauga Academy of Medicine (MAM), which will officially open in September 2011 with 54 students in year one of the medical school program, eight clerkship students were sent to Credit Valley Hospital for their six-week paediatric rotation. The rotation received excellent reviews and was ranked within the top three community hospital rotations. In 2011 all lectures will be video conferenced between the St. George campus and MAM. There was a flurry of activity at Discovery Commons at University of Toronto providing faculty development around teaching via videoconferencing.

Preparation is well underway for accreditation in May 2012. Many new policies have been written and can be found both in the teacher handbook as well as on the University website: http://www.md.utoronto.ca/policies.htm. Special attention should be given to the policies on absences, grades, injury and exposure to infectious disease as well as mistreatment and other kinds of unprofessional behaviour. The University has produced an electronic teacher handbook which is an excellent online resource and can be accessed through: http://www.md.utoronto.ca/handbook.htm.

Preclerkship
Thanks again to all those who contributed to the Paediatric Longitudinal Experience (PedLE). The program which is offered to 70 first-year medical students received outstanding evaluations. We have been developing the Pediatric Research and Clinical Summer Program (PeRCS) which will be offered to 10 first- and second-year medical students in the upcoming year. The new undergraduate medical education endeavour will be led by Dr. Seetha Radhakrishnan in collaboration with Stacey Bernstein, Lisa Robinson and Paul Nathan. Students and supervisors will be part of a unique program that structures both research and clinical experiences in paediatrics for medical students. The objectives of the PeRCS Program are to increase undergraduate medical experience in clinical paediatrics, to provide exposure to academic paediatric research and to create a successful mentorship program in paediatrics.
Clerkship
This year we held our first clerkship OSCEs on March 7 and August 29, 2011. We are always looking for new invigilators and appreciate the time and contribution of colleagues to this important evaluative component of the curriculum. We welcome new clerkship site supervisors to our community hospital rotations for the third year medical students. We look forward to working with Gagan Saund and Anna Seliah in Brampton and Jeff Weisbrot at York Central. We held our annual retreat with representation from our 12 community hospital site supervisors from CVH, WOHC-Brampton, WOHC-Etobicoke, NYGH, TEGH, SMH, SJHC, SGH-Birchmount, SGH-General, YCH, HRRH, RVCH.

This past year, we produced a new handbook of paediatric essentials called Paeds-On-The-Go for third-year clerks to use at the point of care during clerkship. The book is greatly in demand by elective students across the country as well as nursing faculty at SickKids.

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

Tamar Rubin  (Dr. Roy Simpson Scholarship in Paediatrics)
Nicole Coles  (Dr.Yumin Li Access to Excellence in Paediatrics Award)
Julia Sharp  (Dr.Yumin Li Access to Excellence in Paediatrics Research Award)
Daniel Rosenfield  (Dr. Carl Witus Prize in Paediatrics)

Nicole, Julia and Dan are continuing their Paediatric Residency Program at U of T.

On the national scene, we hosted our first annual Paediatric Undergraduate Paediatric Directors of Canada (PUPDOC) meeting. Sixteen undergraduate medical education paediatric leaders 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 national paediatric undergraduate curriculum.

Postgraduate Education
The postgraduate paediatric training program in the Department of Paediatrics is led by Dr. Adelle Atkinson with the support of the Residency Program Committee. In 2010-2011 members of the committee included: Kate Amiel, Michael Khoury, Sanjukta Basak, Ashley Vanderomorris, Jackie Chiang, Natasha Saunders, Julie Johnstone, Niraj Mistry, Ann Jefferies, Elizabeth Jimenez, Eudice Goldberg, Jeff Kobayashi, Eddy Lau, Lillian Sung, Michelle Shouldice, Mindy Solomon, Moshe Ipp, Michelle Gordon, Savithiri Ratnapalan, Steven Moss, Tony Barozzino. Administrative support to the program is provided by Sandra Layno and Eleanor Mitchell.

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. Specifically, we had 78 core residents, 71 subspecialty residents, 23 research fellows and 209 clinical fellows enrolled in the 2010/11 academic year. The Department of Paediatrics is home to 17 residency training programs accredited by the Royal College of Physicians and Surgeons of Canada.

The success of the training program is largely due to faculty engagement. 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, academic curriculum, evaluation, research, mentoring 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. The fourth year of the program was redesigned four years ago, and currently addresses the needs of our trainees who are pursuing a career in community paediatrics. The feedback from this redesign has been excellent and our trainees are feeling better prepared for their community careers. This year enjoys a significant amount of distributed medical education which the residents have embraced.

The academic half day has undergone an evolution over the last several years with the insertion of a number of “sub-curricula” to fully address all the CanMEDS roles. These include the Acute Care and Resuscitation Program (ACRP), paediatric psychiatry and advocacy. This year has seen the implementation of a palliative care curriculum, which has received excellent feedback to date, and the dermatology curriculum is coming up. The ACRP continues to grow and mature and is the first program of its kind in Canada. As such, it has been written up and will be submitted for peer review and eventual publication.

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. In some cases the scholarly activities explore aspects of our programming and aim to improve our curriculum and teaching. An exciting new project involves the creation of learning modules for residents around the care of solid organ transplant patients. Residents have been involved at the ground level in implementing this project in a scholarly way.

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 evaluative activity.

Advocacy continues to be a focus of the program. There are currently four major advocacy projects underway under the leadership of the resident group. In addition to the Gosford Park Public School, our residents are involved with the Rosedale Heights Secondary School. Both schools have at-risk children and youth, and have found this collaboration beneficial. Indeed, the Gosford Park initiative was highlighted on CBC News earlier in the year.

In October 2011 the program underwent a successful internal review. Reviewers commended the program “for (its) many strengths and would recommend this program as a model to others.” The RCPSC will review all the programs in 2013.

The postgraduate program is gearing up for another round of PGY-1 CaRMS and we are delighted to have a new program added into paediatrics. This MD/PhD program strives to attract candidates who are interested in a research career and will involve intensive research support throughout the training program.

In the spring of 2011 we underwent our second annual specialty match. The residents from our own core paediatric program who entered the match did extremely well with a 100 per cent match rate. Outstanding candidates from other universities across Canada also matched to the University of Toronto. The subspecialty programs continued to attract excellent applicants from around the world.

Continuing Education
The goal of continuing education is to promote development and dissemination of continuing education activities locally, nationally and internationally. Our continuing education committee (CEC), led by Suzan Schneeweiss, is comprised of both academic and community-based health care professionals. Library services also help to support CE activities. The CEC develops and supports a breadth of programming. There is strong collaboration with the University of Toronto, Office of Continuing Education and Professional Development, and the Centre for Faculty Development. This year, Dr Schneeweiss was involved in the development of the five-year strategic plan for the Office of CEPD. Dr. Schneeweiss has
also collaborated with the Office of CEPD at the University of Toronto to provide faculty development opportunities in continuing education.

Faculty members of the Department of Paediatrics have been active in continuing education activities for the 2010–2011 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 popular event attracting 120 community-based paediatricians and takes place four times annually. The Annual Paediatric Update (course director: Dr. Suzan Schneeweiss) was held April 27-30, 2011 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 60 members of our faculty presenting at this event. This year, a clinical and metabolic genetics subspecialty day, under the direction of Drs. Daune MacGregor and Roberto Mendoza-Londono, was presented with a comprehensive look at the evaluation and management of common genetic and metabolic disorders in children.

Many of our divisions have been engaged in a variety of continuing education events:

**Cardiology, Dr. Andrew Redington and Dr. Glen Van Arsdell**
Toronto Cardiac Symposium bringing together experts in the field of hypoplastic left heart and its treatment

**Clinical and Metabolic Genetics at The Hospital for Sick Children and Mount Sinai Hospital, Dr. David Chitayat**
19th Annual Symposium on New Developments in Prenatal Diagnosis and Medical Genetics

**Gastroenterology and Clinical Nutrition, Dr. Binita Kamath**
Get Liver Smart!- Alagille Syndrome and Biliary Atresia – one day family education day

**Gastroenterology and Clinical Nutrition, Dr. Vicky Ng**
Liver Transplant Family Education Day

**Haematology and Oncology, Dr. Angela Punnett**
Annual Paediatric Chemotherapeutics Update

**Infectious Diseases, Dr. Anne Matlow**
SickKids 7th Annual Paediatric Patient Safety Symposium. A New Decade: Safer Healthcare for Kids

**Neonatology, Dr. Hilary White and Ms Annette Martens**
Annual Neonatal Skills Course which was held in conjunction with the Annual Paediatric Update

**Neonatology, Dr. Jonathan Hellmann**
Neonatology 50th Anniversary Celebration Academic Day

**Neurology–Centre for Brain and Behaviour, Dr. Carter Snead**
2nd Biennial Centre for Brain and Behaviour Brain Injury in Children Symposium - Three-day International Symposium on brain injury in children

**Paediatric Emergency Medicine, Drs. Jonathan Pirie and Suzan Schneeweiss**
7th annual Paediatric Emergency Medicine Conference- 2 day conference

**Paediatric Emergency Medicine, Dr. Suzan Schneeweiss**
Advanced Pediatric Life Support course – delivered three times over the course of the year

**Paediatric Emergency Medicine, Dr. Suzan Schneeweiss**
Paediatric Emergency Procedural Sedation Course – delivered four times over the course of the year

**Paediatric Emergency Medicine, Drs. Amina Lalani and Sanjay Mehta**
Pediatric Emergency Trauma Course

**Paediatric Emergency Medicine, Dr. Savithiri Ratnapalan**
4th Annual Longitudinal Project Planning and Management Course

**Paediatric Medicine, Drs Mark Feldman and Michael Peer**
City Wide Rounds – held 4 times annually for community-based paediatricians
Respiratory Medicine, Dr. Indra Narang
Paediatric Sleep Symposium – one day symposium

Suspected Child Abuse and Neglect Program, Dr. Michelle Shouldice
Canadian Symposium on Advanced Practices for Child Abuse Paediatricians – one day symposium

Suspected Child Abuse and Neglect Program, Dr. Michelle Shouldice
Current Issues in Sexual Assault, Domestic Violence and Child Maltreatment Conference- 3 day conference in conjunction with Ontario Network of Sexual Assault and Domestic Violence Treatment Centres

Faculty Development
In July 2010, the Faculty Development Office (FDO) was established. The office includes the Director (Dr. Shelly Weiss), administrative assistant (Mrs. Jackee Colquhoun) and the Faculty Development Committee. The committee includes members of both full-time and part-time faculty in the Department of Paediatrics: Drs. A. Dipchand, C. Birken, R. Schneider, T. Martimianakis, M. Friedberg, D. Scolnik, D. Campbell, S. Schneeweiss, N. Jones, N. Bernhard.

In 2011, Medical Education Day showcased the non-expert CanMEDS roles. The guest speaker for Paediatric Grand Rounds was Dr. Richard Frankel from the Indiana School of Medicine. The topic for grand rounds and the workshop that followed was “Professionalism”. Following the workshop, there were three presentations in the area of education research regarding professionalism and other non-expert Can Meds roles. Thirty-two faculty members participated in the full day including the workshop.

A formal Department of Paediatrics mentorship program was launched in the spring of 2011. All faculty in the first six years of appointment were approached and invited to participate in this program. Two informal lunches/presentations were organized in the spring, 2011 for both mentors and mentees. Each mentee was matched with a mentor outside of his/her division and with a similar job profile. Information and guidelines for both the mentors and mentees, and reference articles, are posted on the FDO website. As well, a workshop organized by the CFD for the Department of Medicine for mentees was offered to interested SickKids faculty in June 2011.

A research project was developed and funded by the Paediatric Consultants Education Research Grant which focused on a novel method of evaluation of the mentorship program. The project is designed to prospectively study using qualitative methodology, a developmental evaluation model. The investigators are S. Weiss, K. Parker, T. Martimianakis, R. Schneider, and K. Leslie.

Dr. Michael Kauffmann (Medical Director of OMA-PHP) and his colleagues have developed three workshops for pediatric faculty. These occurred on April 15, May 13 and June 10, 2011. The topics covered included distress, burnout, recognizing and responding, as well as resilience and stress management.

Dr. Michael Kauffmann and his colleague also presented a workshop for leaders at SickKids on June 29, 2011. The title was, “Recognition and early management of distress in your colleagues.” Invited faculty to the workshop included division heads, education program directors, the Paediatric Executive team, and other faculty leaders including leaders at Holland Bloorview Kids Rehabilitation Hospital.

Medical Education Scholarship
As the Director of Scholarship, Tina Martimianakis, with the assistance of Eleanor Mitchell, oversees 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. The Office of Medical Education Scholarship also showcases the department’s education achievement and works to identify opportunities for future growth. The Educational Scholarship Enhancement Committee meets as needed to conceptualize new directions for medical education scholarship initiatives. Past members include Stacey Bernstein, Rayfel Schneider, Bob Hilliard, Vickey Breakey, Catharine Walsh, Elly Berger, Maria Mylopoulos and Melinda Solomon.
Programming to Enhance Education Scholarship

This past year, the Office of Medical Education Scholarship collaborated with the Learning Institute to offer a year of educational programming around issues related to innovation. Educators, teachers and trainees from across SickKids were invited to an interprofessional series of community and skill-building sessions incorporating innovative pedagogical and evaluation techniques. This series on innovation consisted of two parts: the Medical Education Scholarship Rounds and the Learning Institute skill-building sessions.

During the course of the year, participants had the opportunity to attend 10 one-hour Medical Education Scholarship Rounds (MESR) that were modelled on principles of transformative learning and designed to introduce participants to different forms of innovation, relevant theories of innovation and to make explicit how and why our scholarly activity can be conceived as innovative. Participants were encouraged to explore and reflect on their own educational activities and, given resources, to think about how to identify and tap into their innovative capacity. The Royal College Maintenance of Certification Program accredited the rounds. Outside the core faculty, consisting of Tina Martimianakis, Maria Mylopoulos, Kathryn Parker and Adam Dubrowski, guest lecturers were invited to offer perspectives of innovation. Among the invited guest lecturers were Ivan Silver, Brian Hodges, Bonnie Fleming-Carroll and Michelle Durrant.

The second part of this collaborative offering consisted of the Learning Institute two half-day skill-building sessions designed with the goal of helping with the continuing professional development of our SickKids teachers/educators and of building a community of practice through support and mentorship. The learning objectives for the skill-building sessions emerged in consultation with participants in the MESR so that the skill-building sessions would reinforce and build on the learning taking place during MESR rounds. The first session focused on stories of innovation and the second on idea scaffolding.

Throughout the year, the core faculty modelled educational innovation in program development through what they called “a play within a play.” They did this by discussing their own process of preparing for these sessions including their struggles and strategies for program delivery. In this way, their own learning was identified and shared with the larger group. Participants had the opportunity to collaborate with the faculty in the crafting of each session through open discussion as well as the evaluation process in the crafting of each subsequent session.

Those who participated in the “Year of Innovation” had the opportunity to:

- develop new resources (and identify existing ones) that can aid in the pursuit of educational innovation.
- build networks to sustain educational innovation.
- have a better understanding of how our work is innovative.

A number of ideas emerged from the “Year on Innovation” series for future initiatives such as providing mini faculty development sessions on “how to move your idea forward” and a journal club for “thinking about ways to integrate new knowledge into educational practice.”
Leadership in Education Beyond The Department of Paediatrics

Several of our faculty members currently hold key leadership positions in education beyond our department, demonstrating our growing capacity to inform educational practice more broadly.

Dr. Stacey Bernstein, Associate interim academy director Mississauga Academy of Medicine, Deputy Clerkship Director, University of Toronto

Dr. Karen Leslie, Director of the Centre for Faculty Development, University of Toronto and St. Michael’s Hospital

Dr. Bruce Minnes, Medical Editor of aboutkidshealth.ca

Dr. Jonathan Pirie, Co-leads the procedural lab in the Sickkids Learning Institute’s simulation program

Dr. Norman Rosenblum, Associate Dean, Physician Scientist Training, University of Toronto

Dr. Jay Rosenfield, Vice Dean of Undergraduate Medical Education, University of Toronto

Dr. Suzan Schneeweiss, Continuing Professional Educator for the Royal College of Physicians and Surgeons of Canada

Dr. Rayfel Schneider, Member, National CaRMS Paediatric Subspecialty Match Steering Committee

Dr. Brian Simmons, Director, Standardized Patient Program, University of Toronto

Dr. Susan Tallett, Chief of Education of the Sickkids Learning Institute Chair of the Education Subcommittee and the Continuing Professional Development Committee of the Canadian Paediatric Society

Honours and Awards

International


National

Nita D: Selected as member of the editorial team for Neurology – Resident and Fellow section, 2011.

University

Bernstein S: Wightman-Berris Academy Undergraduate Individual Teaching Award, University of Toronto, 2010.

Feldman B: Eugenie Stuart Award for Best Instructor, Faculty of Medicine Department of Health Policy, Management and Evaluation, University of Toronto, 2011.

Jessie van Dyk: Trainee of the Year Award, Neonatal-Perinatal Medicine Fellowship Training Program, University of Toronto, 2011.

Kives S: Chair’s Award for Continuing Medical Education Teaching Excellence. Department of Obstetrics and Gynecology, University of Toronto ($1000.00), 2010.

Ratnapalan S: Helen Batty Award for Faculty Development, 2010-2011.

Walsh C: Starr Medal, Postgraduate Medical Education Award, 2010.
Departmental Faculty

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

Azzie G: POWER Teacher Award, 2010.

Daneman D: 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.

Calpin C: R.H.A. Haslam Preclerkship Teaching Award to the faculty member who has demonstrated excellence in preclerkshop teaching.

Feldman M: POWER Teacher Award, 2010.

Gans M: The Lionel Weinstein Clerkship Teaching Award to the faculty member who has demonstrated excellence in clerkship teaching.

Kanani R: 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.

Kupfert B: Postgraduate Community Teaching Award in recognition of excellence in the teaching of paediatric residents within community-based hospitals and offices.

Laxer R: POWER Teaching Award, 2011.

Ling S: Runner-up. Subspecialty Teaching Award, Department of Paediatrics, University of Toronto, 2011.

Mahmud F: POWER Teaching Award, 2011.

Pirie J: 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.

Shouldice M: 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.

Singh N: The Undergraduate Community Teaching Award in recognition of excellence in the teaching of medical students within community-based hospitals and offices.

Solomon M: POWER Teaching Award, 2011.

Tse S: Department of Paediatrics Award for Teaching Excellence for the Paediatric Resident Lecture Series, 2010.

Residents/Fellows

Al-Hertani W: PeRLS Teaching award.

Chan M: CanMEDS Award – Core paediatric trainee.

Johnstone J: (PGY4) – Christopher Ondaatje Award to a senior resident for excellence in clinical teaching as nominated by core paediatric residents.

Larson C: (PGY3) – Christopher Ondaatje Award to a senior resident for excellence in clinical teaching as nominated by core paediatric residents.

Luca N: CanMEDS Award – Subspecialty trainee.

Divisional/Hospital

Akiyama T: William J. Logan Award for Excellence in Clinical Teaching, Division of Neurology, Department of Paediatrics, Hospital for Sick Children, 2011.

Bar Yosef O: Student Humanitarian Award, The Hospital for Sick Children, 2011.

Barozzino T: Award for Excellence in Clinical Teaching, Undergraduate and Postgraduate Teaching in Pediatrics, Education Achievement Day, St. Michael’s Hospital, Toronto, 2011.

Boutis K: Winner, Clinical Teaching Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, 2010-2011.

Lalani A: James C. Fallis Teaching Award for Paediatric Emergency Medicine Core Rounds: Best Presentation, The Hospital for Sick Children, 2010.

Ling S: The Fellow’s Award for Teaching and Mentorship, Division of Gastroenterology, Hepatology and Nutrition, 2011.

Moharir M: CanMeds Faculty Award, Division of Neurology, Department of Paediatrics, Hospital for Sick Children, 2010-2011.

Ochi A: William A. Hawke Award for Excellence in Clinical Teaching, Division of Neurology, Department of Paediatrics, Hospital for Sick Children, 2011.

Church P: Teacher of the Year, Division of Developmental Paediatrics Faculty Teaching Award, 2011.

Shah P: Excellence in Teaching Award, Neonatal-Perinatal Division, University of Toronto, June 2011.

Ratnapalan S: James C. Fallis Teaching Award (winner), Paediatric Emergency Medicine, 2010-2011.

Scolnik D: Winner of Clinical Teaching Award – Staff Physician Full-Time, Division of Paediatric Emergency Medicine, 2010.

Thull-Freedman J: Runner-up, James C. Fallis Teaching Award, 2011.

Weinstein M: Runner-up, James C. Fallis Teaching Award, Division of Paediatric Emergency Medicine Rounds, 2010.

Weitzman S: The Alvin Zipursky Teaching Award of the Division of Hematology/Oncology 2010-2011.

Educational Funding

In the past academic year, our faculty, residents and fellows also had significant grant capture with 31 awards totaling $1,357,094.71 (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, HSC

In the 2010-2011 academic year 4 Paediatric Consultants Education 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.

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, Wadha A, Bismilla Z ($5,000)

Faculty and resident perceptions about teaching and learning the paediatric musculoskeletal examination: An exploratory study. Schneider R, Hutchinson J. ($4,925)

Creating a novel mentorship program for junior faculty at a paediatric academic health sciences center- the role of a modified developmental evaluation model. Weiss S, Parker K, Leslie K, Martimianakis T, Schneider R. ($4920)

**Educational Development Fund, UofT**
The Educational Development Fund aims at “catalyzing initiatives that immediately and directly impact University of Toronto Faculty of Medicine education and teaching programs through innovation and development”. In a highly competitive year, the following project received funding: Hinting Strategies for Improving the Efficiency of Medical Student Learning of Deliberately Practiced Web-based Radiographs. Boutis K, Pusic M, Pecaric M, Shiau MC, Kalet A. ($19,980)

**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 merited with funding from a variety of sources including the Royal College, CIHR, SSHRC, NSERC and the Ministry of Health.


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, Armson H, Curran V. KT Canada SEED Funding Grant ($30,000 2011)


Can we change the face of immunization to one without pain? Implementation of a postnatal parental education intervention to optimize pain management during childhood immunization. Taddio A, Shah V, Franck L, Stephens, Ipp M. Canadian Institutes of Health Research – Operating Grant: Priority Announcement: Knowledge Translation ($100,000 2011-2012)

Canadian Child Health Clinician Scientist Program (CCHCSP) Strategic training program grant. Rosenblum N, Sweezy N, CIHR, SickKids Foundation, BC Women and Children’s, MICYRN ($1,500,000 2002-2015)

Community Health Worker’s Knowledge, Attitudes and perceptions of training and leadership in child health in rural Tanzania. Sharma T (Supervisor: Chan K). Medical Alumni Association, University of Toronto ($3,500 2010)


Developing and assessing ‘Preparation for Future Learning’ in medical students. Mylopoulos M, Woods NN. Medical Council of Canada; Fund for Research in Clinical Assessment ($34,896.72 2011)


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. Morin M, Mylopoulos M, Bell M, Schneider R, Dubrowski A. Bourse en pédagogie médicale, CHU Saint-Justine ($10,000 2011)


Image, Text, Sound and Technology Program. Interactive community simulation environment for Public Health curriculums. Kapralos B, Hogan M, Muirhead B, Dubrowski A. Social Science and Humanities Research Council of Canada ($49,452.00 2009-2010)


Learning retention and the optimal timing of refresher education. Boutis K, Pusic M, Pecaric M, Beckstead J, Babyn P. Royal College Medical Education Research Grant ($30,000 2011-2014)

Understanding surgeons’ psychosocial reactions to error: A grounded theory study. Moulton, CA, Steven G, Martimianakis M, Kitto S. Royal College of Physicians and Surgeons ($49,917.95 2011-2013)

Resuscitation competencies in inter-professional education (ReCIPE). Simmons B, Reeves S, Deland M. Neonatal Resuscitation Program Research Grant – Canadian Paediatric Society ($17,590 2009-2010)

Self regulated motor learning: Mechanisms and application. Dubrowski A. Natural Sciences and Engineering Research Council ($75,000 2008–2013)


Understanding the role of “Coach”. Leslie K, Ginsburg S, Egan–Lee E, Baker L, Reeves S. Within Faculty Development Royal College of Physicians and Surgeons Faculty Development Grant ($4,915 2011)

Sharing Our Knowledge Discoveries

Our educational research and scholarship is disseminated regularly in leading clinical and educational journals. This past academic year our faculty and residents authored 46 peer reviewed publications and 5 book chapters.

Peer Review Publications


Carnahan H, Dubrowski A, Walsh CM: Medical education research: The importance of research design and a programmatic approach. Medical Education 2010: 44(12): pp 1161-3


**Book Chapters**


Highlights of Other Forms of Educational Scholarship

Education scholarship can take many forms including the development or dissemination of knowledge related to faculty and student relations, student learning and teaching, curriculum and program development, assessment and program evaluation, and educational policies, among other things.

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.

Enhancing educational methods and pedagogy

Our department has a dedicated group of educators with expertise in educational methods and pedagogy. The past year, they have contributed to skill building in education within the department, the university and internationally. The following are some examples of this work:

Dr. Adam Dubrowski (with M Etkin, and U. Shafrir) designed a workshop entitled “Enhancing conceptual thinking in medical education with Meaning Equivalence Reusable Learning Objects (MERLO) and Interactive Concept Discovery (InCoD).” The workshop was delivered at the 1st International Conference on Faculty Development, May 2011, Toronto, ON.

Dr. Kathryn Parker participated in the delivery of the “Educating health professionals for interprofessional care” a five-day workshop at the Centre for Interprofessional Education, Faculty of Medicine, University of Toronto. She also taught in the Simulation Research Atelier, The Wilson Centre for Research in Education, Network for Excellence in Simulation Clinical Teaching and Learning.

Dr. Tina Martimianakis also led the development and delivery of the Wilson Centre Qualitative Research Refined: Design/Execution/Analysis Atelier. This intermediate 4-day workshop familiarized participants to educational research methodologies including ethnography, phenomenology, case studies and rhetorical/narrative approaches.

Program Development, Evaluation and Assessment

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. In the area of assessment and evaluation we have a growing focus on using existing modalities or developing new tools to assess learning of complex tasks including specialized procedures, or working in teams.

The following are only some examples of activities that fall in this category:

In the Division of Cardiology, the past year included the development of a fetal cardiac MRI research program and clinical service at SickKids. This original work was achieved through a collaboration between the U of T Imaging Research group led by Dr. Macgowan and the SickKids cardiac MRI team. New techniques have been developed which have led to a new understanding of fetal cardiovascular
physiology and rapidly been adopted into clinical practice within the context of the development of a fetal cardiac interventional program under the leadership of Dr. Jaeggi. There are efforts underway to broaden the application of this technology to aid decision making in the management of fetal distress. CIHR grant applications and two new prospective REB applications are currently in progress.

The Division of Hematology/Oncology is committed to facilitating knowledge exchange through international partnerships with a particular focus on countries lacking the health care resources available in Canada. This year marked the launch of two such initiatives in collaboration with SickKids International: the Global Sickle Cell Disease Network, under the leadership of Dr. Isaac Odame, and the Caribbean Collaboration in Pediatric Cancer and Blood Disorders, under the leadership of Dr. Victor Blanchette.

In the Division of Neurology, work was undertaken to develop a new paediatric neurology curriculum which will be a didactic, CANMEDs format course, delivered over the next two years. A number of members of the faculty of the Department of Paediatrics outside of the Division of Neurology have agreed to participate.

Drs. S. Radhakrishnan and S. Bernstein developed and launched the Summer Paediatric Research and Mentorship Program for undergraduate medical students (2010-11).

GI/Hepatology and Nutrition divisional members continue to be active nationally and internationally in organizing post-graduate and continuing medical education courses for pediatric gastroenterologists and fellows in training. During 2010-2011 these included leadership roles in organizing the North American Society for Pediatric Gastroenterology Hepatology and Nutrition (NASPGHAN) first year fellows course (Dr. Vicky Ng); the Canadian Association of Gastroenterology (CAG) Gastroenterology Residents in training course (Dr. Jones); National Mentoring in IBD symposium (Dr. Griffiths).

A central role of the Paediatric Gastroenterology Training Program is to teach trainees how to perform endoscopic procedures. Unfortunately, there is currently no validated objective measure of competence in colonoscopy for use in the paediatric setting. Drs. Walsh, Ling and Walters from the Division, along with Dr. Carnahan from the Wilson Centre for Research in Education, are developing an educational evaluative tool designed to measure the competence of clinicians performing colonoscopy on paediatric patients. The tool is currently being tested in the clinical and simulated setting in order to assess its reliability, validity and responsiveness as a measure of competence of clinicians performing colonoscopy.

In the Division on Neonatology, Dr. Hilary Whyte developed a competency-based curriculum for initial education for all critical care paramedics in Ornge that took place from April 2010 to June 2011. Dr. Aideen Moore is the unit lead for the research ethics module for the web-based curriculum for the Canadian clinician scientist training program. Contents of the module include: Introduction to research ethics, consent and capacity in research, privacy and confidentiality in research, authorship and intellectual property, and conflicts in research. Dr. Afif El Khuffash developed a targeted neonatal echocardiography teaching website aimed at staff and trainee neonatologists worldwide and intended to provide an introduction to basic echocardiography techniques. Dr. Ann Jefferies is conducting an evaluation of an international training program in neonatal – perinatal medicine at Children’s Hospital Fudan University Shanghai (principal investigator) as well as evaluating an international neonatal nursing program for the People’s Republic of China.
The Division of Adolescent Medicine provides state-of-the-art, comprehensive specialty care to patients up to 18 years of age, focusing its clinical activities in five programs: Eating Disorders, Good 2 Go, Substance Abuse, Young Families and SickKids Interprofessional Team for Youth (SITY). All of these are comprehensive and interdisciplinary programs with strong clinical, educational and research activities.

**Eating Disorders Program**

The Eating Disorders Program at SickKids provides interdisciplinary, family-based treatment to children and adolescents with a wide range of eating disorders and complex eating problems. Clinical services range from consultation and outpatient programs to intensive day hospital and in-patient services. Multifamily group therapy continues to be a vital component of eating disorder care and allows for families to receive comprehensive treatment and support in a timely manner. The Eating Disorders Program provides training in the care of these complex patients to medical students, paediatric core and subspecialty residents, as well as to a wide range of interdisciplinary trainees. Additionally, the Ontario Community Outreach Program (a collaborative of SickKids, University Health Network and the MOHLTC) trains health-care professionals around the province to assess and treat patients with eating disorders, which allows many families to receive excellent treatment in their home community. The Eating Disorders Program has an active research agenda. Our primary areas of research include the biological underpinnings of eating disorders, medical complications and psychological interventions for eating disorders and determinants of outcomes.

**Good 2 Go Transition Program**

The Good 2 Go Transition Program was founded almost five years ago at SickKids with the aim of preparing all adolescents with chronic health conditions to graduate with the skills and knowledge needed to succeed in the adult oriented healthcare system. It was realized at the time that this would require a significant change in the culture of SickKids that could only happen by working collaboratively with clinics and programs at the hospital. Adult healthcare providers were invited into the process from the beginning. Good 2 Go is currently involved in 30 activities, including:

- **Transfer Clinics**, which provide the opportunity for youth and their parents to meet their new adult-care provider, meet with other transferring patients, attend a group led by adolescent medicine and make a MyHealth Passport. These are conducted in a number of clinics and in the past three years, more than 200 patients and parents have participated. Young people and their parents report being
better prepared, more knowledgeable and less worried about transfer to the adult system as a result of attending a transition clinic/orientation event.

- **MyHealth Passport** is a customized wallet-sized card (and electronic version) used to keep track of and communicate important medical information. There are currently 40 templates, created iteratively. To date there have been 4,096 uses by patients. As well, 989 users have completed an online evaluation, with the vast majority finding it easy or very easy to use (only 10 said it was hard). A more in depth phone survey with very positive results was published early in 2011. The Nova Scotia Capitol Health region has adopted the passport and plans to have 2,000 uses per year.

- **“Help them grow so they’re Good 2 Go” Timelines** are one of our most in-demand tools. Outlining ways that parents can help their children grow up to be self-managers of their health care, these posters also include resource suggestions given to families near the time of diagnosis. There are 15 condition specific timelines and a general one (funded by the Women’s Auxiliary). Evaluations show high ratings of helpfulness and usability.

- A youth-friendly **Self-management Program** was designed and delivered by a collaboration between providers at TGH, PMH and a group of SickKids and UHN patients, led by Good 2 Go. An evaluation is underway. If successful, this program will be provided more generally throughout the hospital and the manual will be marketed.

The program provides education and training to a variety of learners, including medical students, core and subspecialty paediatric trainees, child and youth counsellor and nurse practitioner students. Members of the program are also engaged in the provision of continuing education locally, nationally and internationally. While continuing to respond to the needs of the community in providing education to groups of adolescents in school-based settings, the program is shifting the focus of the outreach education efforts to target those professionals working with adolescents in order to provide them with the knowledge and skills to enhance the work they do with this complex patient population. One extremely successful initiative was a Professional Development Day in March 2011 that attracted over 70 hospital and community-based professionals who work with adolescents.

Integral to the clinical work is the ongoing pursuit to develop new knowledge about how best to deliver care to adolescents and their families. These objectives are pursued in research projects that look at evaluation of family-based programs and program outcomes in this high-risk population. Funding was recently obtained from Health Canada for a study that will provide new knowledge about long-term outcomes for adolescents who have received intensive treatment for alcohol and substance abuse. Another research project in progress is aimed at understanding the characteristics of adolescents who present to the SickKids emergency room with alcohol- and/or substance-related issues.

**Substance Abuse Program**

The Substance Abuse Program continues to provide assessment and ongoing treatment to adolescents and their families who are experiencing difficulties as a result of alcohol and other substance abuse. Services provided include outpatient counselling, comprehensive health assessment and follow-up, intensive day treatment, as well as parent support and counselling.

The program provides education and training to a variety of learners, including medical students, core and subspecialty paediatric trainees, child and youth counsellor and nurse practitioner students. Members of the program are also engaged in the provision of continuing education locally, nationally and internationally. While continuing to respond to the needs of the community in providing education to groups of adolescents in school-based settings, the program is shifting the focus of the outreach education efforts to target those professionals working with adolescents in order to provide them with the knowledge and skills to enhance the work they do with this complex patient population. One extremely successful initiative was a Professional Development Day in March 2011 that attracted over 70 hospital and community-based professionals who work with adolescents.

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**SickKids Interprofessional Team for Youth: SITY**

The SickKids Interprofessional Team for Youth (SITY) provides youth with access to expert adolescent health-care services from our team of highly skilled interprofessional health-care providers. The team addresses a wide spectrum of concerns including illness-specific issues for youth with chronic health conditions, the identification and reduction of high-risk health behaviours and advocacy efforts. Increasingly, the SITY team is being consulted regarding youth with clinical conditions that are considered diagnostic dilemmas.
SITY also provides clinical services in collaboration with renal, cardiac and lung transplant programs, the HIV, SLE and STOMP clinics and through in-patient consultations. SITY works with the Substance Abuse Program to address the often complex health needs of the adolescents in the program.

In addition, SITY continues to build partnerships with local agencies such as Toronto Children’s Aid Society, St Stephen’s Community House, and the Triangle School Program of the Toronto District School Board in an effort to enable youth-at-risk in the downtown core to access health information and necessary health services otherwise unavailable to them. SITY has established a reputation as a safe space for lesbian, gay, bisexual, and transgender youth in the community through outreach and community education provided to such agencies as York Family Services.

The Continuity of Care Clinic (C3) for Adolescent Medicine subspecialty residents continues to focus on continuity of care for medical services, ongoing counselling to youth, and enhancing the ability for successful interventions.

Finally, this year representatives of the SITY team will be contributing to adolescent health at an international level by providing a five-day curriculum to student health advisors placed in secondary schools in Singapore.

The Young Families Program

The Young Families Program (YFP) focuses on providing health care, advocacy, support and education to high-risk adolescent parents and their children. The YFP collaborates with several agencies including prenatal homes, public health and child protection agencies. In particular, the YFP provides a consultation clinic alongside the St. Michael’s Hospital Inner City team at The June Callwood Centre for Teenagers and clinical care, education and policy recommendations.

The YFP, in collaboration with Suspected Child Abuse and Neglect (SCAN) team, has created the High Risk Project - a clinical research project that has resulted in a developmentally-appropriate standardized approach to clinical assessment, education and ongoing care of patients. The team is embarking on the intervention phase with an emphasis on maternal and infant mental health and child-parent relationships. As a result, the YFP has developed a collaboration with the Infant Mental Health Team in the Department of Psychiatry, meeting the needs of the most vulnerable at-risk youth and their children. A collaborative research relationship with faculty members from the Lawrence S. Bloomberg Faculty of Nursing University of Toronto will support enhanced research capacity in the field of high-risk adolescent parents and their children. An interdisciplinary research group has been formed with several projects underway.

The interprofessional team members continue to provide resources and education to health professionals in a variety of settings through structured clinical experiences, conference presentations and committee participation and affiliation with several faculties at the University of Toronto. Teaching of all disciplines is occurring in the clinic setting, and increasingly in the community sites where high-risk youth are presently underserviced.

The Young Families Program is a designated site for the new Social Paediatrics Program where medical students and residents learn to integrate the principles of the social determinates of health to a vulnerable high-risk population. In addition, members of YFP are working with the social paediatrics team to integrate innovative models of health care into community sites such as school-based clinics.

Our Team

The Division of Adolescent Medicine at SickKids is the largest adolescent medicine division in Canada, with a diverse interprofessional clinical team and staff. Members of the Division include a variety of health-care professionals with unique expertise in the care of adolescents. Our team provides flexible, responsive and complete health care for
Teens and their families who need help with eating disorders, substance abuse, teen parenting, complex health-care needs, as well as transition to adult health care. Together, we are also leaders in providing innovative education, research and advocacy to help adolescents reach their full potential.

Research

The Division of Adolescent Medicine continues to integrate innovative clinical research into the care of adolescents and their families. Research remains a fundamental and focused component of the work in the Division. Key research areas include biological studies of eating disorders and their medical consequences, epidemiology of early-onset eating disorders, assessment of Vitamin D status in children and adolescents with eating disorders, and approaches in understanding and evaluating the process of health care transitions for youth with special health care needs. The Good 2 Go Transition Program is involved in evaluating self-management programs and skills for youth with chronic health conditions. The SITY Program in collaboration with the Divisions of Microbiology and Paediatric and Adolescent Gynecology are looking at innovative screening methods for sexually transmitted infections. The Young Families’ High-Risk Project will begin a new phase of its study exploring the role of teen fathers. Several research projects have been undertaken by the Substance Abuse Program including the GAIN-Short Screener Project, and the Substance Abuse Day Treatment follow-up study funded by Health Canada to look at the long-term outcome of patients in the Substance Abuse Day Treatment program. Other innovative research projects include a study that will design, develop, use, and test a mobile phone-based diabetes self-management system for adolescents with type 1 diabetes, a QA project examining teen preferences of chaperones during intimate physical examinations and the evaluation of faculty development and mentoring.

Teaching and Education

The Division provides training opportunities to a diverse group of learners including undergraduate and postgraduate medical trainees from medicine (Paediatrics, Psychiatry and Family Medicine), nursing, psychology, social work, nutrition, art therapy and child youth counsellor training programs. Members of the Division continue to make important educational contributions to local, provincial, national and international committees, and have leadership roles at the Centre for Faculty Development, Royal College of Physicians and Surgeons of Canada, Canadian Paediatric Society Adolescent Health Committee, American Academy of Pediatrics Section on Adolescent Medicine, the Society for Adolescent Health and Medicine, the Canadian Association for Adolescent Health, the Canadian Association for Medical Education and the Academy for Eating Disorders.

The Division of Adolescent Medicine continues to have a key role at SickKids and the University of Toronto in the area of youth advocacy, overseeing the paediatric residents’ school outreach initiative and working with others on the Advocacy Committee and in Social Paediatrics.

The recently accredited training program in Adolescent Medicine underwent a very successful internal review in September 2010. As with all newly accredited training programs, this review was mandated by the Royal College and was a requirement for accreditation of the program to be extended beyond the initial year and a half that is allowed prior to a program review taking place. As a result of the review, the Royal College granted the program full accreditation. The first subspecialty residents in Adolescent Medicine at SickKids graduated in June 2011. Members of the Division have continued to play a leadership role in the development, of the RCPSC subspecialty examination in Adolescent Medicine. To date, the exam has been offered in September, 2010 and 2011.
The Division has been an active contributor to the SickKids International initiative in Doha, Qatar in a number of ways. The Division is contributing through supporting the development of an adolescent medicine program with the Hamad Medical Corporation in Qatar. Members of the Division have made three trips and established a clear plan for adolescent medicine as part of paediatrics, with priorities, timelines and input into recruiting. The next phase is to help create programs, starting with transition initiatives for a number of subspecialties. Simultaneously, members of the Division of Adolescent Medicine are providing support and professional educational development to faculty in Doha.

The Division launched its quarterly newsletter Adolessence which provides information about divisional programs, services and events. It also offers updates on events involving the Division. The newsletter has been widely disseminated in an effort to inform our colleagues throughout the Hospital about the many initiatives happening in the Division of Adolescent Medicine.

**Honours**

Katzman DK: De Marco Visiting Professor for Adolescent Health, Division of Adolescent Medicine, Department of Pediatrics, Children’s Hospital Medical Center of Akron, Akron, Ohio.

Katzman DK: Visiting Professor, Ohio Valley Regional Society for Adolescent Health and Medicine, Akron, Ohio.


Kaufman M: The Alford Memorial Lecturer, Buffalo Children’s Hospital.

**Awards**

Chen I: Oral Presentation Award, International Paediatric Transplantation Association Fellows Symposium, Health Value & Self-reported Quality of Health in Adolescents with Renal Transplants, Hanover, Germany, May 29, 2010.

Maser C: Iris Weiss Memorial Bursary Awards.

Toulany A: Second Place, Clinical-Senior Category, Department of Paediatrics Research Day 2011.

Thompson G: Grace Evelyn Simpson Reeves Award for Excellence in the Nursing Leadership Category.

**Publications**


Books and Book Chapters


Funding

A centralized clinical outcome measurement of eating disorders in youth across Ontario: A multi-site partnership. Buchholz A (PI), Heinmaa M, Pinhas L (HSC), Katzman DK (HSC), Boachie A (Southlake), Jasper J (Southlake), Henderson K (CHEO), Buchholz A (CHEO), Spettigue W (CHEO), Norris M (CHEO), Barrowman N (CHEO), Lafrance A (Laurentian University). Excellence in Child & Youth Mental Health. Buchholz A (PI) ($25,000 2009-2010)

A centralized clinical outcome measurement of eating disorders in youth across Ontario: A multi-site partnership pilot study. Heinmaa M (PI), Pinhas L (HSC), Katzman DK (HSC), Boachie A (Southlake), Jasper J (Southlake), Henderson K (CHEO), Buchholz A (CHEO), Spettigue W (CHEO), Norris M (CHEO), Barrowman N (CHEO), Lafrance A (Laurentian University). Psychiatry Endowment Fund. ($25,000 2011-2010)

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, Armson H, Curran V. KT Canada SEED Funding Grant ($30,000 2011)


Creating a novel mentorship program for junior faculty at a paediatric academic health sciences center- the role of a modified developmental evaluation model. Weiss S, Parker K, Leslie K, Martimianakis T, Schneider R. Paediatric Consultants Education Grant ($4920 2011)
Kidney Foundation of Canada ($85,134 2008-2010)

Development of specialized transition program for HIV+ patients. Gilead Foundation ($24,000 2009)

Effects of anorexia nervosa on peak bone mass. Klibanski A, Katzman DK (Principal Investigator at SickKids site), Misra M, Herzog D, Levitsky L, Bouxsein M, Russell M. 
National Institutes of Health/CFAR ($5,000,000 2011-2016)


National Institute of Mental Health ($6,250,000 2007-2012)

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

Mobile phone-based self-management system for adolescents with type 1 diabetes mellitus: A home-based self-care tool that links the client and family with their health care team. Cafazzo J, Palmert M, Katzman DK, Leonard K, Casseleman M. 
Care to Know Centre, Saint Elizabeth Health Care ($119,000 2009-2010)

International Society for Heart and Lung Transplantation ($12,000 2009)


The development and evaluation of an internet site to enhance the transfer and transition from paediatric to adult-focuses cardiology care. Good 2 Go Transition Program. Labatt Heart Centre Innovation Fund ($25,000 2009-2011)

Understanding the Role of “Coach”. Leslie K, Ginsburg S, Egan-Lee E, Baker L, Reeves S. Within Faculty Development Royal College of Physicians and Surgeons Faculty Development Grant ($4,915 2011)

Vitamin D status in children and adolescents with anorexia nervosa. Katzman, DK, (PI) Steinegger C, Sherwood K, Segal S, Pinhas L. Paediatric Consultants Partnerships Grant ($9,889.34 2010-2012)
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 reaches 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 marked 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 physiologic measurements in children.

The cardiovascular research focus within the 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 program. As an example, the biology of a new technique, remote ischemic preconditioning, has been explored and translated to clinical trials here at SickKids. The heart centre is making a major investment in the development of biobanking 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 endowment, 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 Labatt Family Heart Centre. Following a series of important internal initiatives, the extraordinary generosity of the Labatt family has funded the redevelopment and future activities of the heart centre at SickKids.

**Honours and Awards**

Bradley T: Winner of Best Poster Award Association for Research into Arterial Structure and Physiology, Artery 10 Meeting, Verona, Italy, 2010.

Hamilton R: Supervising Investigator, Gina M. Finzi Memorial Student Summer Fellowship, 2011.

Stephenson E: Family Centered Care Humanitarian Award, 2010.

**Publications**


Blankier S, McCrindle BW, Ito S, Yeung RSM: The role of atorvastatin in regulating the immune response leading to vascular damage in a model of Kawasaki disease. Clinical Experimental Immunology 2011: March 1 [Epub ahead of print].


The single most important development of the last decade has been the establishment of the Labatt Family Heart Centre at SickKids.


Books and Chapters


**Funding**

Adolescent Type 1 Diabetes Cardio-Renal Intervention Trial (AdDIT). Dunger DB, Daneman D, Curtis JR, Mahmud FH, Bradley TJ. British Heart Foundation ($30,000 2007-2012)

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 R, Bradley TJ, Cherney DZI, Reich HN, Scholey JW. Juvenile Diabetes Research Foundation - Canadian Clinical Trials Network ($3,657,088, 2011-2016)

A novel adaptation of strain-based myocardial performance evaluation in heart rate dependent contractile remodeling. Labatt Family Heart Centre Innovations Fund ($17,524 2010-2011)


A randomized, controlled, multidose, multicentre, adaptive phase II/III study in infants with proliferating infantile hemangiomias 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, Chakkittakandiyil A, Lara-Corrales I. Pierre Fabre Dermatologie ($373,044 2010-2020)

Associate Member and Director of Coordinating Center-“A Transatlantic Network to Define the Mechanisms, Mediators and Clinical Applications of Remote Ischemic Preconditioning”. Redington AN, Callahan J, Wilson G, Kharbanda R, Toftegaard NT, Botker EH. The Leducq Foundation ($6,523,095 US 2006-2011)

Biologic determinants of right ventricular remodeling in tetralogy of Fallot. Mital S, Redington AN, McCrindle B, Mertens L. Heart & Stroke Foundation of Canada ($150,634 2011-2016)

Can post-operative biventricular pacing improve cardiac output and decrease mechanical ventilation in children with electro-mechanical dys synchrony after surgical repair of atrioventricular septal defect? Friedberg M, Stephenson EA. Labatt Family Heart Centre Innovations Funding ($48,640.50 2010-2012)

Cardiovascular biomarker discovery in disease and development through predictive precision proteomics. Mital S. Ontario Research Fund - Global Leadership Round in Genomics & Life Sciences Competition (GL2 Competition) (Total: $6,641,774 Mital: $280,000)


Contractile adaptations to constrained heart rate conditions. Gross G. Canadian Institutes of Health Research (CIHR) Operating grant ($529,180 2008-2012)

Creating a fetal lamb model of hypoplastic left heart syndrome. Chaturvedi R, Jaeggi E. Labatt Family Heart Center Innovation Grant ($21,000 2008-2011)


Effect of a pilot healthy lifestyle program on obesity prevention in overweight adolescents with dyslipidemia: a 3-arm randomized controlled clinical trial. Wong H, Chahal N, Manlihot C. Institute Danone Grant-in-Aid Program ($50,000 2010-2011) ($135,000 2010-2013)

Emerging team in ARVC research. Hamilton R.M. Canadian Institute of Health Research ($2,499,925 2011)

Establishment of normal values for echocardiography ventricular and vascular functional research. Mertens L, Bradley TJ, Friedberg MK, Jaeggi ET. The Labatt Family Heart Centre - Innovation Fund ($48,000 2010-ongoing)

Fetal cardiac MRI for normal fetal cardiovascular physiology. Seed M, Macgowan C, Yoo S-J, Grosse-Wortmann L, Jaeggi E. Labatt Family Heart Center Innovation Grant ($50,0002009-2011)

Genomic basis of congenital heart disease. Mital S. McLaughlin Centre Accelerator Grant in Genomic Medicine ($50,000 2011)

Glucose homeostasis and cardiac output after pediatric cardiac surgery. Mital S. Heart and Stroke Foundation of Ontario ($195,019 2011)


Inflammation and atherosclerosis in paediatric rheumatic disease. Bradley TJ, Beyene J, Schneider R, Feldman B, Silverman ED. The Labatt Family Heart Centre - Innovation Fund ($12,000 2007-ongoing)


Late functional status in a cohort of survivors with pulmonary atresia intact ventricular septum from the Congenital Heart Surgeons Society Study. Collaborators: Caldarone C. Children’s Heart Foundation ($89,190 US 2011)

Longitudinal examination of atherosclerotic risk in paediatric systemic lupus erythematosus: Even children are at risk. Silverman ED (Co-PI), Bradley TJ (Co-PI), Beyene J, Bargman JM. Canadian Institute of Health Research Operating Grant Competition ($489,367 2011-2014)

Molecular expression and epitopes in congenital heart block. Hamilton RM. Canadian Institute of Health Research CIHR ($100,000 2010-2011)

Myocardial viability in cardiac ECMO assessed by PET. Chaturvedi RR, Labatt Heart Foundation ($11,000 CAD 2011)


Personalized medicine in the genomics era: An international symposium on childhood heart disease. Mital S. Ontario Genomics Institute Genomics Capacity Building Workshop ($10,000 2011)


Quality of life following paediatric heart transplantation. Anthony SJ, Dipchand AI, Nicholas D, McCrindle BM. Labatt Family Heart Centre Innovation Fund ($20,000 2009-2010)


Thromboprophylaxis before Fontan for neonates and infants with single ventricle physiology. Mital S. NIH/NLHBI. **Pediatric Heart Network** ($7,518,965)

Towards a better understanding of Kawasaki disease. Yeung R, Siminovitch K. **Canadian Institutes of Health Research** ($196,935 2011-2012)

Trial of beta blocker therapy (Atenolol) vs. angiotensin II receptor blocker therapy (Losartan) in individuals with Marfan syndrome. Lacro RV, Dietz HC (Study PIs), McCrindle BW, Bradley TJ. **Pediatric Heart Network** ($2,047,000 2006-2011)

Urinary inflammatory markers in adolescence with type 1 diabetes (AdDIT ancillary study). Daneman D, Sochett EB, Mahmud FH, Bradley TJ, Cherney DZI, Reich HN, Scholey JW. **JDRF** ($TBA: 2011)

Ventricular-ventricular interactions and their modulation for enhancement of right ventricular performance in pulmonary arterial hypertension. Friedberg M, Redington AN, Humpl T, Mertens L. **Canadian Institutes of Health Research Operating Grant** ($298,500 2010-2013)

Ventricular-ventricular interactions and their modulation for enhancement of right ventricular performance in pulmonary arterial hypertension. **Heart & Stroke Foundation of Ontario Operating Grant** ($119,946 2010-2012)

Ventricular function in congenital and pediatric heart disease. Mertens L. **Belgian Fund for Scientific Research (€50,000/year 2001-2011)**

There can be no keener revelation of a society’s soul than the way in which it treats its children.

*Nelson Mandela, former president of South Africa*
The Division of Clinical and Metabolic Genetics is committed to providing excellence in patient care, research and education.

In April of 2010, Dr. Peter Kannu joined the Division in a full-time capacity. He completed his clinical genetics training at Starship Children’s Hospital in New Zealand and the Royal Children’s Hospital in Melbourne, Australia, and was appointed to Queen’s University Department of Paediatrics from 2008 to 2011 as a clinical geneticist and associate professor. Dr. Kannu is in the final stages of writing his PhD on the “Molecular Genetics of Arthritis”. He is also a team investigator in Professor Ben Alman’s research laboratory where his research concentrates on Wnt and Hedgehog signaling in cartilage and bone.

The Division hosted a Clinical and Metabolic Genetics Subspecialty Day at this year’s Paediatric Update Conference. The specialty day planning committee was co-chaired by Dr. Roberto Mendoza and Dr. Daune MacGregor. The overall goal was to provide paediatricians with comprehensive practice guidelines and approaches to management of children with genetic disorders.

Research endeavors 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 impacted our patterns of practice. There are many new challenges in the interpretation of entirely novel data in clinical settings.

The Tenth Annual Starbucks Clinical Research Summer Students Competition was awarded to Dr. Julian Raiman and Dr. Dominic Amato, Retrospective Study of Bone Health in Gaucher Disease at the Hospital for Sick Children and Toronto General Hospital; Dr. Peter Kannu and Ms. Andrea Shugar, Establishing DNA testing criteria for children with possible Neurofibromatosis type 1; Ms. Karen Tam, Dr. Robin Hayeems, Ms. Louise Taylor, and Ms. Riyana Babul-Hirji, Exploring the genetic counselling needs and expectations of parents who have a child with cystic fibrosis; Dr. Rosanna Weksberg, DNA Methylation Alterations in CHARGE syndrome; and Dr. Andreas Schulze, Quantitative in vivo magnetic resonance (MR) spectroscopy of the brain in children as standard of care at SickKids.

The Division of Clinical and Metabolic Genetics has developed and participated in numerous educational activities within the Hospital. It has important links to the Research Institute and the Department of Paediatric Laboratory Medicine. The Division directs fellowship and residency training programs in genetic medicine as well as the MSc Program in genetic counselling. During the 2010–2011
academic year, we had nine medical genetics residents and four clinical fellows, making our division one of the largest training programs in Canada.

As is the case for many clinics at SickKids, transitioning patients to adult facilities requires careful planning. The Genetic Metabolic team has developed a passport with the Good2Go team for patients between the ages of 16 and 18. A transition strategy includes a readiness checklist, GMD passport, formal genetic counselling, discussion of the adult transfer plan, as well as planning a “meet and greet” visit to the adult genetics program at Toronto General Hospital just prior to their last metabolic clinic visit at SickKids. In addition, the Genetic Metabolic team, led by Dr. Hanna Faghfoury, is currently developing a transitional care checklist for genetic metabolic patients aged 13 to 15. The checklist is for the team to use with this age group to identify areas for discussion in the areas of medical needs, diet, psychosocial and schooling. Tools from the Good2Go program will be utilized including the readiness checklists and Myhealth passport. The Phenylketonuria team held their annual education day in conjunction with SickKids Specialty Food Shop in April. Families were able to take part in cooking demonstrations and heard from experts in the field.

In addition, the Division’s three teaching awards to honour excellence in teaching within the Division were awarded in June to Dr. Hanna Faghfoury for excellence in teaching by a staff member; Dr. Ramses Badilla, for excellence in teaching by a trainee; and Ms. Andrea Shugar for excellence in teaching by an interprofessional staff member. These awards were voted on by the trainees and students.

Dr. David Chitayat was the recipient of the 2010 Canadian College of Medical Genetics Founders Award for Excellence in Medical Genetics. This award is conferred upon individuals who have made a significant contribution to the Canadian College of Medical Geneticists and the genetics community. Dr. Walla Al Hertani, genetic metabolic fellow, was awarded the SickKids Foundation 2011 Student Humanitarian Award. The award is to recognize and honour students who have consistently demonstrated compassion and humanitarianism in providing care to patients and their families.

As well, we received two Tapestry Awards this year. These awards, provided by SickKids New Immigrant Support Network, celebrate staff and volunteers who promote cultural competence values at the Hospital. The Genetic Metabolic team was awarded the Planters Award which recognizes a group that seeks out opportunities to enhance their own cultural competence and teaches others, is respectful and understanding of others points of view and looks for areas in which cultural competence seeds can be planted and cared for until they grow. Dr. Komudi Siriwardena was awarded the Storyteller Award recognizing a staff or volunteer who communicates clearly, openly and respectfully, encourages honest discussion and finds and uses available resources to communicate health and hospital information.

Honours and Awards

Al Hertani W: Student Humanitarian Award, SickKids Foundation, April 2011.

Chitayat D: Founders Award - Excellence in Medical Genetics, Canadian College of Medical Genetics, October 2010.


Publications


Books and Chapters


Funding

A phase 3, randomized, double-blind, Placebo-Controlled, multinational clinical study to evaluate the efficacy and safety of 2.0mg/kg/week and 2.0 mg/kg/every other week BMC 110 in patients with mucopolysaccharidosis IVA (Morquio A Syndrome). Raiman J. Biomarin Pharmaceutical ($42,000 2011)

A pilot study in patients with Niemann-Pick disease type C analysis of individual species of lipids and evaluation of filipin staining in leucocytes. Raiman J, Mahuran D, Rigat B, Badilla R. Dr. R. Weksberg Grant Competition ($7,481 2011)

A retrospective natural history study of patients with Lysosomal acid lipase deficiency/wolman phenotype LAL-1-NH01. Raiman J (Site PI). Synageva Biopharam Corporation ($4,400 2011)

ATN AIR-P-10-02. The study of toddlers with autism and regression (STAR). Schulze A. HRS (subcontract Massachusetts General Hospital) ($280,000 2011-2012)


Research endeavors 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.

Finding of rare disease genes in Canada (FORGE Canada) Canadian Pediatric Genetic Disorders Sequencing Consortium. Mendoza R (Collaborator). Genome Canada, CIHR, Genome Quebec, Genome BC ($3,000,000 2011-2012)


HPN 100–007. A phase 3, open-label study of the safety of HPN-100 for the long-term treatment of urea cycle disorders (Treat UCD). Schulze A. Hyperion Therapeutics ($33,560/patient 2010-2012)

HPN 100-011 – Long term use of HPN–100 in urea cycle disorders. Schulze A. Hyperion Therapeutics ($50,000 2010-present)

Insulin secretion and sensitivity in patients with glycogen storage disease I or III. Schulze A. Halee Ochshorn Fund, SickKids Foundation ($40,000 2010-present)


Quantitative in vivo magnetic resonance (MR) spectroscopy of the brain in children as standard of care at SickKids. Schulze A. Starbucks Clinical Genetics Research Studentship Award ($4,880 2011)

The GeneMed Program, Division of Clinical Pharmacology and Toxicology, The Hospital for Sick Children. Koren G, Chitayat D, Ito S, Madadi P. McLaughlin Centre Accelerator Grant Competition ($60,000 2011-2012)

Treatment of GAMT (guanidinoacetate methyltransferase) deficiency with high-dose ornithine to reduce the accumulation of the neurotoxin guanidinoacetate by inhibition of the AGAT enzyme (arginine: glycine amidinotransferase). Schulze A. Heinz/Mead Johnson/ Weston Endowment ($17,033 2011-present)

The Division of Clinical Pharmacology and Toxicology at SickKids is one of the largest and the 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 collaborating with Division of Allergy and Immunology to provide specialized outpatient follow-up and management for those with various drug/toxin-related problems. The two information centres, Motherisk and the Poison Centre, receive annually about 35000 (Motherisk) and 75000 (Poison Centre) inquires, which have reached the limit of the response capacity of the systems. Motherisk Program directed by Dr. Gideon Koren continues generating and dissemiating new knowledge in the field of drug safety for fetuses and breastfeeding babies. The Ontario Poison Centre led by Dr. Margaret Thompson has now become a hub for medical toxicology training in Canada, attracting many residents and fellows nationally and internationally.

The Division is one of the two major training sites of the Royal College, Dr. Ito representing SickKids Clinical Pharmacology is co-leader of the European Union-funded international initiative of Paediatric Pharmacology training to address global needs of paediatric clinical pharmacologists.

Research in the Division includes drug metabolizing enzymes and their regulation, drug transporters, placental and mammary gland drug transport and metabolism, and reproductive toxicology and teratology. The breadth and depth of these basic and clinical research programs are shown in the publications (over 60) and funding records (over $3 million during this year). Our Division members serve as editors and associate editors of key journals in the discipline, showing strong leadership in the field.

Honours and Awards

Koren G: Distinguished Scientist Award- Canadian Society for Clinical Investigation, 2010

Koren G: The Paulson Medal Award- Norwegian Society for Pharmacology and Toxicology, 2011

Nulman I: Schwarz-Reisman Visiting Scholar Award, 2010

Publications


Books and Chapters


Funding


Genotype specific approaches to therapy in childhood (GATC); Canadian Pharmacogenomic Network for Drug Safety (CPNDS). Ito S (PI: Dr. Carlton: UBC). CIHR ($105,000/yr for SickKids: 2009-2014)

Drugs and human milk (MT13747). Ito S. CIHR ($376,323 2007-2010); ($602,292 2010-2015)


The role of placenta in fetal toxicology. Koren G. 
**CIHR** ($854,309 2007-2011)


Central for the study of complex childhood diseases (CSCCD). Koren G (Martin Post, PI). **Canadian Foundation of Innovation** ($2,400,000 2007-2010)

Koren G. **Canadian Pharmacogenetic Network for Drug Safety.** ($24,000,000 2008-2013)

The Ivey Chair in Molecular Toxicology: Koren G. **CIHR** ($250,000/yr 2004-2014)

The role of the placenta in fetal toxicology. Koren G (with Drs. Ito and Einarson). **CIHR** ($140,000/yr 2006-2011)


Developing a national screening tool kit for those identified and potentially affected by FASD. Koren G. **Public Health Agency of Canada** ($708,000 2007-2012)

Baseline biomonitoring studies and a survey of child-youth health as prerequisites to epidemiological studies to assess the health risk of the Attawapiskat first nation and Walpole island first nation. Koren G (Bend J, PI, Rieder M, PI) (Co-applicant). **First Nation & Inuie Branch** ($249,000 2009-2010)

Biologically-based outcome predictors in Juvenile radiopathic arthritis. Koren G (Co-applicant) (Rosenberg J, PI). **CIHR** ($1,250,000 2007-2012)

Environmental Team Grant: Effects of brominated flame retardants on reproductive health on development. Koren G (Co-applicant) (Goodyer C, PI). **CIHR** ($2,500,000 2010-2015)


The Vulnerable Infant Population (VIP) perinatal stress study. (Purdy I, UCLA, PI) (Co-applicant) **American Association of Critical Nurses** (US$72,000 2010-2012)

Studies on pregnancy exposure to medications and vaccines. Koren G (Chambers C, PI). **Organization of Teratology Information Services (OTIS)** (US$5,300,000 2004-2012)

The fetal safety of proctofoam. Koren G. **Duchesnay Inc. Canada** ($79,000/yr 2007-2010)

Pre-emptive use of diclectin. Koren G. **Duchesnay Inc. Canada** ($135,000/yr 2005-2011)

Pharmacokinetics of folate in pregnancy. Koren G. **Duchesnay Inc. Canada** ($96,000/yr 2006-2012)

Neurodevelopment of children exposed in utero to chemotherapy for maternal breast cancer. Nulman I. **Canadian Breast Cancer Foundation** ($436,257 2010-2012)

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 2008-2011)

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 annually 2009-2011)

The effect of Supra-therapeutic doses of Diclectin on child's neurodevelopment. Nulman I. **Duchesnay Inc., Canada** ($487,600); 2005–2010

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 2010-2011)

Medication use in pregnancy with focus on attitudes perception of risk and mental well-being. Koren G (PI: Nordeng H). **The University of Oslo** (€$225,000 2011-2013)


Developing GeneMed for Canada, Pilot study. Koren G. **University of Toronto Centre for Applied Genomics** ($60,000 2011-2012)


Testing the fetal programming hypothesis. Koren G (PI: Magee L). **CIHR: CHIP-Child** ($1,150,000 2011-2016)


Neurodevelopment of children exposed in Utero to chemotherapy for maternal breast cancer. Nulman I (PI). **Canadian Breast Cancer Foundation (CBCF)** ($436,257 2010-2013)
Division of Developmental Paediatrics

The Division of Developmental Paediatrics is situated at Holland Bloorview Kids Rehabilitation Hospital. The division consists of full-time academic physicians as well as a community section of developmental paediatricians. The main clinical focus of the Division is on childhood neurodevelopmental disorders such as cerebral palsy and autism spectrum disorders. In addition, there is a paediatric rehabilitation component with the acquired brain injury and neuromuscular programs.

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 Paediatrics is the largest paediatric, physiatry, and neurology residents and medical students in applied childhood disability.

Division members actively lead applied clinical research in childhood disability studies, in association with Bloorview Research Institute.

Honours and Awards

Biggar WD: Nomination for the Richard Rowe Award for Clinical Excellence in Paediatric Medical Care, Department of Paediatrics 2010-2011.

Fehlings D: Nomination for 2011 Gayle Arnold Award for best free paper at the 2011 Annual Meeting for the American Academy for CP and Developmental Medicine for research presentation “How do children with CP of different Manual Ability Classification System (MACS) levels perform on computer tasks?” (Principal author Davies C) and “Reliability and discriminant validity of the quality FM, a new measure of quality of movement of children with CP” (Principal author Wright V).

Kawamura K: Department of Paediatrics, University of Toronto Subspecialty Education Award - Runner up, 2010.

Publications


**Funding**


A pilot dose finding study of pioglitazone in children with ASD. Anagnostou E, Brian J, Dupuis A. **Dean’s Fund** ($10,000 2010-2011)

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, Curran V, Kitto S. **Knowledge Translation Canada** ($30,000 2011)


Active video games for promotion of physical activity in children and youth with disabilities: Risks and benefits. Biddiss E, McKeever P, Wright V, Chau T, Fehlings D. **Canadian Institutes of Health Research** ($147,272 2010-2013)

Autism comes to the hospital: Experiences of hospital care from the perspectives of children and adolescents with autism spectrum disorder, their parents and health care providers. Muskat B, Nicholas D, Roberts SW, Stoddart K, Zwaigenbaum L.

SickKids Foundation and the Institute of Human Development, Child and Youth Health – Canadian Institutes of Health Research ($190,000 2010-2012)


Children’s, parent’s and rehabilitation professionals’ beliefs regarding the value of walking: CIHR training grant in autism research. Fombonne E, Bryson S, Paterson A, Scherer S, Roberts W, Szatmari P, Smith I, Moore C. Canadian Institutes of Health Research ($1,712,750 2009-2014)


Economic and mental burden of neural tube defect in Canada. Koren G, Church P. Bayer Pharma ($80,000 2011–2012)


The experience of autism over the course of paediatric development. Nicholas D, Roberts SW, McKeever P. SickKids Foundation ($95,996 2008–2010)


The lived experience of mothers of children with autism. Nicholas D, Roberts SW, McKeever P. Social Sciences and Humanities Research Council ($154,000 2008–2011)


2010-2011 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 around the world. This year, we had 12 trainees in our subspecialty training program: Four Canadians, three Israelis, two Kuwaitis, one Irish, one Australian and one German.

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; 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: 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.

The SickKids Team Obesity Management Program (STOMP) is now over a year old and flourishing. STOMP is an interdisciplinary medical-surgical program for obese children and youth. The program is intended for children and adolescents with complex, severe obesity defined as: greater than the 99th percentile for BMI, or greater than the 95th with an associated severe medical or psychosocial co-morbidity or additional chronic illness impacted by obesity (e.g. solid organ transplant, brain tumour-related hypothalamic obesity). STOMP is an intensive two year program focusing on healthy lifestyle psychoeducation and cognitive behavioural therapy with access to surgical intervention (lap band bariatric procedure). The interdisciplinary team consists of three physicians (endocrinology, general paediatrics & general surgery), an exercise therapist, psychologist, dietitian, social worker, information coordinator and nurse practitioner.
Our research efforts have targeted the following areas: (i) prediction and prevention of type 1 diabetes through involvement in the multinational TrialNet and TRIGR study groups; (ii) implications and treatment of insulin resistance and obesity among children and adolescents and the evolution of these abnormalities in young children; (iii) identification of factors affecting metabolic control and the early complications of diabetes; (iv) prevention and treatment of the medical complications of diabetes; (v) psychosocial and psychological outcomes in diabetes and other endocrine disorders; (vi) evaluation of disorders of calcium and bone mineral metabolism in pediatrics; and (vii) clinical and laboratory-based investigation of the regulation and disorders of pubertal timing.

A particularly exciting research development this year was the launch of Juvenile Diabetes Research Foundation’s (JDRF’s) new Canadian Clinical Trial Network (CCTN). The CCTN was created in partnership with the Government of Canada’s Federal Economic Development Agency for Southern Ontario (FedDev Ontario) and is charged with conducting trials aimed at identifying better treatments for Type 1 diabetes. SickKids is one of three lead sites for the CCTN, and the initial trials have already begun enrolling subjects.

**Honours and Awards**

Allen L: James C Fallis Award, Invited Speaker Presentation, Division of Pediatric Emergency Medicine, Hospital for Sick Children, 2011.

Daneman D: Pediatric Review Lecture Series (PERLS) Award from Residents, 2011.


Kives S: Chair’s Award for Continuing Medical Education Teaching Excellence. Department of Obstetrics and Gynecology, University of Toronto $1000.00, 2010.


Klip A: Elected Fellow, Canadian Academy of Health Sciences (CAHS), 2011.

**Publications**


Books and Chapters


Funding


Adolescent Diabetes Cardio-Renal Intervention Trial (AdDIT). Daneman D, Curtis J, Mahmud F, Medical Consultant/Collaborator Sochett E. Canadian Diabetes Association (CDA$244,026 2009-2012)


Adolescent type 1 diabetes cardio-renal intervention trial (AdDIT). Daneman D, The Hospital for Sick Children ($91,020 2008-2012)

Adolescent diabetes intervention trial (AdDIT) (retinopathy and cardiovascular). Daneman D, Curtis J, Mahmud F, Sochett E. Canadian Diabetes Association ($85,000 2009-2012)


Autonomic nervous system regulation in adolescents and children treated for craniopharyngioma. Hamilton J, McCrindle B, Syme C. Brain Tumour Research Assistance and Information Network (b.r.a.i.n.child) ($20,632 2010-2012)

Brain function in FASD: Neuroanatomy of memory mapping. Rovet J. Canadian Foundation for Fetal Alcohol Research ($64,000 2008-2010)

Canadian Clinical Trial Network (CCTN). Wherrett DK. Juvenile Diabetes Research Foundation (JDRF) ($525,000/yr 2010-2013)

CASE Center for transdisciplinary research on energetics and cancer: Determinants of obesity & metabolic dysfunction in adolescents. Berger N, Redline S, Palmert MR. National Institutes of Health/National Cancer Institute ($1,529,233 2005-2010)

Comparison of continuous versus cyclical use of a 30-MCG ethinyl estradiol 0.15 mg desogestrel oral contraceptive pill in adolescents. Allen L, Brown C. Akzo Nobel–Organon Canada ($24,500 2006-2011)

Comparison of continuous versus cyclical use of a 30-MCG ethinyl estradiol 0.15 mg desogestrel oral contraceptive pill in adolescents. Allen L, Brown C. Physicians Services Incorporated Foundation ($70,500 2006-2011)

DNA Methylome study in Type 1 diabetes. Petronis A, Palmert MR. National Institutes of Health/National Institute of Child Health & Human Development ($2,939,808 2009-2012)

Exploring the mechanisms of risk for type 2 diabetes in adolescents. Hamilton J, O’Gorman C. Adrian and Rita Hudson Fund at the Toronto Community Foundation ($38,611 2009-2010)


The SickKids Team Obesity Management Program (STOMP) is now over a year old and flourishing. STOMP is an interdisciplinary medical-surgical program for obese children and youth.
Food intake control in children. Anderson GH, Hamilton J (co-applicant), Luhovyy B, Thomas S. Canadian Institutes of Health Research ($660,000 2010-2015)

Gene by environment interactions that modulate pubertal timing. Palmert MR, Grasemann C. The Hospital for Sick Children Research Training Centre ($80,000 2009-2010)

Genetic factors that regulate the onset of puberty. Palmert MR. National Institutes of Health/National Institute of Child Health & Human Development ($1,633,256 2005–2010)

Hemodynamic modulation in type 1 diabetes. Miller J, Sochett E, Cherney D. Canadian Institutes of Health Research ($127,603.17 2007–2012)


Interplay between fatty acids and macrophages in the genesis and relief of muscle cell insulin resistance Klip A. Canadian Diabetes Association ($255,000 2009-2012)


JDRF (Juvenile Diabetes Research Foundation) and Diabetes UK (AdDIT) Study Daneman D. Juvenile Diabetes Research Foundation and Diabetes UK ($85,000 2008-2012)


Mobile phone-based self-management system for adolescents with Type 1 diabetes mellitus: A home-based self-care tool that links the client and family with their health care team. Cafazzo J, Palmert MR, Katzman D. Applied Client-Focused Team (ACT) Grant, St. Elizabeth’s Care to Know Center ($119, 000 2009–2010)


Regulation of muscle glucose transporters by Rac and Rabs during insulin action and lipotoxicity. Klip A. Canadian Institutes of Health Research ($724,217 2010-2015)

Social cognitive processing in fetal alcohol spectrum disorders. Stevens S, Rovet J. Canadian Foundation for Fetal Alcohol Research ($64,000 2010-2012)

The effect of milk products on glycemic regulation, satiety and food intake in children. Anderson GH, Bellissimo N, Hamilton J (co-applicant), Luhovyy B. Dairy Farmers of Canada ($150,000 2010-2011)

The GH Monitor Registry. Hamilton J (Principal Investigator SickKids site). Serono Canada Incorporated (Funding is distributed on a per patient basis) ($6,200 2005-2010)

The GLUT4 interactomes and their metabolic implications. Klip A. Canadian Institutes of Health Research ($818,206 2007-2012)


The prevalence of albuminuria in youth with Type 2 diabetes. Sellers E, Hadjiyannakis S, Hamilton J (co-applicant), Dean H, Amed S, Panagiotopoulos D, Dyck R, Langlois V, Dart A. Public Health Agency of Canada ($40,000 2010-2012)

The role of eyes and gaze in normal and abnormal social cognition development. Rovet J. (Co PI) Canadian Institutes of Health Research ($100,000 2009-2011)

TIME Trial: RCT of sensor-augmented pump vs standard pump initiation. The Hospital for Sick Children ($330,000 2010-2013)


Type 1 Diabetes TrialNet Toronto Clinical Centre. Wherrett DK. National Institutes of Health ($500,000 2009-2010)

Type 1 Diabetes TrialNet. Toronto Clinical Centre. Wherrett DK. National Institutes of Health ($2,100,000 + $100,000 per year 2009-2014)


Use of ACASI to gather information on risk behaviours in a referral population of pregnant Canadian adolescents. Spitzer RF Physician Services Incorporated ($37,800 2010-2012)
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. Specialty nursing and allied health professionals play a valuable and increasing role in patient care, including during the past year organization of patient support groups (e.g. IBD teen support group) and family education days (e.g. continuing Claire Smith IBD day for families and the inaugural Liver Transplant Family Education Day).

During 2010-2011, Dr. Tanja Gonska joined the Division as a clinician/investigator and associate scientist affiliated with the Cystic Fibrosis Centre. Dr. Stanley Zlotkin accepted the position of Vice-President, Medical and Academic Affairs, in the SickKids Hospital Executive Office. Dr. Paul Pencharz returned to the Division on a major part-time basis to again provide medical leadership to Clinical Nutrition and to mentor trainees.

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. Increasingly, faculty members collaborate in or lead large multi-centre research consortia addressing both pathogenesis and treatment of childhood liver disease, cystic fibrosis and inflammatory bowel disease.

One of the highlights of the year was the Scientific Day in the Exocrine Pancreas, a research symposium organized in May 2011 to recognize Dr. Peter Durie’s career thus far. The event was held in combination with an ambitious fellowship reunion, celebrating 40 years of SickKids, University of Toronto GI fellowship training, the last 15 as combined GI/nutrition fellowship training. Former fellows and training directors of the program, as well as esteemed research colleagues of Dr. Durie came from around the world to join in the symposium and inspire current trainees.
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 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). As is further discussed under Educational Scholarship (below), 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.

Honours and Awards

Staff:
Avitzur Y: Schwartz-Reisman Visiting SickKids Scholar Award, Department of Pediatrics, 2011.


Durie P: Paul Di Sant’agnese Outstanding Achievement Award. To recognize outstanding achievement in cystic fibrosis research. Cystic Fibrosis Foundation, 2011.


Griffiths A: Inaugural Northridge Chair in Inflammatory Bowel Disease, 2011.

Ling S: The Fellow’s Award for Teaching and Mentorship. Division of Gastroenterology, Hepatology and Nutrition, 2011.

Ling S (Runner-up): Subspecialty Teaching Award, Department of Paediatrics, University of Toronto, 2011.


Zlotkin S: Danone Institute Distinguished Nutrition Leadership Award, 2010.

Trainees:

Mouzaki M: Studies of Pediatric Liver Transplantation (SPLIT) Travel Grant Award, 2010.


Van Limbergen J: Edward Christie Stevens Fellowship (Postgraduate Award – University of Toronto), 2011.

Van Limbergen J: Charlotte Anderson Award from the European Society of Paediatric Gastroenterology (ESPGHAN), 2011.

Van Limbergen J: Canadian Institute of Health Research Fellowship Award, 2011.

Van Limbergen J: Canadian Institute of Health Research Bisby Fellowship Award, 2011.
Walsh C: Starr Medal, Postgraduate Medical Education Award, 2010.

Walsh C: Edward Christie Stevens Fellowship, Postgraduate Medical Education Award, 2010.

Walsh C: Elizabeth Arbuthnot Dyson Fellowship, Postgraduate Medical Education Award, 2010.

Walsh C: Chisholm Memorial Fellowship, Postgraduate Medical Education Award, 2010.

Publications


Turner D, P Shah, S Zlotkin, Griffiths AM: Omega-3 fatty acids (fish oil) for maintenance of remission in inflammatory bowel disease: A systematic review and meta-analyses. Inflammatory Bowel Disease 2011: 17: pp 336-345.


Books and Chapters


Funding


A model to predict outcome of liver disease in alagille syndrome. Kamath B. American Liver Foundation ($50,000/year 2009-2011)
A multi-center group to study acute liver failure in children. Ng V, Fecteau A. *National Institutes of Health* (US$19,936 2010-2011)

A multi-disciplinary human study on the genetic, environmental and microbial interactions that cause IBD. Executive Committee: Croitoru K, Chair, Griffiths AM, Deputy Chair Ropelski M, Moyeddi P. *Crohn's and Colitis Foundation of Canada* ($5,600,000: SickKids remuneration $50,000/year 2007-2012)

A prospective study of linear growth in pediatric IBD. Denson LA, Griffiths AM. *Crohn's and Colitis Foundation of America* ($150,000/year 2008-2011)


A retrospective analysis of nutritional predictors of post transplant morbidity and growth in pediatric liver transplant. Courtney-Martin G, Avitzur Y. *Canadian Society of Transplantation Research Grant* ($1,250 2010)

Adherent and invading escherichia coli engagement of CEA-CAM6: defining the link to Crohn’s disease. Gray-Owen S, Sherman PM. *Crohn's and Colitis Foundation of Canada* ($375,000 2011-2014)

BAFF and APRIL expression in de-novo autoimmune hepatitis and chronic rejection after pediatric liver transplantation – an explorative pilot study. Avitzur Y. *Creative Professional Activity Grant, Department of Pediatrics, The Hospital for Sick Children* ($7,647 2010-2011)


Cell signaling in mucosal inflammation and pain. McCullouch C, Brunell J (lead investigators), Sherman PM. *Canadian Institutes for Health Research* ($325,000/year 2009-2015)

Certolizumab in pediatric Crohn’s disease: A multicenter study. Griffiths AM (steering committee member and SickKids principal investigator). *UCB Pharma* (per patient remuneration: anticipated $60,000 2010-2012)


Childhood Liver Disease and Research Network (ChiLDREN) Consortium. Sokol R, Ng V, Kamath B, Ling S. *National Institutes of Health* (US $140,059 2010-2011)

Clinical Research Facilitation Award. Durie P. *Cystic Fibrosis Foundation Therapeutics, Inc. (CFFT)* ($108,637 2007-2011)


Development and establishment of a novel microfluidic-pptic method for sweat testing. Gonska T, Li D. **Cystic Fibrosis Centre Catalyst Research Grant** ($50,000 2010-2011)


Diagnosing cystic fibrosis in neonates and adults: Where do we draw the line? Durie P, Tullis E, Ratjen F. **Cystic Fibrosis Canada** ($390,000 2011-2014)


Epithelial cell signaling responses to attaching-effacing intestinal pathogens. Sherman PM. **Canadian Institutes of Health Research** ($777,000 2008-2013)

Evaluation of quality of life of >15 year survivors of pediatric liver transplantation at the University of Toronto. Ng V, Therapondas G. **Astellas Investigator-Initiated Study Grant Request – AIISGR** ($14,000 2010-2011)


Role of ATG16L1 in Crohn disease. Jones NL. **Crohn's and Colitis Foundation of Canada** ($150,000/year 2008-2011)

Gastric flora in gastrostomy fed children with neurologic impairment on acid suppression medication. Rapoport A, Avitzur Y. **Creative Professional Activity Grant, Department of Pediatrics, The Hospital for Sick Children** ($10,000 2011-2012)

Genetic predictors of time to recurrence following ileal resection in early onset Crohn disease. McLeod R, Griffiths AM. **Crohn’s and Colitis Foundation of Canada** ($150,000/year 2007-2010)


Immuno-genetic determinants of linear growth in Paediatric IBD. Denson LA, Walters TD, Griffiths AM. **Crohn’s and Colitis Foundation of America Paediatric Bone and Skeletal Health Research Award** ($100,000/year 2011-2014)

Iron and malaria. Zlotkin S. **National Institutes of Health** (US$365,000 2009-2011)

Neonatal protein and energy metabolism. Pencharz P. **Canadian Institute of Health Research** ($136,817 2010-2011)


Outcomes of children 10 years after pediatric liver transplantation. Ng V. **National Institutes of Health, American Recovery and Reinvestment Act (ARRA)** (US$7,500 2010-2011)
Pathobiology and ribosomal insufficiency in Shwachman-diamond syndrome. Rommens J, Durie P. **Canadian Institutes of Health Research** (Y2: $157,830 2010-2015)

Predicting response to standardized paediatric colitis therapy: The PROTECT Study. Hyams J, Denson L, Kugathasan S, Sylvester E, Gupta N, Walters TD. **National Institute of Health (NIDDK) U34 Multi-centre clinical study implementation planning grant** ($20,000 Salary support of 0.1 FTE, 2010-2011)

Prediction by ultrasound of the risk of hepatic cirrhosis in cystic fibrosis (‘PUSH’). Ling SC, Durie P, Navarro O. **Cystic Fibrosis Foundation and National Institutes of Health** ($333,000 2009-13)

Protocol AI463-08 “Evaluation of the pharmacokinetics, safety, tolerability and efficacy of entecavir (ETV) in pediatric subjects with chronic hepatitis B virus (HBV) infection who are HBeAg positive”. Ling SC. **Bristol-Myers Squibb** ($25,000/patient 2007-2013)

Protocol AI463-189 “A comparative study of the antiviral efficacy and safety of entecavir (ETV) versus placebo in pediatric subjects with chronic hepatitis B virus (HBV) infection who are HBeAg-positive”. Ling SC. **Bristol-Myers Squibb** ($26,287/patient, 2010-2015)

Refinement and validation of sweat potential measurements and modified sweat chloride as novel functional outcome in CF drug trials. Durie P. **Cystic Fibrosis Foundation Therapeutics, Inc (CFFT)** (US$57,934 2008-2011)

Risk stratification and identification of immunogenetic and microbial markers of CD. Kugathasan S, PRO-KIIDS Consortium, Walters TD. **Crohn’s and Colitis Foundation of America Special Purpose Grant** ($5,000,000 Salary Support of 0.2 FTE, 2009-2012)

Risk stratification in newly diagnosed children with Crohn disease. Kugathasan S, PI. Role: SickKids site principal investigator. **Crohn’s and Colitis Foundation of America** (estimated $50,000/year 2010-2011)

Role of autophagy during H. pylori infection and disease. Jones NL. **Canadian Institute of Health Research** ($103,575/year 2008-2013)

Studies of the proteins involved in inflammatory bowel disease. Muise A. **Canadian Child Health Clinician Scientist Program** ($5,000/year 2008-2012)

The gut microbiota in pediatric inflammatory bowel disease. Stintzi, Mack, Muise, Figelys, Griffiths. **Canadian Institute of Health Research – Operating Grant (MOP245176)** ($720,000 2011-2016)

The role of adherens junction protein in IBD. Muise A. **Crohn’s and Colitis Foundation of Canada/Caniadian Association of Gastroentorology/Canadian Institute of Health Research** ($115,000/year 2008-2012)

The role of NADPH oxidases in Crohn’s disease. Brumell J, Muise A. **Canadian Institute of Health Research** ($192,840 /year 2009-2014)

The use of indicator amino acid oxidation to determine amino acid requirements. Pencharz P, Ball R. **Canadian Institute of Health Research** ($158,630 2010-2011)

Tier 1 (renewal). Sherman PM. **Canada Research Chair** ($1,400,000 2008-2015)

Understanding the genes involved in inflammatory bowel disease. Muise A. **Ontario Ministry of Research and Innovation** ($25,000/year 2009-2014)
The Division of Haematology/Oncology provides diagnostic services and specialist care for children 18 years and under with cancer (paediatric oncology) and non-malignant blood disorders (paediatric haematology). The Division is the largest of its kind in Canada and among the largest such programs worldwide, with approximately 380 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 approximately 112 transplants performed this year were for children with cancer, with others performed for children with benign haematologic disorders, severe immunodeficiency disorders or genetic diseases. The number of in-patient days for paediatric haematology/oncology/BMT cases is approximately 16,000/year and the number of ambulatory care visits just over 22,500.

Reflecting the size and diversity of its clinical services, the Division is organized into six sections and three programs:

- **Leukemia/lymphoma section**  
  (Section Head, Dr. Sheila Weitzman)

- **Solid tumor section**  
  (interim Section Head, Dr. Meredith Irwin)

- **Neuro-oncology (brain tumor) section**  
  (Section Head, Dr. Eric Bouffet)

- **Blood and marrow transplantation section**  
  (Section Head, Dr. John Doyle)

- **Haematology section** (Section Head, Dr. Victor Blanchette)

- **Long-term follow-up (aftercare) program**  
  (Program Head, Dr. Paul Nathan)

- **New agents and innovative therapies program**  
  (Program Head, Dr. Sylvain Baruchel)

- **Cancer genetics program** (Program Head, Dr. David Malkin).

The haematology section has large clinical and research programs in paediatric thrombosis and haemostasis, the paediatric hemoglobinopathies and the inherited and acquired paediatric marrow failure syndromes and myelodysplasias.

The Division is an active member of the Children’s Oncology Group (COG), the largest paediatric cancer clinical trials group in North America (SickKids Principal Investigator, Dr. Ron Grant), and is committed to the improvement in
outcomes and quality of life in children with cancer through participation in prospective clinical trials. The Division is a member of the Phase I Consortium of COG (Principal Investigator, Dr. Sylvain Baruchel), and is an active participant in activities of the Société Internationale d’Oncologie Pédiatrique (SIOP), the Histiocyte Society, New Approaches to Neuroblastoma Therapy (NANT), Therapeutic Advances in Childhood Leukemia (TACL) and the Berlin Frankfurt Münster (BFM) paediatric leukemia clinical trials consortia. The Division, in collaboration with the Paediatric Oncology Group of Ontario (POGO), supports a network of paediatric oncology satellite centres in the Greater Toronto and surrounding areas. Satellite centres in sickle cell disease are established in Rouge Valley hospital and the William Osler Health Centre.

Major achievements in the past year included the establishment of the Garron Family Cancer Centre through a $30 million gift, creating four senior endowed chairs and two mid-career endowed professorships. Dr. Eric Bouffet, Director of the Section of Neuro-Oncology, was appointed as the first Garron Family Chair in Childhood Cancer Research. The Division is the largest Royal College of Physicians and Surgeons of Canada accredited training program for the specialty paediatric haematology/oncology in Canada. Dr. Angela Punnett is the Division’s Training Program Director. 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 haemostasis.

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 are appointed 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. This year marked the launch of two such initiatives in collaboration with SickKids International: the Global Sickle Cell Disease Network, under the leadership of Dr. Isaac Odame, and the Caribbean Collaboration in Paediatric Cancer and Blood Disorders, under the leadership of Dr. Victor Blanchette.

The Administrative team for the Division comprises Dr. Jim Whitlock (Division Head), Judy van Clieaf (Executive Director, Child Health Services), and Sandra Carbone-Walker (Interim Administrator, Administrative and Support Services).

Honours and Awards

Alexander S: Outstanding Junior Faculty Clinical Award, 2011.

Blanchette V: Canadian Blood Service 2010 Lifetime Achievement Award.


Carcao M: Invited to join the Editorial Board of journal “Hemophilia”.


Tabori U: Junior Physician Researcher Award, University of Toronto, Department of Pediatrics, 2011.

Weitzman S: The Alvin Zipursky Teaching Award of the Division of Hematology/Oncology 2010-2011.


Publications


Bouffet E: Comment to the paper “Surgical outcome of patients considered to have “inoperable” tumors by specialized pediatric neuro-ongological multi-disciplinary teams: Should we caution against multidisciplinary decision?” Childs Nervous System 2010: 26: pp 1227-1228.


Dupuis LL, Schechter T: Cyclosporine dose intensity and risk of acute graft-versus-host disease; Trough versus area under the curve. Biological Blood Marrow Transplant 2010: 16: pp 866-867.


Books and Chapters


**Funding**

A 5-year observational study (registry) of children aged 2 to < 6 years at enrollment with transfusional hemosiderosis treated with deferasirox. Araosmigh-Bensafson C, Lawniczek T, Hmissi A, Odame I. **Novartis** ($2,400/pt 2008-2012)

A feasibility trial of individualized homeopathic treatment of fatigue in children receiving chemotherapy. Sung L, Brule D. **Lotte and John Hecht Foundation** ($69,530 2011-2013)

A multi-centre, open-label, single-arm, and multiple dosing trial on efficacy and safety of monthly recombinant factor XIII (rFXIII) in subjects with congenital factor XIII deficiency. Carcao M, Blanchette V. **Novo Nordisk** ($16,356/pt 2009-2010)

A multi-centre, open-label, single-arm, and multiple dosing trial on efficacy and safety of monthly recombinant factor XIII (rFXIII) in subjects with congenital factor XIII deficiency - safety extension trial. Carcao M, Blanchette V. **Novo Nordisk** ($12,647.60/pt 2010-present)

A multicentre, randomized, open-label phase II trial evaluating deferasirox compared with deferoxamine in patients with cardiac iron overload due to chronic blood transfusions. Maseruka H, Jehl V, Lawniczek R, Odame I. **Novartis** ($23,345/pt 2009-2012)

A phase I study of vinblastine in combination with rapamycin in pediatric patients with recurrent or refractory solid tumors including CNS tumors. Baruchel S. **Solving Kids Cancer/The James Fund for Neuroblastoma Research** ($121,690 2010-2011)

A phase II, open label, multi-center, single-dose pharmacokinetics, and multiple dose study of the safety, efficacy and tolerability of FBS0701 in a pediatric population with transfusional iron overload. Odame I. **Ferrokin Biosciences** ($14,220/patient 2011-2012)

A phase II randomized, double-blind, placebo-controlled study of the efficacy, safety, and pharmacokinetics of GMI-1070, a pan-selectin inhibitor, in subjects hospitalized for sickle cell vaso-occlusive crisis. Odame I. **Glyco Mimetics, Inc.** ($17,799.25/patient 2010-2011)


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

A randomized controlled multicenter 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 2009-2011)

A randomized, open-label, multi-dose study of HQK-1001 in subjects with sickle cell disease. Odame I. **Haemaquest Inc.** ($14,512.40/patient 2011-2012)
A randomized phase II trial of bevacuzimab and temsirolimus in combination with vinorelbine cyclophophamide in patients with recurrent refractory rhabdomyosarcoma. Baruchel S. St. Baldrick’s Foundation ($50,000 2010-2013)

A randomized study of IVIG vs IVIG with high dose methylprednisolone in rapidly augmenting platelet counts in childhood ITP. Carcao M, Blanchette V. Talecris ($145,065 2004-current)

A three-month prospective open label study of therapy with Fragmin® (Dalteparin Sodium Injection) in children with malignancies and venous thromboembolism. Brandão LR, Williams S. Eisai Inc. ($8,000/pt 2010-2014)

Acute megakaryocytic leukemia in Down syndrome. Hitzler J. Canadian Cancer Society Research Institute ($142,000/yr 2010-2012)


Advancing basic and translational research in diffuse intrinsic pontine glioma. Bartels U, Bouffet E, Hawkins C. b.r.a.i.n. child ($25,000 2010-2011)

An international network to determine the origins and improve survival for children with mismatch repair genes mutations affected by malignant brain tumors. Tabori U. B.r.a.i.n.child ($68,700 2011–2013)


Atypical hemolytic uremic syndrome: A new pathological role for complement and coagulation control in platelets. Licht CPB, Kahr WHA. Heart and Stroke Foundation of Canada ($123,510 2009-2011)

AYA soft tissue sarcoma research. Gupta A. AFLAC/Children’s Oncology Group ($14,579 2010–2011)

Biochemical and genetic analyses of JPO2, a novel of c-Myc oncogene interacting protein. Huang A. National Cancer Institute of Canada ($440,082 2006-2010)

Biomarkers as predictive of bronchiolitis obliterans post BMT in children. Gassas A. Leukemia and Lymphoma Society of Canada ($118,000 2011)

Canadian family physicians attitudes and knowledge regarding the care of adult survivors of childhood cancer: A survey study. Nathan PC, Henderson T, Daugherty C, Del Giudice L, Grunfeld E. Pediatric Oncology Group of Ontario Seed Funding Grant ($14,000 2010-2011)


Caring for a child with cancer: Understanding single parent families’ experiences. Klassen, AF; Sung L. National Cancer Institute of Canada ($126,920 2009-2010)

Characterization of novel oncogenic loci in childhood primitive neuroectodermal brain tumors. Huang A. Canadian Institute of Health Research ($450,000 2009-2013)

Characterizing ALL stem cells. Guidos C, Danska J, Hitzler J. Ontario Institute of Cancer Research ($630,000 2008-2012)

Child Health Research Institute [Infrastructure for new Research Building]. Rossant J, Malkin D, + 24 other co-applicants. Canada Foundation for Innovation ($91,000,000 2008-2013)


Children’s Oncology Group Grant. Whitlock JA. National Childhood Cancer Foundation ($9,838 2010-2011)


Major achievements in the past year included the establishment of the Garron Family Cancer Centre, creating four senior endowed chairs and two mid-career endowed professorships.

Combined telomerase inhibition and drug screen as novel therapies for tumor initiating cells in pediatric nervous system tumors. Tabori U. Canadian Institute of Health Research ($300,000 2010-2014)


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 2006–current)


Cyclosporin pharmacokinetics study and area under the curve (AUC) relationship to graft-versus-host disease (GvHD) in children post bone marrow transplantation. Dupuis L, Schechter-Finkelstein T, Sung L, Pharm D, Fernandez C, Schutze K, Gassas A, Doyle J. C17 Research Network ($198,000 2010-2012)


Defining the clinical phenotype of inherited marrow failure syndromes and the risk factors for severe hematological complications and cancer by the Canadian Marrow Failure Registry (CIMFR). Dror Y. C17 Research Network ($120,300 2009-2011)

Delivery of rFVIII via direct incorporation into platelets. Kahr WHA. Bayer Canada ($230,000 2009–2011)


Development and evaluation of an internet-based program to promote self-management and transitional care for teens with hemophilia. Breakey V, Stinson J, Blanchette V. Canadian Hemophilia Society, Care Unit Cure Research Program ($75,000 2011–2012)

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, Laverdiere C, LeMay S, Sung L. Canadian Institutes of Health Research Disease Management Program ($200,000 2011-2012)

Development of a MIBG facility. Baruchel S, Irwin M. The Garron Family Centre ($4,000,000 2011-2012)

Development of efficacy parameters for the maintenance phase of Acute Lymphoblastic Leukemia (ALL) treatment. Hitzler J, Lee-Chong A, Lieberman M, Zagorski B, Nathan PC. Comprehensive Cancer Centre, The Hospital for Sick Children ($7,000 2010-2011)

Discovery and characterization of C19MC a novel oncogenic miRNA locus in malignant brain tumors. Huang A. Canadian Institute of Health Research ($520,000 2010-2014)

DNA copy number variation in Li-Fraumeni syndrome. Malkin D. Canadian Institutes for Health Research ($784,000 2009-2013)

Early researcher award. Nathan PC. Ministry of Research and Innovation ($100,000 2010-2013)

Establishing and validating a Shwachman–Diamond syndrome induced pluripotent stem cell model. Dror Y. Donor Directed Research Funds ($20,000 2011-2012)

Establishment of a pediatric Investigational New Drug (IND) Canadian phase 1 consortium. Baruchel S. NCIC CTG (Up to $300,000/study 2010-2015)


Exhaustion of tumor initiating cells by targeting their self-renewal capacity with telomerase inhibition. Tabori U. The Terry Fox Foundation ($450,000 2010-2013)


FDG-PET/CT in the evaluation of post-transplant lymphoproliferative disorder in children following solid organ transplantation. Shammas A, Charron M, Punnett A, Hong T. Comprehensive Cancer Centre, The Hospital for Sick Children ($50,000 2010-2011)

Frequency and clinical correlations of BRAF mutation in children with Langerhans Cell Histiocytosis. Abla O. Division of Haematology/Oncology, The Hospital for Sick Children ($5,800 2011)


Genetic characterization of CNS rhabdoid tumors. Huang A, Bouffet E, Hawkins C. The Hospital for Sick Children Foundation ($70,000 2009-2011)

Genetic epidemiology of osteosarcoma. Spector L, Malkin D, Ross, J, Sklar C, Nagarajan R. National Institutes of Health ($1,000,000 2006-2011)

Genetic influences on the pharmacokinetics of Factor VIII. Lillicrap D, Blanchette V, Carcao M, Rivard G. Baxter-Canadian Hemophilia Epidemiological Research Program (B-CHERP) ($75,000/year 2010-2013)

Genetic predisposition for bone marrow failure. Dror Y. Donor-directed funds ($20,000 2008-2010)

Genome-wide analysis of bone marrow failure-related genetic alterations in inherited marrow failure syndromes. Dror Y, Beyene J, Shago M. Canadian Institutes of Health Research ($357,000 2010-2013)


IGFR inhibitor and temsirolimus. Baruchel S. Pfizer Canada Inc. ($25,000 2011-2012)

Improving the quality of palliative care delivery for children with advanced cancer. Alexander S. POGO ($11,481 2010)


IND203 SB939: HDAC inhibitor in refractory solid tumor and lymphoma. Baruchel S. NCIC CTG ($300,000 2010-2011)


Integrative genomics for health research – Phase II. Scherer S, Malkin D +8 other co-PIs. Canada Foundation for Innovation ($19,989,710 2009-2013)


Investigating the impact of BI 6727 on the growth and survival of neuroblastoma and sarcoma cells using in vitro and in vivo models. Baruchel S. C17 ($10,000 2011-2012)


Longitudinal assessment of peripheral neuropathy and motor function in children treated for average risk acute lymphoblastic leukemia. Kadan-Lottick N, Ness K, Hockenberry M, Sung L. Biomarker, Imaging and Quality of Life Studies Funding Program ($1,633,012 2011-2016)

Modulation of p73 by cyclo-oxygenase inhibitors in neuroblastoma. Irwin MS. National Cancer Institute of Canada/Canadian Cancer Society ($373,829 2008-2011)


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

New Investigator Award. Sung L. *Canadian Institutes of Health Research* ($300,000 2009-2014)


p73 modulatory proteins: Roles in apoptosis and chemosensitivity. Irwin MS. *National Cancer Institute of Canada/Canadian Cancer Society Research Institute* ($427,500, 2010-2013)


Phase 1 study of Imetelstat in refractory and recurrent neuroblastoma. Baruchel S. *NCIC CTG (funding in partnership with C17, Garron Cancer Family Center, CIHR)* ($360,000 2010-2011)

Phase I Trial of NECTAR (Nelarabine, Etoposide and Cyclophosphamide) in T-ALL Relapse: A Joint Study of TACL and POETIC. Whitlock JA. *Therapeutic Advances in Childhood Leukemia* ($10,000 2010-2012)

Phase II study of high dose chemotherapy with cyclosporin for vision-threatening intraocular retinoblastoma. Chan HSL, Gallie BL. *Terry Fox Research Institute* ($151,816 2010-2012)

Phase II A multicenter, randomized, open-label phase II trial evaluating deferasirox compared with deferoxamine in patients with cardiac iron overload due to chronic blood transfusions. Williams S, Kirby M. *Novartis* ($23,345/pt 2011-2012)


Preclinical development of pazopanib topotecan in refractory recurrent sarcoma. Baruchel S. *GlaxoSmithKline* ($50,000 2010-2011)
Preclinical development of TH302 and hypoxia-targeted drug in refractory recurrent sarcoma. Baruchel S. Threshold Pharmaceuticals ($18,000 2010-2011)


Predicting late effects of individual cancer survivors. Yasui Y, Greenberg M, McBride M, Nathan PC. Canadian Institutes of Health Research ($109,049 2010-2012)

Predicting the risk of infection in children receiving chemotherapy for acute myeloid leukemia. Sung L. Canadian Institute for Health Research ($300,000 2009-2014)


Prediction of tumor resistance and normal brain sensitivity to cranial irradiation in pediatric brain tumors. Tabori U. Brainchild Foundation ($50,000 2009-2011)

Predictors of functional and neuro-cognitive outcomes in long term survivors of pediatric low grade gliomas. Tabori U, Mabbott DJ, Rubin J, Gutmann D, Bouffet E. Pediatric Brain Tumour Foundation of the United States ($100,000 2008-2010)

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 2010-2013)

Prognostic and therapeutic implications for telomere maintenance and telomerase inhibition in pediatric high grade gliomas. Tabori U. Canadian Institute for Health Research ($385,811 2008-2011)

Prospective surveillance of resistance in colonizing bacteria from stool or peri-rectal swab cultures in bacterial isolates from sterile site cultures in pediatric patients receiving levofloxacin for AL or undergoing HSCT. Fisher B, Alexander S, Guar A, Zaoutis T, Sung L. Biomarker, Imaging and Quality of Life Studies Funding Program ($913,202 2011-2015)

Quantitative non-invasive MRI measurements of cerebrovascular reactivity in children with sickle cell disease. Kassner A, Williams S, Shroff M, deVeber G. Canadian Institutes of Health Research ($94,000 2010-2011)

Randomized study of first TIME Immunotolerance Induction in patients with severe type A haemophilia 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 (€1000/pt 2009-present)


Rodin: Research of determinants of inhibitor development among previously untreated patients with haemophilia. Carcao M, Blanchette V. University Medical Center Utrecht (€250/patient 2007-present)


Serum biomarkers to predict lung complications and to monitor the effectiveness of therapy in non-malignant stem cell transplant recipients. Gassas A. Physician Services Foundation ($170,000 2011)

SickKids MIBG and Phase I Leukemia Programs. Whitlock JA. *Alex's Lemonade Stand: Foundation for Childhood Cancer* ($233,280 2011-2014)


Studying the blood cell defects in Shwachman-Diamond syndrome using an induced pluripotent stem cell disease model. Dror Y. *Butterfly Guild – Seattle Children's Hospital and Research Foundation* ($30,000, 2011-2012)

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

TCD with transfusions changing to hydroxyurea (TWiTCH). Williams S, Odame I. *National Heart, Lung, and Blood Institute* ($23,000,000 2009-2014)


The genetic basis of severe sickle cell disease: The never lost international cohort study. Kirby M. *Children's Discovery Institute* ($149,968 2008-2012)


The role of dysfunctional central venous catheters as a predictor of thrombotic events and/or infections in pediatric cancer patients. Athale U, Brandão LR, Halton J, Gibson P, Silva M. *C17 – Paediatric Haematology/Oncology Centres in Canada* ($150,000 2010-2012)

The role of SBDS in promoting cell survival. Dror Y. *Canadian Institutes of Health Research* ($250,000 2006-2011)
The role of VPS33B in platelet alpha granule formation. Kahr WHA. Canadian Institutes of Health Research ($441,912 2006–2010)

The roles of the novel p53 family proteins in cancer and chemosensitivity. Irwin MS. Canada Research Chair ($500,000 2008–2013)

The utility of serum specific lung biomarkers as indicators of bronchiolitis obliterans in children receiving allogeneic hematopoietic stem cell transplantation. Gassas A, Sung L, Doyle JJ, Finkelstein-Schechter T, Dell S, Subbarao P, Palaniyar N. Paediatric Oncology Group of Ontario ($15,000 2010)

The Von Willebrand Disease (VWD) international prophylaxis (VIP) study. Carcao M. Rho Inc. (US$2,500/pt 2009–present)


Up regulation of Epstein–Barr virus activity by plasmodium falciparum: Determinants of host control. Allen U, Weitzman S. Canadian Institutes of Health Research ($700,000 2011–2014)

Validation of the Children’s International Mucositis Evaluation Scale (ChIMES). Sung L, Beyene J, Feldman B, Tomlinson D. Canadian Institutes of Health Research ($313,000 2010–2013)


The Division of Immunology and Allergy continues as a leader in patient care, research and education in immunology. Under the leadership of Dr. Roifman, who is the Founder and Director of the Canadian Centre for PID, Jeffrey Modell Centres Network (JMCN) and the Canadian Immunodeficiency Society (CI Society), these (inter)national programs facilitate early recognition, diagnosis, research and effective treatment of primary immunodeficiencies (PID).

The Primary Immunodeficiency (PID) Program at The Hospital for Sick Children is the largest centre of its kind in Canada and is considered to be one of the largest in the world. Medical services are provided to over 2,000 outpatients referred by physicians and hospitals nationally. This number has steadily increased by 30 per cent over the last 10 years. With a total of 9 clinics per month, evaluation of our complex patients is enhanced by providing extensive time and attention to their conditions.

The Allergy Program at SickKids is a referral-based clinic for the diagnosis and management of children with complex allergic diseases including multiple drug allergies, latex allergy, anaphylaxis, food challenges, urticaria (chronic, idiopathic, cold/heat induced etc.) and asthma. To accommodate this diverse group, three clinics are available to patients and families, with 900 patients a year, plus 500 patients referred to external clinics. In 2010, Dr. Julia Upton travelled to Duke University to gain firsthand experience with oral immunotherapy for food allergies and presented her knowledge at the 2011 Annual Paediatric Update. Dr. Sasson Lavi, a member of our Division, was interviewed by National Post for a supplement on asthma and allergies published in May 2011. The two articles were entitled “Good asthma control requires patient compliance” and “Inhaled corticosteroids: what are the risks?”.

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 visits at short-stay units with subsequent 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 in Ontario. Final analysis is underway and a clinical trial is under development. As a leader in gammaglobulin treatment, Dr. Roifman acted as the Lead investigator in
multiple international clinical trials. We are in the preparatory stages of participating in a Greencross Multicentre trial for gammaglobulin infusions.

Brenda Reid as Clinical Nurse Specialist in the Division has been instrumental in providing leadership to nurses across the country in the management of primary immunodeficient patients. Through the CI Society, she formed a network of nurses and has developed a nursing section for their website. In 2010, this network developed “tips” for infusion nurses to manage patients on IVIG and SCIG. As well, she contributed to the development of infusion guidelines for the Ontario Regional Blood Conservation Networks IVIG Toolkit.

Innovative protocols in stem cell and gene therapy pioneered in our centre in the late 1980s have transformed the field and enhanced practice of many facilities worldwide. We have demonstrated that matched unrelated transplants are successful in 80 per cent of cases and are superior to other modalities of BMT for multiple forms of PID (JAMA 2006:295:508; Italian Journal of Pediatrics 2007:33:24; Immunol Res 2007: 38: 191, BMT 2008: 41: 947). This success was credited through the publication of a two-volume textbook series within the Immunology and Allergy Clinics of North America headed by guest editor Dr. Chaim Roifman.

In the past year we began to study the role of Lyp phosphatase, (a molecule we originally cloned and sequenced) in the normal immune system, autoimmunity and immunodeficiency. Our studies have illustrated that a known mutation in lyp may affect its interactions with Src kinase. Further studies are still underway and a paper is currently in press. In addition we characterized ZAP70 deficient human lymphocytes (JACI 2010). Moreover, we have found that autoantibodies against IL-17A, IL-17F; and IL-22 may cause chronic mucocutaneous candidiasis in patients with autoimmune polyendocrine syndrome type I (J Exp Med 2010).

With such life-altering advancements in the care and quality of life of patients, Dr Chaim Roifman, Division Head, continues to remain a member of the IUIS committee for primary immunodeficiency (previously WHO). Research remains an integral pillar in our Division. Under the guidance of Dr. Chaim Roifman, The Jeffrey Modell Research Laboratory for the Diagnosis of PID (Canadian Centre for PID) continues to thrive. In 2010, we performed 1721 tests for the evaluation of immunity in PID patients as well as 149 molecular sequences for possible immunodeficiency. Defining novel phenotypes and genotypes of primary immunodeficiencies remains the fundamental goal of this centre.

We identified a distinct group of patients with chronic mucocutaneous candidiasis who have combined immunodeficiency and susceptibility to CMV infections (JACI 2010). We also identified that diffuse large B cell lymphoma can be a presenting feature of zap-70 deficiency (JACI 2010). Diagnosis of immunodeficiency in this scenario might alter the course of therapy and include allogeneic bone marrow transplantation. Similarly (Medicine 2010), this collaborative study showed that the clinical features of IRAK-4 and MyD88 deficiency are indistinguishable. In another study, patients with immuno-osseous dysplasia spondyloenchondrodysplasia and various autoimmune phenotypes were sequenced and found to have a common mutation in ACP5 which encodes tartrate-resistant acid phosphatase (Nat Genet 2011).

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 severe immune deficiency in children. 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 (JACI 2011). In contrast Dr. Grunebaum’s lab, with a grant that they received in 2011 from the Canadian Immunodeficiency Society, was 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 Fred Rosen/Jeffrey Modell/NIH research grant, Dr. Grunebaum’s team showed that purine nucleoside phosphorylase (PNP) deficiency caused apoptosis.
of thymocytes (JACI, accepted for publication 2011). Importantly, delivering normal PNP protein into thymocytes prevented the apoptosis of the cells and corrected the immune abnormalities associated with PNP deficiency. The ADA and PNP novel enzyme replacement treatments options for purine defects developed by Dr. Grunebaum’s team are attracting increasing 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.

Education remains a major focus for every member of the Division with a flawless certification record by the Royal College of Physician and Surgeons of Canada since 1990. Our program provides exceptional training in clinical and laboratory immunology. By preparing outstanding academic and non-academic specialists in immunology and allergy, we continue to attract brilliant candidates from across the world. To accommodate these additional national and international fellows, The CI Society-Talecris Fellowship Program has supported our Division for over a decade. These trainees have the opportunity to participate in a flexible program which can be predominantly research oriented.

Our commitment to education far exceeds these training programs. As the Chair of the Jeffrey Modell Centers Network, Dr. Chaim Roifman established The Robert A. Good/Jeffrey Modell Fellowship in Immunodeficiency and Transplantation. This International program began in 2009 and provided matching funds for several Immunology Fellowship positions each year globally. In addition, the Jeffrey Modell Canadian Immunodeficiency Network implemented PID Video Conference rounds. The rounds are accredited by the Royal College and they are held quarterly. The seminars are hosted by SickKids and link immunologists and trainees across Canada to discuss complex cases. Participation is accessible through telehealth video conferencing and through webcasting, with an average of 60 participants and nine national sites.

Dr. Adelle Atkinson is in her sixth year as Director of Post Graduate Medical Education in the Department of Paediatrics. She continues to excel as an outstanding educator. In recognition of her achievements, she received the Sarita Verma award for mentorship and advocacy in the spring of 2010 and was promoted to associate professor in June 2009. Over the last year she has given invited presentations at international conferences in the area of postgraduate medical education and faculty development including topics such as residency selection, professionalism, clinical teaching and feedback. Dr. Atkinson runs a novel clinic studying drug allergies in medically complex patients, providing an important clinical service to this tertiary care population. Dr. Atkinson was also nominated for the RCPSC Program Director award. The training program of the Core Paediatrics Residency Program at SickKids received a successful internal review and was considered a “model” for other programs.

Thanks to the support of The Donald & Audrey Campbell Chair, the Jeffrey Modell Foundation, the CI Society, Canadian Institutes of Health Research, March of Dimes, and the Canadian Centre for Primary Immunodeficiency, children with primary immunodeficiency are diagnosed earlier and receive state-of-the-art treatment in a timely fashion.

Honours and Awards

Atkinson A: (Medical Education and Immunology/Allergy) has been nominated for the RCPSC Program Director award.

Roifman CM: Career Excellence Research Award, Department of Paediatrics, The Hospital for Sick Children, June 2011.
Publications


Nahum A, Dadi H, Bates A, Roifman CM: The L412F variant of Toll-like receptor 3 (TLR3) is associated with cutaneous candidiasis, increased susceptibility to cytomegalovirus, and autoimmunity. Journal of Allergy and Clinical Immunology 2011: 127(2); pp 528-531.


Nicholas S, Krance RA, Hanson IC, Chinen J, Mamlok RJ, Roifman CM, Shearer WT: Early versus delayed diagnosis of SCID: Triumph vs tragedy. Clinical Immunology 2011: 139(3); pp 360-362.


**Books and Chapters**


**Funding**


Correcting purine nucleoside phosphorylase deficiency by prolonged intracellular enzyme replacement therapy. Grunebaum E. *March of Dimes* ($390,000 2007-2010)

CI Society Talecris treatment and bone marrow transplant centre for primary immunodeficiency. Roifman C. *Canadian Immunodeficiency Society* ($150,000 2009-2012)
Determinants of the Microbiome in IBD by the Harvard/Broad Institute - Toronto IBD Consortium. Snapper Scott, Notarangelo, Geha, Muise etc. Crohn’s and Colitis Foundation America with support from the Helmsley foundations ($500,000 2011-2014)

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


Genetics of primary immunodeficiency. Roifman CM. Canadian Immunodeficiency Society ($100,000 2007-2010)

Home immunoglobulin therapy. Roifman CM. Canadian Immunodeficiency Society ($430,000 2007-2011)

Immune and non-immune abnormalities associated with purine nucleoside Phosphorylase deficiency. Grunebaum E, Roifman CM. Jeffrey Modell Foundation and the National Institute of Health-National Institute of Allergy and Infectious Diseases ($250,000 2009-2011)

Immune and non-immune abnormalities associated with PNP. Roifman CM, Grunebaum E. Jeffrey Modell Centres Network National Institute of Health ($250,000 2009-2011)

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

Jeffrey Modell Research Laboratories for the diagnosis of primary immunodeficiencies. Roifman CM. Jeffrey Modell Foundation ($125,000 2009-2011)

Jeffrey Modell Canadian Immunodeficiency Network. Roifman CM. Canadian Immunodeficiency Society ($12,672 2010)

JMFRA Research Fellowship. Roifman CM. Jeffrey Modell Foundation and Robert A Good Society ($37,500 2009)

Optimizing hematopoietic stem cell transplantation—the cord advantage. Grunebaum E. Elizabeth Rose Herman Endowment Fund ($29,000 2008-2010)

A person’s a person, no matter how small. 

Dr. Seuss, author
Division of Infectious Diseases

The Division of Infectious Diseases is a leader in clinical, educational and research activities locally, nationally and internationally. The Division has active in-patient and ambulatory consultant services that include teams that focus on general infectious diseases and infectious diseases in immunocompromised infants, children and youth, respectively. Within the spectrum of infections in previously healthy and immunocompromised hosts, major clinical areas of focus include transplant-related infections, perinatal HIV, infections in patients with cystic fibrosis, childhood tuberculosis and congenital infections. We are a resource for issues related to infectious disease outbreaks, including new and emerging infectious, infection control and the ever-increasing problem of multi-drug resistant tuberculosis. In this context, the Division has a leadership role in structuring the approach to the management of major emerging and resurgent infectious disease threats.

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 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 multicentred paediatric HIV studies on 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, HIV, and encephalitis. Multicentred research relating to the diagnosis and prevention of infections in transplant patients is 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).

Representatives from our Division continue to play a key role in activities of the Royal College of Physicians and Surgeons of Canada, and in many areas of undergraduate, graduate, post-graduate and continuing medical education activities. Faculty members continue to hold editorships, visiting professorships and related academic honours nationally and internationally.
Honours and Awards

Allen UD: Harry Jerome Award for outstanding achievements in Health Sciences, 2011.


Bitnun A: Kindred Spirit Tapestry Award - awarded to SickKids HIV Care Team, 2011.

Bitnun A: Junior Faculty Award for Clinical Excellence in Paediatric Medical Care, 2011.


Publications


DiRisio M, Ballantyne PJ, Read SE, Bendayan R: “HIV isn’t me...”: HIV+ adolescents’ experiences in a positive context of support and treatment. AIDS Care 2011: 23 (6) pp 694-99.


Kakkar F, Allen UD, Ling D, Pai M, Kitai IC and the Infectious Diseases and Immunization Committee, Canadian Paediatric Society: The Canadian Journal of Infectious Diseases and Medical Microbiology 2010:21: p e111.


McDonald J, Moore D and the Infectious Diseases and Immunization Committee, Canadian Paediatric Society: FluMist vaccine: Questions and answers. http://www.cps.ca/english/statements/ID/FluMist.htm. Dr. Allen is a member of the Committee and co-author.


Salvadori M, LeSaux N and the Infectious Diseases and Immunization Committee, Canadian Paediatric Society: Recommendations for the use of vaccines in infants. Paediatric and Child Health 2010: 15 (8): pp 519–23. Dr. Allen is a member of the committee and co-author.


Books and Chapters


Funding

A pilot study of genetic determinants of severe influenza in children. Tran D, Paterson A, Beyene J, Richardson S, Schuh S. University of Toronto: Dean’s Fund - New Staff Grant ($10,000 2007-2012)


Defining the role of Stenotrophomonas maltophilia in cystic fibrosis patients. Waters V. Canadian Cystic Fibrosis Foundation ($81,290 2009-2011)


EVerotoxin as a diagnostic adjunct to post-transplant lymphoproliferative disorder (PTLD) prediction. Genetic predictors of severe respiratory illness from pandemic H1N1 influenza infection. Tran D, Paterson A. Public Health Agency of Canada ($99,930 2010-2011)

Lingwood C, Allen UD. SickKids Transplant Centre ($14,000 2010-2011)


Failures are divided into two classes — those who thought and never did, and those who did and never thought.

John Charles Salak, author
Improving communication through structured radiology reports: An evaluation of a structured report development and implementation strategy. Tran L, Mann E, Wadhwa A. The Canadian Medical Protective Association ($49,320 2011-2012)


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

Randomized double blind controlled trial of the use of biofilm antimicrobial susceptibility assay to guide antibiotic therapy in chronic pseudomonas aeruginosa infected cystic fibrosis patients. (Hospital for Sick Children and St. Michael’s Hospital). Waters V. Innovotech Inc. and National Research Council Industrial Research Assistance Program ($200,000 2009-2012)

RSV Infection among transplant recipients and other high risk compromised hosts. Allen UD, Robinson J. Abbott Canada ($236,000 2008-2010)

The NLRP3 inflammasome and resistance to viral myocarditis. Opavsky A. Labatt’s Centre Innovation Fund ($25,000 2010-2011)


Understanding the HIV transitions of families living with HIV. Browne O, Bitnun A, Read S. Ontario HIV Trials Network (OHTN) ($110,040 2009-2011)
Division of Neonatology

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 received funding for eight additional NICU beds, which will be opened as staff are recruited over the next year.

The Ontario Human Donor Milk Bank was funded by the Ontario government and construction has begun at Mount Sinai Hospital. The bank is a partnership of three hospitals – Mount Sinai Hospital, SickKids and Sunnybrook. 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.

Newborn follow-up clinics were opened at Mount Sinai and SickKids under the directorship of Dr. Ed Kelly and Dr. Linh Ly. They operate in coordination with the newborn follow-up clinic at Sunnybrook Health Sciences Centre. All three clinics utilize a common protocol and database, and each will report to their respective NICU clinical director.

A post-natal ambulatory clinic was opened at Mount Sinai for newborn infants who were discharged from Mount Sinai Hospital and required medical attention during the first three months of life. The Level 1 nursery at Mount Sinai was re-structured to provide more consistency and quality of care.

The Division of Neonatology welcomed Dr. Robert Jankov to the faculty at SickKids, Dr. Jennifer Young, Dr. Afif El Khuffash and Dr. Adel Mohamed to the faculty at Mount Sinai, and Dr. Kate Basil and Dr. Lucia Mirea to the faculty at the Maternal-Infant Care Research Centre. The Division of Neonatology wishes to thank Dr. Olufunmi Akindele and Dr. Andrew Shennan for their service and significant contributions and they deserve our enormous thanks and best wishes on their departure from the faculty staff.

The Division’s Neonatal-Perinatal Fellowship Training Program, under the leadership of Dr. Martin Skidmore, received an excellent internal review and will undergo external review in the next year. The Clinician-Scientist Scholar Training Program expanded with the recruitment of Dr. Afif El-Khuffash and Dr. Amish Jain, who have enrolled in the Masters Degree program at the University of Toronto in Clinical Epidemiology and Cardiac Physiology, 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 112 publications, and received grant funding of $119,779,738.
Honours and Awards

Barozzino T: Award for Excellence in Clinical Teaching, Undergraduate and Postgraduate Teaching in Pediatrics, Education Achievement Day, St. Michael’s Hospital, Toronto, ON, 2011.

Church P: Teacher of the Year, Division of Developmental Paediatrics Faculty Teaching Award, 2011.

Church P: Physician Member, Scientific Advisory Committee, American Academy Cerebral Palsy & Developmental Medicine (AACPDM), Chicago, IL, 2011.

Church P: Physician Member, Executive Change Committee, Spina Bifida Program, Holland Bloorview Kids Rehabilitation Hospital, Toronto, ON, 2011.

Dunn M: Chair/Lead, Ontario NICU Infection Control Initiative, Provincial Council for Maternal and Child Health, Sep 2010–Present

El Khuffash A: Assistant Professor of Pediatrics, University of Toronto, January 2011.

Fellows Award at the 23rd National Resident and Fellow Competition, Winnipeg, May 2011.

James A: Adjunct Associate Professor, Faculty of Business & Information Technology, University of Ontario Institute of Technology, Oshawa, Ontario, Canada, 2010.

James A: Adjunct Associate Professor, Faculty of Health Sciences, University of Ontario Institute of Technology, Oshawa, Ontario, Canada, 2010.


Jefferies A: Promotion to Full Professor, Department of Paediatrics, Faculty of Medicine, University of Toronto, June 2011.

Jefferies A: Patil award for platform presentation in the area of Teaching and Learning, Association for Medical Education in Europe Annual Conference, August 2010.

Khurshid F: Trainee of the Year Award, Neonatal-Perinatal Medicine Fellowship Training Program, University of Toronto, 2011.


Mortality rates and NICU outcomes of neonates born at the limits of viability in inborn vs outborn centres.
Lee S: Ontario Health Innovation Merit Award, November 2011.

Lee S: Appointed Associate Member, Samuel Lunenfeld Research Institute, April 2011.

McNamara P: Winner of Fellow section of the 23rd Canadian National Resident and Fellow Research Competition, presented by Dr. Amish Jain who was selected to be the SickKids representative. For Targeted Neonatal Echocardiography (TnECHO) Prevents Postoperative Cardiorespiratory Instability Following PDA Ligation.

Mohamed A: Assistant Professor of Paediatrics, University of Toronto, February 2011.


Ng E: Member, Paediatric Taskforce, The Greater Toronto Child Health Network, 2010.


Shah P: Excellence in Teaching Award, Neonatal-Perinatal Division, University of Toronto, June 2011.

Shah P: Physician Researcher Award for Scientific Accomplishment from the Department of Paediatrics, University of Toronto, June 2011.


Shah V: Association for Medical Education in Europe Patil Award for presentation in the area of Teaching and Learning, 2010.


Shah V: Supervisor for Trainee (Dr. Eyad Almidani) who received award for the “Best Poster”, 10th Annual Neonatal-Perinatal Research Day, University of Toronto, Toronto, 2011.

Tomlinson C: PhD Dissertation Award Distinction, Canadian Nutrition Society, April 2011.

Tomlinson C: Doctorate (PhD) Doctor of Philosophy, Nutritional Sciences, University of Toronto, October 2010.

van Dyk J: Trainee of the Year Award, Neonatal-Perinatal Medicine Fellowship Training Program, University of Toronto, 2011.

Whyte H: Promotion to Full Professor, Department of Paediatrics, Faculty of Medicine, University of Toronto, June 2011.


Whyte H: Innovations in Health Care – Improving Patient Safety – Ontario Minister of Health Award, November 2010.


Young J: Assistant Professor, University of Toronto, 2010.

Young J: Mount Sinai Hospital Bernard Ghert Award of Resident Excellence in Patient Focused Care – Nominee, 2010.

Publications


Be the change that you want to see in the world.

Mohandas Ghandi, political and spiritual leader in India


Books and Chapters


A comparison of debriefing methods following simulated neonatal resuscitation. Finan E. NRP Research Grant ($16,180 2010)

A critical appraisal of resuscitation practices in the NICU. Gibbins, S, Dunn M, Asztalos E, Schurr P, Chow J, Kiss A. PBR Award Sunnybrook Health Sciences Centre ($12,358 2010–2011)

A multi-faceted approach to the implementation of recommendations for management of infants at increased risk for sepsis for the interprofessional health care team. Shah V, Jeffreys A. Academic Health Sciences Alternate Funding Plan Phase III Innovation Fund ($39,613 2009–2010)


Funding


University of Toronto Faculty of Medicine Continuing Education Research and Development ($4,900 2010–2011)


Clinical prediction models for critically ill pregnant women: MEOWS and CIPHER. Von Dadelszen P, Lee S, et al. Canadian Institutes of Health Research ($100,000 2011–2012)

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, Jain A, Desphande P, McGeer A. Physicians Services Incorporation Foundation ($136,000 2011)


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


Developing and testing a prediction model for neurodevelopmental outcomes for the extremely preterm infant. Asztalos E. Alva Foundation ($250,000 2010–2015)

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

Economic and mental burden of neural tube defect in Canada. Church P, Koren G. Bayer Pharma ($80,000 2011)


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

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

Enhancing breast milk production with domperidone in mothers of preterm neonates (EMPOWER Trial). Asztalos E. Canadian Institutes of Health Research ($999,454 2011-2016)


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 ($100,000 2010-2011)


HOLD IT: Health outcomes from low vitamin D in toddlers. Maguire JL. CIHR Operating Grant ($563,000 2010-2014)

Hypercapnia as therapy for neonatal pulmonary hypertension. Jankov R.P. Canadian Institutes of Health Research Open Grants Program (MOP# 93596) ($579,880 2009-2014)

Hypoglycemia and neuroplasticity in the neonatal period. Shroff MM, Moore AM, Whyte HEA, Taylor MJ. Translational Research Grant, Department of Medical Imaging, University of Toronto ($35,000/year 2008-2010)

Impact of ACORN newborn education program in rural China. Du L, Singhal N, McMillan DD, Aziz K, Lee SK. Canadian Institutes of Health Research ($180,000 2008-2011)

Implementation of a wireless positive patient identification system for the prevention of breast milk errors in the NICU. Unger S, O’Brien K. Ministry of Health Innovation Funds ($60,014 2010-2012)

Improving parental opinion on retrotransfer through effective discharge planning. Diambomba Y. AHSC AFP Innovation Funds ($62,000 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, Gibbens S, Doctor S. Canadian Medical Protective Association Collaborative Research Grant ($49,750, 2009-2010)

Inhibition of apoptosis as a major component of chronic neonatal lung injury. Tanswell AK, Jankov R.P. Canadian Institutes of Health Research ($477,180 2007-2012)


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


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

Measuring late preterm health and developmental outcomes through TARGet Kids! Maguire JL, Sgro M, Campbell D. St. Michael’s Hospital Innovation Fund ($18,694 2011-2012)

Milk intake, vitamin D deficiency and fracture risk in young children. Maguire JL. Dairy Farmer’s of Canada ($90,000 2011-2012)

MiTy Trial (Metformin in Women with Type 2 Diabetes in Pregnancy Trial). Feig D, Lee S, et al. Canadian Institutes of Health Research ($1,735,119 2010-2015)

Multiple courses of antenatal corticosteroids for preterm birth (MACS). Murphy K, Asztalos E. Canadian Institute of Health Research ($2,943,583 2006-2010)


Neuroimaging and patent ductus arteriosus ligation. Taylor M, Sledge J, McNamara PJ. *NSERC (Natural Sciences and Engineering Research Council of Canada)* ($384,734; 2008-2012)

Nutrition research trainee support. O’Connor D, Unger S. *The Hospital for Sick Children Foundation* ($40,000 2011-2013)


Oxidative stress and neonatal pulmonary vascular resistance control. Belik J. *Canadian Institute of Health Research Operating Grant* ($597,193 2009-2014)


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

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

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

Resuscitation competencies in inter-professional education (ReCIPE). Simmons B, Reeves S, Deland M. Neonatal Resuscitation Program Research Grant – Canadian Paediatric Society ($17,590 2009-2010)

Role of reactive oxygen/nitrogen species in normal and aberrant postnatal lung growth. Tanswell AK. Canadian Institutes of Health Research Open Grants Program ($323,592 2007-2010)


Safety and efficacy of methylxanthines in the very low birth weight infant: Effect on sleep on the school age child. Marcus C, Asztalos E. National Heart, Lung and Blood Institute (NHLBI) ($267,567 (yr 1) 2009-2013)


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

Surveillance of early-onset neonatal sepsis and meningitis. Sgro M, Campbell D. Draeger Medical ($10,000 2011-2012)

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

Surveillance of Severe Hyperbilirubinemia. Sgro M, Campbell D. Public Health Agency of Canada ($40,000 2011-2013)


TARGet Kids! Maguire JL. Operating Grant St. Michael’s Foundation ($30,000 2010-2011)

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

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 ($135,000 2010-2011)


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. Bramm B, Lee S, et al. **University of Alberta** ($300,000 2008-2011)

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 2010-2012)


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

The Women’s Auxiliary Chair in Neonatology. Lee S. **The Hospital for Sick Children** ($350,000 2009-2013)


Vitamin D deficiency in urban Canadian toddlers: A study of prevalence and risk factors. Maguire JL. **Dairy Farmers of Ontario Research Grant** ($89,750 2008-2010)

What is the impact of Early Childhood Education and Care (ECEC) program quality on children’s developmental health? Perlman M, Shah PS. **CIHR** ($56,040 2011-12)
2010-2011 has proven to be an outstanding year for the Division of Nephrology. The number of patients cared for and the complexity of care provided continue to grow. The Nephrology Fellowship Training Program, which provides a unique combination of comprehensive clinical training and exposure to state-of-the-art scientific inquiry, draws trainees from across the world.

The research profile of the Division continues to grow, as demonstrated by the number of successful grant applications, the high quality of the journals in which Division members’ work is published, and the number of invitations to speak at leading national and international conferences. The Division is uniquely poised to lead in clinical, epidemiological, and translational research, and in basic scientific discovery.

In 2010–2011, the expertise in clinical care, education, and research of members of the Nephrology Division was recognized by major awards at the local, national, and international level.

Honours and Awards

Rosenblum ND: Kidney Foundation of Canada Medal for Research Excellence, 2011

Publications


Allen U, Licht C: Pandemic H1N1 influenza A infection and (atypical) HUS – more than just another trigger? Pediatric Nephrology 2011: 26: pp 3-5.

Ardoin SP, Schanberg LE, Sandborg C, Yow E, Barnhart HX, et al; APPLE investigators: Laboratory markers of cardiovascular risk in pediatric SLE: The APPLE baseline cohort. Lupus 2010: 19(11): pp 1315-1325. (Dr Elizabeth Harvey was one of 117 collaborators)

Bergstralh EJ, Monico CG, Lieske JC, Herges RM, Langman CB, Hoppe B, Milliner DS; IPHR Investigators: Transplantation outcomes in primary hyperoxaluria. American Journal of Transplantation 2010: 10(11): pp 2493-2501. (Dr Elizabeth Harvey was one of 161 collaborators)


Funding


Canada research chair in developmental nephrology (Tier I). Rosenblum ND. Canadian Research Chairs Program ($200,000/yr 2005-2012)

Canadian child health clinician scientist program. Rosenblum ND. Canadian Institutes of Health Research ($300,000/yr 2009-2015)

Canadian child health clinician scientist program. Rosenblum ND. Manitoba Institute of Child Health ($50,000/yr 2008-2011)

Canadian child health clinician scientist program. Rosenblum ND. Women’s and Children’s Health Research Institute ($35,000/yr 2008-2015)

Books and Chapters


Canadian paediatric clinician-scientist program.
Rosenblum ND. B.C. Children’s Hospital Foundation ($150,000/yr 2002-2015)

Canadian paediatric clinician-scientist program.
Rosenblum ND. The Hospital for Sick Children Foundation ($300,000/yr 2002-2014)

Control of cerebellum cell specification, migration and organization by SUFU. Rosenblum ND. Canadian Institutes of Health Research ($146,824/yr 2011-2016)

Control of complement-mediated platelet activation in aHUS via eculizumab. Licht C. Alexion Pharmaceuticals, Inc. (US$15,000 2010)

Control of kidney cell determination and morphogenesis by BMPs and beta-catenin. Rosenblum ND. Canadian Institutes of Health Research ($155,828/yr 2008-2013)

Dysregulated Hedgehog signaling and the pathogenesis of nonobstructive and obstructive hydronephrosis. Rosenblum ND. Kidney Foundation of Canada ($50,000/yr 2010-2012)


MD/PhD grant. Rosenblum ND. Canadian Institutes of Health Research ($110,000/yr 2005-2011)

MD/PhD grant. Rosenblum ND. Canadian Institutes of Health Research ($110,000/yr 2006-2012)

MD/PhD grant. Rosenblum ND. Canadian Institutes of Health Research ($110,000/yr 2007-2013)

MD/PhD grant. Rosenblum ND. Canadian Institutes of Health Research ($110,000/yr 2008-2014)

MD/PhD grant. Rosenblum ND. Canadian Institutes of Health Research ($110,000/yr 2009-2015)

MD/PhD grant. Rosenblum ND. Canadian Institutes of Health Research ($110,000/yr 2010-2016)

Modulation of vascular injury by the motility regulators, slit and roundabout. Robinson LA. Canadian Institutes of Health Research ($616,945 2011-2016)

Multi-mode spinning disc confocal platform for live cell imaging. Robinson LA, Klip A, Trimble W. Canada Foundation for Innovation ($964,325 2010-12)
Notch signaling and control of podocyte cell proliferation in development and disease. Piscione T. *Kidney Foundation of Canada* ($100,000 2009-2011)


Robinson LA. *MaRS Innovation Proof of Principle Program* ($50,000 2011-2013)

The biology of chronic preconditioning: Genomic and physiologic mechanisms of response. Redington AN, McCrindle B, Wells GD, Robinson LA. *Canadian Institutes of Health Research* ($200,000 2010-2012)

The role of MYH9 in renal transplantation. Parekh RS. *Johns Hopkins University-Institute for Clinical and Translational Research (ICTR) Accelerated Translational Incubator Pilot (ATIP) Program* ($100,000/yr 2010-2011)

Translational studies of the liver disease in autosomal recessive polycystic kidney disease. Rosenblum ND. *Liam’s Light Foundation* ($190,000 2011-2013)

Validation of PROMIS (patient reported outcomes measurement information system) pediatric banks with incident nephrotic syndrome. Gibson D, Hébert D. *National Institutes of Health* ($521,000 2010-2011)

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We worry about what a child will become tomorrow, yet we forget that he is someone today.

*Stacia Tauscher*
The major foci of the clinical activities of the Division of Neurology are epilepsy, stroke, headache, neurometabolic disease, neuromuscular disease, neurogenetics, sleep disorders, movement disorders, demyelinating diseases, functional neuroimaging and neurointensive care.

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 and molecular and cellular neurobiology.

Honours and Awards

Akiyama T: William J. Logan Award for Excellence in Clinical Teaching, Division of Neurology, Department of Paediatrics, Hospital for Sick Children, 2011

Al-Khater R: Prichard Day Fellows Winner (DOPA-Aggravated and Dopamine-Responsive Movement Disorder: A New Disease), Division of Neurology, Hospital for Sick Children, Department of Paediatrics, Hospital for Sick Children, 2011

Andrade D; Who’s Who in Medicine Higher Education, Academic Keys, United States, (Distinction), 2010

Bar Yosef O: Student Humanitarian Award, The Hospital for Sick Children, 2011

Cortez M: Appointed Chairman of the Canadian Board Registered EEG Technologists, Inc. (CBRET), 2011

Elliott I: Career Achievement Award, The Hospital for Sick Children Nursing Excellence Awards, 2011

Jones KC; Prichard Day Resident Winner (Wallerian Degeneration in Childhood Stroke, Beyond a Radiological Diagnosis), Division of Neurology, Department of Paediatrics, The Hospital for Sick Children, 2011

Lagman-Bartolome M: CanMeds Trainee Award, Division of Neurology, Department of Paediatrics, The Hospital for Sick Children, 2010–2011
Moharir M: Nominated for the Junior Award for the Richard Rowe Award for Clinical Excellence in Paediatric Medical Care, Department of Paediatrics, 2011

Moharir M: CanMeds Faculty Award, Division of Neurology, Department of Paediatrics, The Hospital for Sick Children, 2010-2011


Nita D: Selected as member of the editorial team for Neurology - Resident and Fellow section, 2011

Ochi A: William A. Hawke Award for Excellence in Clinical Teaching, Division of Neurology, Department of Paediatrics, The Hospital for Sick Children, 2011


Publications


Gladstone J, Cooper P: Migraine in Canada …. We can and should do better! Canadian Journal of Neurological Sciences 2010: 37(5): pp 553–554.


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Kids: they dance before they learn there is anything that isn’t music.

William Stafford


Books and Chapters


Funding

A pilot, dose finding study of pioglitazone in children with ASD. Anagnostou E. Dean’s Fund ($10,000 2010–2011)

A pilot dose finding study of pioglitazone in children with ASD. Anagnostou E, Brian J. PSI ($127,700 2010–2013)


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


Anterior nucleus of the thalamus deep brain stimulation: A PET study. Andrade D. University of Toronto, Division of Neurology, New Initiatives Program ($30,000 2009-2011)

Autism comes to the hospital: Experiences of hospital care from the perspectives of children and adolescents with autism spectrum disorder, their parents and health care providers. Muskat, B, Nicholas D, Roberts SW, Stoddart K, Zwaigenbaum L. SickKids Foundation & The Institute of Human Development, Child and Youth Health – Canadian Institutes of Health Research ($190,000 2010-2012)


Biometric authentication using handwriting biomechanics. Chau T, Anagnostou E, Fleury A. Natural Sciences and Engineering Research Council of Canada (NSERC) ($340,000 2010–2013)


Centre for Investigation of Neuroplasticity in Neurodevelopment. Snead C. Canadian Foundation for Innovation/ORF ($9,535,612 2007–2012)

Centre for the Study of Complex Childhood Diseases. Tein I, Member, CFI Team. Canada Foundation for Innovation (CFI) ($21,000,000 2007–2012)


Charaterization of genetic and molecular mechanisms underlying infantile spasms. Osborne L, Minassian BA. Canadian Institutes of Health Research ($549,785 2008–2013)


Comparative functional studies of the two MeCP2 isoforms, MeCP2e1 and MeCP2e2. Vincent J, Frankland P, Minassian BA. International Rett Syndrome Foundation ($100,000 2009-2011)

Compression of sagittal sinus in neonates underlying sinovenous thrombosis. deVeber G. Heart and Stroke Foundation of Canada, Junior Personnel Award ($100,000 2009-2011)

Conscious will and voluntary actions: Is there a last ventriloquist in the brain? Perez Velazquez JL. Bial Foundation (€47,500 2009-2012)

Cortical oscillations and altered states of consciousness: The study of meditative states and functional brain activity. Perez Velazquez JL. Bial Foundation (€18,000 2009-2011)


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, Martinianakis, T, Schneider R, Leslie K. Pediatric Consultants Education Research ($4,890 2011-2012)

Deep brain stimulation for epilepsy: A PET study. Andrade D. University of Toronto, Division of Neurology ($30,000 2009-2011)


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


Efficacy of L-arginine therapy on vasodilatation and mitochondria in MELAS syndrome. Tein I. United Mitochondrial Diseases Foundation ($75,000 2010-2011)

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* ($40,000 2011-2013)

Final stages of the development of the GMFM challenge module: A new advanced motor skills test for children with cerebral palsy. Wright V, Fehlings D. *Physiotherapy Foundation of Canada* ($2,000 2010-2011)


Genetics of reading disabilities. Barr CL, Kerr E, Lovett MW. *Canadian Institutes of Health Research* ($1,026,192 2008-2013)

Genome wide DNA methylation profiling in autism. Weksberg R, Roberts SW, Scherer S. *Canadian Institutes of Health Research* ($649,518 2008-2011)


Hemorrhage in children with cerebrovascular malformations. deVeber G. *Ontario Stroke Network* ($64,799 2010-2012)

Identification of genetic causes of pediatric neurological conditions and using these to uncover the cellular pathways involved and to determine the ways in which they are disturbed. Minassian BA. *Canada Research Chairs Program* ($478,585 2006-2011)

Identifying juvenile myoclonic epilepsy genes through whole-genome sequencing in families. Andrade D. *McLaughlin Centre for Molecular Medicine (ON)* ($50,000 2011-2012)


Infantile spasms in Down syndrome: Correction of the epileptic phenotype. Snead OC. Canadian Institutes of Health Research ($181,202 2011-2016)


MEB Diseases. Vajsar J. SickKids Foundation ($37,000 2006–2012)


Molecular basis of Lafora bodies (starch formation in the brain) and Lofora’s progressive myoclonus epilepsy. Minassian BA, Ackerley CA, Scherer SW, Lohi H. Canadian Institutes of Health Research ($1,146,830 2006–2011)

Multimodal neuroimaging and neurobehavioural outcomes in preterm neonates. Taylor M, Whyte H, Shroff M, Donner EJ, Moore A. Canadian Institutes of Health Research ($925,000 2007–2012)

Multimodal neuroimaging of frontal lobe cognitive function in children. Taylor MJ, Donner EJ, Pang FW. Canadian Institutes of Health Research ($466,335 2006–2011)

Multidrug resistance inhibitor Verapamil for the treatment of severe seizures. Andrade D. University of Toronto ($39,000 2008–2012)


Networks of Centres of Excellence of Canada (NCE) ($19,572,000 2010-2015)


Ontario-Manitoba Regional Research Training Centre. Banwell B, O’Connor P, Marie R-A. Multiple Sclerosis of Society of Canada ($300,000 2009-2011)

Genes, reading and dyslexia. Gruen J. (subcontracted sites: Lovett MW, Wolf M, Pennington B, Willcutt E, Boada R) Manton Foundation to Yale University (US$5,000,000 2009-2014)

Paediatric myasthenia. Kolski H, Vajsar J. Canadian Paediatric Surveillance Program ($42,000 2010-2011)

Pilot study of biomarkers for spinal muscular atrophy. Vajsar J. Spinal Muscular Atrophy Foundation USA ($28,000 2008-2011)

Pilot study of neuroimaging predictors of cognitive impairment and autistic spectrum disorder in tuberous sclerosis complex. Widjaja E. Society for Pediatric Radiology ($10,000 2010-2011)


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 2010-2013)


Role of carnitine/organic cation transporters in the mammary gland and implications for the suckling infant. Tein I. Mead-Johnson Grant ($13,790 2010-2011)

Role of the carnitine/organic cation transporter family in developing murine heart. Tein I. Mead-Johnson Grant ($21,290 2010-2011)
Spatio-temporal patterns of synchronized brain activity. Perez Velazquez JL. NSERC Discovery Grant ($172,165 2007-2011)

The Children’s Stroke Project. deVeber G. Anonymous Children’s Foundation ($1,800,000 2009-2014)


The lived experience of mothers of children with autism. Nicholas D, Roberts SW, McKeever P. Social Sciences and Humanities Research Council (SSHRC) ($154,000 2008-2011)

The practice of pediatric movement disorders amongst pediatricians. Soman TB, Lamba D, Logan WJ, Lang AE. The Hospital for Sick Children Foundation ($500 2006-2011)


Thrombolysis in pediatric stroke. deVeber G, LeFond C. National Institutes of Health ($4,000,000 2010-2015)

Towards the correction of the Rett-like phenotype of MeCP2-deficient mice. Canadian Institutes of Health Research ($150,000 2010-2014).

Transcranial magnetic stimulation to evaluate the role of clozapine potentiation of GABA in the treatment of schizophrenia. Ontario Mental Health Foundation ($75,000 2009-2011)


Vascular effects of infection in pediatric stroke. deVeber G, Fullerton H. National Institutes of Health ($6,815,231 2009-2014)


Young Investigator Award. Andrade D. Brain & Behavior Research Foundation (NARSAD) (US$60,000 2011-2013)
The Emergency Department (ED) at SickKids is the place where more than 55,000 children and families sought care in 2011. On an average day in the ED we provide care to 160 children, admit 18 of them to hospital, actively resuscitate at least one child, and evaluate at least 40 children with life-threatening presentations of illness or injury. The ED is the gateway to the hospital for more than 50 per cent of those children admitted to the wards or an intensive care unit.

2010-2011 was the year when the provincial mandate to improve efficiencies in operations brought about an intense and productive focus on how we do our clinical work, and how we can best serve the patients and families who come seeking help and care. Although service excellence and its component parts of timely care, safety and patient-centredness were a main focus, academic achievement and innovations continued to showcase the talents of our Paediatric Emergency Medicine (PEM) faculty group.

The ED team has committed itself to a focus on improvement. We are very proud that in 2010-2011, even as record numbers of patients arrived for care through the winter and spring, our wait times went down and our satisfaction scores notably improved. We now have a PEM faculty group with an FTE complement of 22.5, as well as a dedicated part-time faculty who support our clinical delivery of care in a true 24/7 fashion to match patterns of arrivals and acuity. As our volumes have grown, so have our staffing needs: total staff hours in a given week exceed 560 as of the current academic year.

Education is a core part of the academic mission in the Division of PEM. We maintain a strong continuing education profile with a fall PEM Update that draws an international audience (now in its eighth year), and courses throughout the academic calendar on sedation, trauma, paediatric advanced life support and advanced pediatric life support. We train subspecialty fellows in PEM as well as a myriad of undergraduate and post-graduate trainees from Toronto, and across Ontario and the whole of Canada. Post-graduate trainees come from programs in family medicine, emergency medicine, paediatrics, and other specialties. A clinical rotation in the ED at SickKids is often a trainee’s only exposure to the emergency care of the ill or injured child. More than 500 trainees rotated through our clinical department in 2010-2011!

The research program in PEM is a testament to “science that makes a difference.” Across the spectrum of common emergency conditions, educational theory and practice, cost-effectiveness of care, and traditional outcomes research, PEM investigators at SickKids are at the leading edge of the science and practice of emergency care. Notable publications in 2010-2011 include Stephen Freedman and Kevin Chan reporting on an economic analysis on ondasentron use in PLoS Medicine, Kathy Boutis highlighting the importance of deliberate practice in how learners achieve competencies in radiograph interpretation (Academic Medicine), and Suzanne Schuh and Christopher Sulowski, a PEM fellow, reporting on
outcomes in appendicitis for obese children (Pediatrics). Total research dollars garnered by PEM investigators in 2010-2011 were over $2.7 million. This achievement for research funding represents dollars awarded to a myriad of small, innovative important projects across 10 faculty members as well as large sums awarded from CIHR. (Stephen Freedman for his probiotic study in gastroenteritis) and the Thrasher Foundation (Suzanne Schuh for her inhaled magnesium study in asthma).

Faculty in PEM were recognized for their outstanding work by a number of national organizations, the university and the hospital in 2010-2011. Jonathan Pirie received the Harry Bain Award for Excellence in Teaching at the hospital, Savithiri Ratnapalan received the Helen Batty Award for Faculty Development from the university, and Stephen Freedman received the Terry Klassen Young Investigator Award from Paediatric Emergency Research Canada. Faculty members have also taken on leadership positions of importance – Suzan Schneeweiss as the Continuing Professional Development Educator for the Royal College of Physicians and Surgeons of Canada, Bruce Minnes as the new Medical Editor of aboutkidshealth.ca, and Sanjay Mehta as the new VP for the section of Paediatric Emergency Medicine at the Canadian Paediatric Society.

Honours and Awards

Boutis K: Winner, Research Recognition Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children in recognition of excellence in outstanding effort and contribution to research, 2010-2011.

Boutis K: Winner, Clinical Teaching Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, 2010-2011.


Freedman S: Winner, Annual Terry Klassen Young Investigator Award – Pediatric Emergency Research Canada. For excellence in clinical research and embodying the spirit of interpersonal and interdisciplinary collaboration as envisioned by one of PERC’s founders, Dr. Terry Klassen. 2010-2011.


Lalani A: James C. Fallis Teaching Award for Paediatric Emergency Medicine Core Rounds: Best Presentation, The Hospital for Sick Children, 2010.

Mehta SV, Lalani A: Nominee, Department of Pediatrics Continuing Education Award for Course Coordination, The Hospital for Sick Children, 2011.

Pirie J: Harry Bain Award, Excellence in teaching as nominated by core paediatric residents, Department of Paediatrics, June 2011.

Ratnapalan S: Helen Batty Award for Faculty Development, 2010-2011.


Schuh S: Runner-up, Research Recognition Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, in recognition of excellence in outstanding effort and contribution to research, 2010-2011.

Scolnik D: Winner of Clinical Teaching Award - Staff Physician Full-Time, Division of Paediatric Emergency Medicine, 2010.
Scolnik D: Winner of Power Teaching Award - Department of Paediatrics: for outstanding contributions to postgraduate teaching, 2010.

Scolnik D: Nominated for the Tapestry Award for Cultural Competence, SickKids, 2011.

Thull-Freedman J: Runner-up, HSC Emergency Department Citizenship and Advocacy Award, 2010

Thull-Freedman J: Runner-up, James C. Fallis Teaching Award, 2011.

Thull-Freedman J: Co-Recipient, Families as Partners in Patient Safety Award, (Research award for “Identification of educational and infrastructural barriers to prompt antibiotic delivery in febrile neutropenia”), 2010.

Publications


Books and Chapters


**Funding**

Children with acute gastroenteritis: Predictors of increased length of stay in the emergency department. Schindler N, Freedman SB, Black K. IWK Health Centre ($2,000 2011-2013)

CLARINET Study: International randomized double blind clinical study evaluating the efficacy and safety of clopidogrel 0.2mg/Kg once daily versus placebo in neonates and infants with cyanotic congenital heart disease palliated with a systemic–to–pulmonary artery shunt. Finkelstein Y. Research Grant, Sanofi-Aventis Inc. and Bristol-Myers-Squibb Pharmaceuticals ($4,000 2009–2010)

Community health worker's knowledge, attitudes and perceptions of training and leadership in child health in rural Tanzania. Sharma T (Supervisor: Kevin Chan). Medical Alumni Association, University of Toronto ($3,500 2010)


Paramedics attitude towards death notification in the field. Douglas L, Cheskes S, Feldman M, Ratnapalan S. Paramedics Research Consortium ($14,074.00 2011-2013)


Fracture severity in overweight versus non-overweight children presenting to a paediatric emergency department. Kwan C, Howard A, Boutis K. RTSUF ($3000 2011-2012)


Inhaled magnesium in refractory pediatric acute asthma. 

Intranasal fentanyl vs. placebo for pain relief during abdominal ultrasounds in suspected appendicitis. 
Chan M, Manson D, Chung S, Schneeweiss S. SickKids Trainee Start-Up Fund ($3,000)

IVIG for Stevens Johnson syndrome and toxic epidermal necrolysis. Finkelstein Y. New Trials Support (TALENTS) Award Talecris Biopharmaceuticals ($10,000 2009-2010)

Learning retention and the optimal timing of refresher education. Boutis K, Pusic M, Pecaric M, Beckstead J, Babyn P: Royal College Medical Education Research Grant ($30,000 2011-2014)


SickKids summer research student mentoring program (SSuRe). Finkelstein Y. 2nd year Undergraduate Student ($2,000 2010)


The association between parental understanding and implementation of discharge instructions and outcomes of care for infants with viral respiratory illness. Samuels-Kalow M, Porter S, Stack A. Resident Research Grant, Emergency Medicine Foundation Mentor ($ 5,000 2010-2011)
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. Our faculty had a very successful and productive academic year in 2010-2011. There is currently 19 full-time and nine major part-time physician faculty.

We were able to recruit some outstanding new faculty in 2010. Dr. Daniel Roth has been appointed as a Clinician Scientist with his research focus in global health. Dr. Roth did his paediatric residency in Edmonton, Alberta and completed his PhD at the Johns Hopkins Bloomberg School of Public Health. Dr. Adam Rapoport was hired as an academic clinician in the new 0.5 FTE position of clinical director in Palliative Care. The other half of his time will be spent at the Max and Beatrice Wolfe Children’s Centre, Temmy Latner Centre for Palliative Care, Mount Sinai Hospital, as paediatric palliative care consultant. Dr. Rapoport was a chief resident at SickKids before doing his fellowship in our program and completing a Master’s degree in Bioethics. Dr. Charlotte Moore, who has been on faculty as 0.4 FTE during her tenure in the MOHLTC as the provincial lead for Maternal, Child and Youth Health Strategy, has now been hired full-time to lead the SickKids Child Health Policy Initiative effective May 2011. Dr. Moore did her medical training at Johns Hopkins University School of Medicine and her residency at Harvard/Boston Medical Center Combined Program in Pediatrics prior to a fellowship in Neonatology at SickKids. We wish them much success and happiness in their new roles. Dr. Colin Macarthur, a former director of the Paediatric Research Outcomes Team (PORT) returned to SickKids after his stint as VP Research at Holland Bloorview to serve as Associate Chief, Clinical Research at the RI. Dr. Macarthur will rejoin the Division of Paediatric Medicine and PORT. Dr. Pat Parkin will return to the Division in July 2011 after spending the 2010/11 academic year on sabbatical as a Visiting Scientist at the AHRC of the Li Ka Shing Knowledge Institute of St Michael’s Hospital in Toronto.

At the same time we have lost two of the stalwarts and founding members of the original Division of General Paediatrics. Dr. Robert Hilliard retired from his full-time position in June of 2011 after a stellar career at SickKids spanning over 30 years. His contribution both clinically and particularly in the field of education was immense and culminated in his last year when he served as President of the Canadian Paediatric Society. Dr. Susan Tallett will officially retire in September of 2011. Her contribution to postgraduate paediatric education is unparalleled in Canada where she was recognized for her mentorship, advocacy and innovation. She also served as Associate Department Chair (Education) and most recently as the Chief of Education and head of the SickKids Learning Institute. These two outstanding paediatricians and colleagues will be missed!
The Paediatric Medicine in-patient service under the leadership of Dr. Carolyn Beck remains extremely busy with volumes continuing to increase. Many quality initiatives have been undertaken over the last year and with the help of Drs. Moore and Coffey we are continuing to try and improve the quality and efficiency of care provided to our patients in hospital. Our hospitalist group continues to be involved in the development of the paediatric hospitalist movement in Canada and the USA with Dr. Sanjay Mahant as President of the CPS Hospitalist Section and one of eight North American members of the executive committee of PRIS (Pediatric Research in Inpatient Settings).

The divisional Complex Care Program has emerged as a national and international leader in models of care under the leadership of Dr. Eyal Cohen. On the clinical side, a dedicated inpatient complex care team operates six beds and is staffed by a hospitalist with complex care expertise and a nurse practitioner. The ambulatory arm of the complex care team currently coordinates care for more than 150 of the most complex, high-needs patients. The Norman Saunders Complex Care Initiative funded three research grants in 2010/11. Through philanthropy, we were able to set up the Janis Rotman Fellowship in Homecare Innovation, which started in 2011 and will fund one fellow from one of the healthcare disciplines to work on innovative research in the understudied realm of paediatric homecare.

The ambulatory program has expanded with the new laser program (under Dr. Miriam Weinstein) in paediatric dermatology as well as the tertiary care obesity clinic (STOMP) under Dr. Catherine Birken.

Faculty members continued to excel, advocate and gain recognition as leaders in their field. Dr. Charlotte Moore received two awards from the MOHLTC to honour her achievements, commitment and excellence in public service. Drs. Hilliard, Mahant, Feldman, Shouldice and Friedman all continued in their leadership roles through the various sections and committees of the Canadian Paediatric Society. This has been a tremendously successful year with regards to research productivity. There were 38 abstracts from the division at the annual PAS and CPS meetings, including many platform presentations. The number of peer-reviewed publications and grant funding from both internal and external agencies continues to rise year after year. For example, the TARGet Kids! group under the leadership of Drs. Patricia Parkin, Catherine Birken and Jonathon Maguire has now enrolled over 3,800 children into a cross-sectional cohort for longitudinal follow-up. This group has been funded for two large RCTs through CIHR.

Education is a major focus in our division, with Dr. Susan Tallett leading the SickKids Learning Institute and Dr. Stacey Bernstein as director of the Undergraduate Education Program. Dr. Bernstein was also appointed as the interim associate academy director at the Mississauga Academy of Medicine. Under the leadership of Drs. Shouldice and Mahant the fellowship program continues to grow with a total of 17 full and part-time fellows this past year. Seven fellows will be returning in 2011/12 to join the 12 new fellows. Our academic fellows are doing graduate work in various areas, for example, clinical epidemiology, public health, and education, and many are going on to work as academic generalists in childrens' hospitals around the country. Faculty is heavily involved in CME activities and this year the SCAN Section hosted the inaugural Canadian Symposium on Advanced Practices in Child Abuse Pediatrics. This was the first national forum of its kind with 44 paediatricians representing almost every province attending. In addition, a conference on “Current Issues in Child Maltreatment Conference” was co-hosted by the Ontario Network of Sexual Assault Domestic Violence Care Centres with approximately 350 registrants.

Many faculty members were recognized with teaching awards including Dr. Ronik Kanani (Marvin Gerstein Award for excellence in teaching by a part-time faculty as well as runner-up for the Lionel Weinstein Teaching award) and Dr. Mark Feldman (POWER Award for being among the
top five postgraduate teachers in the department with sustained high POWER evaluations). Dr. Michelle Shouldice received the CME award for demonstrating excellence in course coordination in the Department of Paediatrics. Dr. Jeremy Friedman won the Richard Rowe Award for Clinical Excellence in Paediatric Medical Care.

Congratulations to Drs. Feldman, Mahant, Shouldice and Miriam Weinstein on their promotion to Associate Professor and to Dr. Pat Parkin for her promotion to Professor. Dr. Jeremy Friedman was appointed Associate Department Chair (Clinical) at the University of Toronto and Associate Paediatrician-in-Chief at SickKids as of September 2011.

**Honours and Awards**

Beck C: Nominated - Junior Award - Richard Rowe Award for Clinical Excellence in Paediatric Medical Care, 2011.

Bernstein S: Wightman-Berris Academy Undergraduate Individual Teaching Award, University of Toronto, 2010.

Calpin C: R.H.A. Haslam Preclerkship Teaching Award, Department of Paediatrics, 2011.

E Cohen and the Integrated Complex Care Model Team: Complex Care Through Community Partnerships - Finalist, Minister’s Award of Excellence at the Celebrating Innovation Expo, Toronto, ON, 2010.

Coffey M: Honourable Mention: Top Articles in Pediatric Hospital Medicine, 2010.

Feldman M: POWER Award, Department of Paediatrics Award, 2011.

Friedman, J: Richard Rowe Award for Clinical Excellence in Paediatric Medical Care. Department of Paediatrics, University of Toronto, The Hospital for Sick Children, 2011.

Gans M: Lionel Weinstein Clerkship Teaching Award, Department of Paediatrics, University of Toronto, 2011.

Guttmann A: Canadian Institutes of Health Research New Investigator Salary Support Award, 2011.

Guttmann A: Junior Faculty Research Award, University of Toronto, 2010.

Guttmann A: Academy Health Nemours Award, 2010.

Ipp M: Canadian Society for Pharmacology and Therapeutics Annual Publication Award, 2010.

Jacobson S: POWER Teacher Award, 2010.

Kanani R: Marvin Gerstein Award, Department of Paediatrics, University of Toronto, 2011.

Kupfert B: Postgraduate Community Teaching Award, Department of Paediatrics, University of Toronto, 2011.

Lara-Corrales I: Weston Research Award, Society for Pediatric Dermatology, 2010.

Moore C: Ontario Ministry of Health and Long Term Care ACE Award - BORN Ontario, 2011.


Rapoport A: Awarded First Prize, 18th International Congress on Palliative Care; Montreal QC, 2010.


Roth D: Elected member, Phi Beta Kappa Society, The Johns Hopkins University, Maryland, 2011.


Shouldice M: Hospital for Sick Children, Continuing Education Award for Excellence in Course Coordination, Department of Paediatrics for Canadian Symposium on Advanced Practices for Child Abuse Paediatricians.

Weinstein Miriam: Runner-up, James C. Fallis Teaching Award, Division of Paediatric Emergency Medicine Rounds, 2010.

Weinstein Miriam: Third Place, Poster Award: Society for Pediatric Dermatology 37th Annual Meeting, Baltimore Maryland, 2011.

Publications


Friedman JN and Canadian Paediatric Society Acute Care Committee: Emergency management of the paediatric patient with generalized convulsive status epilepticus. Paediatrics and Child Health 2011: 16(2): pp 91-104.


Ho NTC, Pope E, Weinstein M, Greenberg S, Webster C, Krafchik B: A double-blind, randomized placebo-controlled trial of topical tacrolimus 0.1% vs. clobetasol propionate 0.05% in childhood vitiligo. British Journal of Dermatology 2011: (epub ahead of print).


Books and Chapters


Funding


A randomized, controlled, multidose, multicentre, adaptive phase II/III study in infants with proliferating infantile hemangiomomas 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, Chakkittakandiyil A, Lara-Corrales I. Pierre Fabre Dermatologie ($373,044 2010-2012)


Assessing Ontario’s universal influenza immunization program. Guttmann A, Manuel D. Canadian Institutes of Health Research ($1,000,000 2006–2010)


Can we change the face of immunization to one without pain? Implementation of a postnatal parental education intervention to optimize pain management during childhood immunization. Taddio A, Shah V, Franck L, Stephens, Ipp M. Canadian Institutes of Health Research – Operating Grant: Priority Announcement: Knowledge Translation ($100,00 2011-2012)

Canadian paediatric surveillance program: Severe iron-deficiency anemia in infants and young children. Zlotkin S, Parkin P, McCourt C, Wong S, Grabowski J, Carcao M, Belletrutti 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 (2009–2011)


Charting the territory: Determining and documenting trajectories for families where a child has a life-threatening condition. Siden H, Steele R, Brant R, Cadel S, Davies B, Straatman L, Rapoport A. Canadian Institutes of Health Research ($1,343,000 2008–2013)


Development and validation of toddler NutriSTEP. Randal-Simpson JA, Keller HH, Beyers, JE, Birken CS. **Canadian Institutes of Health Research, Operating Grant** ($200,809 2010-2012)


Effectiveness of a new neuromuscular electrical stimulation (NMES) treatment technique in the management of young infants with severe dysphagia: A prospective pilot study. Mahant S, Marcus S, Friedman JN. **Pediatric Consultants Partnership, The Hospital for Sick Children** ($9,080 2010-2011)


Ensuring effective newborn screening: The case of cystic fibrosis. Guttmann A, Miller E. **Canadian Institutes of Health Research, Operating Grant** ($771,524 2010–2014)

Evaluation of the emergency department general internal medicine patient flow toolkit. Guttmann A, Schull M. **Canadian Health Services Research Foundation** ($500,000 + $1,133,400 from MOHLTC 2007-2011)


Gastric flora in gastrostomy fed children with neurologic impairment on acid suppression medication. Rapoport A, Cohen E, Mahant S, Richardson S, Avitzur Y. **Pediatric Consultants Partnership, The Hospital for Sick Children** ($10,000 2011-2012)


**Pediatric Consultants Creative Professional Activity Grant** ($5,686 2009-2010)


Integration of pulse oximetry into the routine assessment of sick young infants at first-level clinics in Karachi, Pakistan. Roth D, Mir F, Zaidi A. **Grand Challenges Canada** ($113,000 2011-2012)


Is prolonged bottle feeding an independent risk factor for overweight children? Birken CS, Parkin PC, O’Connor D, Jacobson S, Peer M, Mekky M. **Dean’s Fund New Staff Competition, Faculty of Medicine, University of Toronto** ($9,972 2008-2013)


Measuring late pre-term health and developmental outcomes through TAR.Get Kids! Maguire JL, Campbell D, Sgro M, Birken CS, Parkin P. **St. Michael’s Hospital Innovation Fund** ($18,694 2011-2012)

Measuring the quality of hospital care for children and youth in Canada. Guttmann A, Anderson G. **Canadian Institutes of Health Research** ($75,000 + $300,000 from MOHLTC 2008-2011)


Patterns and predictors of health care utilization by adult survivors of childhood cancer: A Pediatric Oncology Group of Ontario and ICES population database linkage study. Guttmann A, Nathan P. **Canadian Institutes of Health Research, Operating Grant** ($426,000 2009–2011)

Pediatric Outcomes Research. Parkin PC, Macarthur C. **The Hospital for Sick Children Foundation** ($750,000 2008–2013)


PROMOTE: Preschoolers at risk - obesity and cardiometabolic risk factors: Towards early identification. Birken CS, Adeli K, Hamilton J, Hanley A, Maguire J, McCrindle B, Parkin PC et al. **Canadian Institutes of Health Research, Operating Grant** (Start up Assistant Professors, Clinicians, New Investigators) ($100,000 2010–2011)

Randomized, double blind, controlled trial of 0.9% NaCl/dextrose 5% vs 0.45% NaCl/dextrose 5% as maintenance intravenous fluids in hospitalized children. Friedman JN, Freedman S, Beck C, Geary D, Ragone A. **Physicians’ Services Incorporated Foundation** ($46,500 2010–2012)


Safety and efficacy of simplified antibiotic regimens for outpatient treatment of suspected sepsis in neonates and young infants in Bangladesh. Baqui A, Roth D, et al. **(USAID) and World Health Organization (WHO)** ($1,600,000 2008–2012)

Short and long term outcomes of complicated pediatric pneumonia. Cohen E, Weinstein M, Dell M, Mahant S, Traubici J, Mekky M. Faculty of Medicine, University of Toronto ($10,000 2008-2013)

TARGet Kids!: St. Michael's startup grant. Maguire JL, Campbell D, Sgro M, Birken CS, Parkin P. St. Michael's Foundation ($90,000 2010-2011)

TARGet Kids!: Supporting nutrition and development in inner city children. Maguire JL, Campbell D, Sgro M, Birken CS, Parkin P. St. Michael's Foundation ($30,000 2010-2011)


The development of quality indicators for high acuity pediatric conditions requiring emergency department care. Guttmann A, Stang A. Canadian Institutes of Health Research, Operating Grant ($81,254 2010-2011)


The medical home of children and youth in Canada. Guttmann A. Canadian Institutes of Health Research, Knowledge Synthesis Grant ($99,402 2010-2011)

The natural history of swallowing dysfunction in infants with dysphagia. Marcus S, Friedman J, Mahant S. Norman Saunders Complex Care Initiative, The Hospital for Sick Children ($10,634 2010-2011)


Treatment choices for children with typical acute immune thrombocytopenic purpura: Development of a decision aid. Beck C, Birken CS, Blanchette V, Boydell K, Llewellyn-Thomas H, Parkin PC. Dean’s Fund New Staff Competition Faculty of Medicine, University of Toronto ($10,000 2006-2011)

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 2010-2012)

Vitamin D supplementation for preschoolers: A TARGet Kids! randomized controlled trial. Maguire JL, Mamdani M, Birken CS, Parkin P. Dean’s Fund New Staff Competition, University of Toronto, Faculty of Medicine ($9,976 2010-2015)

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

Vitamin D outcomes and interventions in toddlers. Maguire JL, Birken CS, Hoch J, Loeb M, Mamdani M, Mazzulli T, Parkin P, Thorpe KE, Vieth R. Canadian Institutes of Health Research Operating Grant – Priority Announcement: INMD Startup Funds (Bridge funding) ($100,000 2011-2012)

Children are the living messages we send to a time we will not see.

Neil Postman, The Disappearance of Childhood
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. We have continued to broaden 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. The infant pulmonary function laboratory offers a unique spectrum of tests that are still 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 developing pulmonary function tests for pre-school children.

As part of the Toronto Lung Transplantation Program, the Division provides pre- and post-transplantation care for children with end-stage lung disease. The lung transplant program continues to be the largest in the country and has performed over 35 lung transplants to date. The program is now open for performing infant lung transplantation in select patients.

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 pediatric 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. It also provides what is required for board certification in pediatric pulmonology in the United States and trains physicians from abroad. Dr. Solomon recently completed the Education Scholars Program and her master's degree in Community Health (Health Professional Teacher Education).

Dr. Sharon Dell continues to be the associate program director for the Clinical Epidemiology & Health Care Research program within the Faculty of Medicine at the University of Toronto. 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. Neil Sweezey leads the hospital's Clinician-Scientist Training Program and is the Toronto centre leader and a national executive member of the CIHR-funded Canadian Child Health Clinician Scientist Program. These programs provide advanced scientific training and mentoring for child health clinicians preparing for careers as independent researchers in child health. There is a broad spectrum of both basic science and clinical research that bridges the laboratory
to the clinic in many disease areas. The major research foci include clinical and epidemiological studies in patients with asthma and CF, translational studies on airway inflammation and infection in cystic fibrosis, effect of sex hormones in airway inflammation, defining the role of novel genes in lung development, studies in aerosol therapy and exercise physiology.

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 and inflammatory assessment such as single breath exhaled nitric oxide and multiple breath washout technology, establishing SickKids as a world leader in infant pulmonary function testing. Dr. Subbarao has also successfully received funding for multiple research studies, as well as salary support from the CIHR, the Young Investigator Award.

The Division continues to be involved in the NIH-funded Childhood Asthma Management Program Continuation Study (Dr. Grasemann, Dr. Solomon, Dr. Subbarao). There has also been a growing interest in assessing the pulmonary sequelae of sickle cell disease that are currently being addressed in a number of research studies (Dr. Grasemann, Dr. Narang, Dr. Subbarao). Dr. Allan Coates recently retired from the Division of Respiratory Medicine but remains active on both the provincial and national level with the Ontario Lung Association and the Canadian Thoracic Society, promoting training of spirometry in children as well acting in advisory roles for research studies using lung function testing with Statistics Canada.

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 Mucociliary Clearance Consortium and in interstitial lung disease with the Children’s Interstitial Lung Disease Consortium.

Dr. Theo Moraes’ research is directed towards a better understanding of processes driving lung inflammation as well as immunological mechanisms involved in immunity against respiratory viruses. Dr. Indra Narang focuses on clinical and physiological studies related to sleep–disordered breathing and has started a collaboration with numerous services in the institution including studies on obesity and cardiac disorders such as cardiomyopathies. Dr. Sweezey, 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. Reshma Amin has recently joined our Division and brings expertise in both clinical research related to CF lung disease as well as clinical expertise in sleep–related breathing disorders. She will focus her clinical and research activities on technology dependent children.

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 azithromycin in Pseudomonas negative CF patients, the first collaborative study funded by the US CF Foundation conducted in Canada and the USA, on the role of aspergillus infection in CF funded by both the Canadian CF Foundation and Physician Service Incorporated and then on the use of hypertonic saline as an early intervention strategy funded by the US CF Foundation and National Institutes of Health (NIH).

Dr. Ratjen is also involved in developing new outcomes measures in the BREATHE program to assess improvement in CF lung disease, and a study to develop CFTR corrector therapy funded by CIHR and the Canadian CF Foundation. A team grant with Dr. Ratjen as PI has been funded by CIHR bringing together basic scientists, including stem cell researchers with clinical scientists. Dr. Grasemann is leading a series of studies to elucidate the role of arginase and NO deficiency in CF lung disease; the studies are sponsored by CIHR and the Canadian CF Foundation. Dr. Sweezy as PI is funded by the Canadian CF Foundation to study the effects of sex hormones on airway inflammation in CF. Other studies supported by research grants, as well as generous support by individuals such as the Irwin family, are ongoing in addition to industry-sponsored studies including an 80-site study in Australia, Canada and the US on denufosol, a P2Y receptor agonist that activates chloride conductance through alternative chloride channels (PI Dr. Ratjen). The CF group is also involved in other clinical studies of drugs targeting the basic defect in CF. A close collaboration exists 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.

For a more complete description of our clinical activities, educational events and research interests, please visit our website as well as the website of the CF Centre.

**Publications**


Green N, Burns JL, Mayer-Hamblett N, Kloster M, Lands LC, Anstead M, Ratjen F, Saiman L: Lack of association of small colony variant Staphylococcus aureus with long term


**Books and Chapters**


**Funding**

A multi-stage population based study to determine the association between air pollution and asthma. Dell S. Health Canada ($76,442 2009-2012)

A phase 2, randomized double blind placebo controlled cross over study to evaluate LCI in subject with cystic fibrosis, the G551D mutation & FEV > 90% predicted (Vertex 106). Ratjen F. Vertex Pharmaceuticals ($70,664.80 local budget, 2011-2014)

A phase 3 efficacy and safety study of PTC 124 as an oral treatment for nonsense-mutation-mediated cystic fibrosis. Solomon M, Ratjen F. PTC Therapeutics Inc ($15,771 per completed valid study subject, 2010)


A randomised, double-blind, placebo-controlled parallel-group trial to confirm the efficacy after 12 weeks and the safety of tiotropium 5 μg administered once daily via the Respimat® device in patients with cystic fibrosis. Ratjen F. Boehringer – Ingelheim ($45,023.01, 2011-2014)

A study to investigate the use of the AeroEclipse® II breath actuated nebulizer for the delivery of Methacholine Chloride Bronchoprovocation gent. Dell S. Ministry of Health of Ontario ($174,455 2010-2011)

AllerGen-Karolinska Institute International Partnership Initiative (IPI). Subbarao PJ. AllerGen NCE Inc ($20,000 2009-2010)


Canadian Birth Cohort: Indoor Air and the Development of Asthma and Allergy (CHILD Study). Subbarao PJ. AllerGen NCE Inc ($357,400 2011-2012)

Canadian Birth Cohort: Indoor Air and the Development of Asthma and Allergy (CHILD Study). Subbarao PJ. CIHR ($12,000,000 2007-2013)

Canadian Child Health Clinician Scientist Program (CCHCSP) Strategic training program grant. Rosenblum N (PI), Sweezey N, et al. (Co-Is). CIHR, SickKids Foundation, BC Women and Children’s, MICYRN ($1,500,000 2002-2015)

Cerebral hemorrhage risk in hereditary hemorrhagic telangiectasia. Faughnan M, Ratjen F. National Institutes of Health Research (US$1337.00 2010-2011)


Collaboration between the CHILD Study and the START Study. Subbarao PJ. AllerGen NCE Inc ($50,000 2011-2012)

Cystic Fibrosis Foundation Therapeutics Inc. Inhaled Saline for Infants Study (ISIS-002). Subbarao PJ. ISIS – NIH (US$1,794,674 2008-2012)

Defining the role of stenotrophomonas maltophilia in CF patients. Waters V, Ratjen F. Canadian Cystic Fibrosis Foundation ($240,000 2010-2011)

Diagnosing cystic fibrosis in neonates and adults: Where do we draw the line? Durie P, Ratjen F. Canadian Cystic Fibrosis Foundation ($360,000 2008-2011)

Does complicated pneumonia lead to chronic lung disease? Dell S, Cohen E, Weinstein M. Pediatric Consultants Partnership ($9,900 2010-2011)

Emerging Team Grant: From genes to proteins, cells, tissues and patients. Ratjen F, Grasemann H, Rotin D, et al. Canadian Institutes of Health Research ($2,401,449 2009-2014)

Emerging Team Grant in Cystic Fibrosis. Ratjen F. Canadian Cystic Fibrosis Foundation (CCFF) ($50,000, 2009-2014)

Enhancing CD8 T cell immune responses to RSV. Moraes TJ. Dean’s Fund New Staff Competition, University of Toronto ($10,000 2009-2014)
Enhancing CD8 T cell immune responses to RSV. Moraes TJ. *The Hospital for Sick Children, Start-up Operating Fund* ($432,000 2008-2012)

Enhancing CD8 T cell immune responses to RSV. Moraes TJ. *The Hospital for Sick Children, Start-up Equipment Fund* ($24,000 2008-2012)

Ensuring effective newborn screening: The case of cystic fibrosis. Miller F, Ratjen F. *Canadian Institute of Health Research* ($636,506, 2010-2014)

Expanded access program for Aztreonam lysine for inhalation in Canadian patients with cystic fibrosis and pseudomonas aeruginosa airway infection who have limited treatment options and are at risk for disease progression. Solomon M, Ratjen F. *Gilead Sciences* ($90,030 2009-2010)

Functional relevance of altered L-arginine metabolism in cystic fibrosis lung disease. Grasemann H. *Canadian Cystic Fibrosis Foundation* ($170,000 2009-2011)

Genetic diseases of mucociliary clearance consortium. Dell S, Knowles M. *NIH U54RFA-OD-08-001* ($6,709,685 2009-2014)

Influenza infection of human endothelium leads to microvascular leak: Cellular and molecular mechanisms. Moraes TJ, Lee W. *Ontario Thoracic Society* ($49,945 2010-2011)

Inhaled saline for infants study (ISIS-002). Ratjen F. *Cystic Fibrosis Foundation Therapeutics Inc. & National Institutes of Health* (US$1,794,674 yearly 2008-2013/US$202,375.97 (local budget), 2008-2012)

Lab technician, salary support. Grasemann H. *The Lynne and Arnold Irwin Foundation* ($56,842 2011-2011)

Making the link between objective measures of airway disease and epidemiological survey data. Dell S. *Ontario Lung Association* ($50,000 2009-2010)

Modulation by sex hormones of inflammation and susceptibility to pseudomonas aeruginosa in cystic fibrosis airways. Sweezey N. *Canadian Cystic Fibrosis Foundation* ($85,000 per annum 2009-2011)

Modulation of pulmonary L-arginine metabolism by endogenous NOS inhibitors in cystic fibrosis. Grasemann H. *Cystic Fibrosis Canada* ($170,000 2011-2013)

Modulation by sex hormones of inflammation and susceptibility to pseudomonas aeruginosa in cystic fibrosis airways. Sweezey N. *Cystic Fibrosis Canada* ($270,000 annum 2011-2014)

New Investigator Award in Area of Clinical Research. Open-label Extension of Study 08-110 – A Multi-Center Study of Denufosol Tetrasodium. Subbarao PJ. *CIHR* ($300,000 2009-2014)


Pathogenesis of serious infections with influenza: Role and mechanisms of microvascular leak. Moraes TJ, Lee W. *Physicians’ Services Incorporated Foundation* ($170,000 2011-2013)

Pilot study to validate a system for measuring the lung clearance index in children with cystic fibrosis. Ratjen F. *Cystic Fibrosis Foundation Therapeutics* (US$100,86 2010-2011)

Platform for Outcomes Research and Translation in Asthma and Allergy (PORTAL). Dell S, Lynds L. *Allergen* ($300,000 2009-2014)
Prediction by ultrasound of the risk of hepatic cirrhosis in cystic fibrosis (PUSH): Summary for CF care providers. Solomon M, Ling S. **Cystic Fibrosis Foundation, NIH** ($333,000 2008-2013)

Private donations from Bothwell Accurate and Golden Thread Charitable Foundation for the Canadian Healthy Infant Longitudinal Development (CHILD) Study. Subbarao Pj. **SickKids Foundation** ($300,000 2008-2013)

Randomized, double-blind, placebo-controlled, cross-over multi-center study to assess the efficacy and safety of inhaled tobramycin nebulizer solution (TOBI®) for the treatment of early infections of P. aeruginosa in cystic fibrosis subjects aged from 3 months to less than 7 years. Solomon M, Ratjen F. **Novartis Inc** ($6,750 per completed valid study subject 2010-2011)


Respiratory syncytial virus in the development of infant wheezing disorders: A bench to bedside approach to gene-virus interactions. Subbarao PJ, Turvey S. **AllerGen NCE Inc** ($176,800 2009-2012)

Serum biomarkers as predictors of bronchiolitis obliterans in children receiving allogeneic hematopoietic stem cell transplantation: a pilot study. Dell S, Gassas A. **Comprehensive Cancer Centre** ($50,121 2009-2010)

Serum biomarkers as predictors of bronchiolitis obliterans in children receiving allogeneic hematopoietic stem cell transplantation. Dell S, Gassas A, Palaniyar N, Doyle J, Schecter-Finkelstein T, Sung L, Dell S. **POGO Seed Funding Grant** ($14,995 2011-2012)

Smoke-free homes and asthma pilot intervention study. Dell S, Schwarz R. **CIHR Catalyst Grant** ($50,000 2010-2011)

Start-up equipment/ operating fund. Subbarao Pj. **SickKids Foundation** ($222,000 2008-2011)

Surfactant protein D controls inflammatory response and modulates NO synthesis in the cystic fibrosis lung. Grasemann H. **Ontario Student Opportunity Trust Fund** ($60,000 2008-2011)

The Canadian Health Infant Longitudinal Development (CHILD) Study. Grasemann H. **Canadian Institutes of Health Research** ($12,000,000 2007-2013)

The Canadian Infant Longitudinal Development (CHILD) Study. Dell S, Sears M. **CIHR** ($12,000,000 2008-2013)

The Hospital for Sick Children Centre for the Study of Complex Childhood Diseases (CSCCID). Post M, Ratjen F. **Canadian Foundation for Innovation** ($20,571,919, 2006-2011)

Trainee salary support. Dell S, Radhakrishnan D. **The Hospital for Sick Children Research Institute** ($80,000 2008-2010)

Trainee salary support. Dell S, Radhakrishnan D. **Ontario Thoracic Society Graduate Scholarship Canadian Thoracic Society Fellowship** ($90,000 2010-2013)

Trainee salary support. Dell S, Simons E. **The Hospital for Sick Children Research Institute** ($80,000 2009-2011)

Transplant centre. Grasemann H. **University Health Network** ($36,000 2010-2011)


The Division of Rheumatology provides comprehensive care for children with rheumatic diseases. The ambulatory clinics have approximately 5,000 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, morphea, systemic JIA, systemic and neonatal lupus erythematosus, spondylitis and inflammatory brain disease. 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.

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 the largest paediatric rheumatology fellowship training program in North America and is fully accredited by the Royal College of Physicians and Surgeons of Canada. This academic year, our fellows come from Canada, the Netherlands, Thailand, Australia and Singapore. 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.

**Honours and Awards**

Benseler S: Citizenship Award, Medical Staff Association (MSA), Nomination, The Hospital for Sick Children, 2010

Benseler S: Runner Up, Junior Researcher Award, Department of Pediatrics, The Hospital for Sick Children, 2011

Feldman B: Eugenie Stuart Award for Best Instructor, Faculty of Medicine Department of Health Policy, Management & Evaluation. University of Toronto, 2011

Laxer R: American Academy of Pediatrics James T. Cassidy Award, 2010

Laxer R: POWER Teaching Award, 2011
Levy D: Future Leaders in Rheumatology (FLIRT) Recipient, 2010

Silverman E: Distinguished Investigator Award, the Canadian Rheumatology Association, 2010

Tse S: Department of Paediatrics Award for Teaching Excellence for the Paediatric Resident Lecture Series, 2010

Tse S: Department of Paediatrics Scholarship for Education Scholar Program, Centre for Faculty Development, University of Toronto, 2010

Publications


Books and Chapters


Luca N, Benseler S: Vasculitis and thrombophlebitis. eMedicine, 2010.


**Funding**


A 12-week randomized, double blind, placebo-controlled, parallel group, 2-arm study to evaluate the efficacy and safety of tocilizumab in patients with active systemic juvenile idiopathic arthritis (sJIA); with a 92-week single arm open-label extension to examine the long term use of tocilizumab. Schneider R (Site PI), Local co-investigators: Silverman E, Benseler S. Hoffmann-La Roche Study Design Team and International Steering Committee ($552,992 2008-2012)

An one-year open-label, multicenter trial to assess efficacy, safety and tolerability of Canakinumab (ACZ885) and the efficacy and safety of childhood vaccinations in patients aged 4 years or younger with Cryopyrin Associated Periodic Syndromes (CAPS) Laxer R, Schneider R, Tse S. Novartis Pharmaceuticals Inc ($42,646 2011-2013)

An open label study to assess the safety, tolerability and efficacy of Canakinumab (ACZ885) in patients aged 4 years or older diagnosed with cryopyrin-associated periodic syndromes in Canada. Laxer R, Schneider R. Novartis Pharmaceuticals Inc ($16,650 2010-2012)

An open-label extension study of canakinumab in patients with systemic juvenile idiopathic arthritis (SJIA) and active systemic manifestations. Schneider R (Site PI), Co-Investigators: Silverman E, Laxer R. M. Novartis Pharmaceuticals Canada Inc. ($71,304 2010-2012)


Career Enhancement Program Award. Levy D. Canadian Child Health Clinical Scientist Program (CCHCSP) ($10,000 2010-2012)


Childhood onset SLE: Determining long-term outcomes. Levy D. Physicians Services Incorporated ($158,000 2011-2013)


Comparing the burden of illness of hemophilia in the developing and the developed world: The Sao Paulo-Toronto Hemophilia Study. Feldman BM, Blanchette V. Baxter Healthcare Corporation (219,637.94 2010-2013)


Development of an internet-based psycho-educational program for parents and children newly diagnosed with arthritis:


Effect of pubertal hormone changes on SLE. O’Neil K. Site PI: Levy D. Lupus Foundation of America ($60,000 2010-2011)


Faculty and resident perceptions about teaching and learning the paediatric musculoskeletal examination: An exploratory study. Schneider R, Hutchinson J. The Hospital for Sick Children, Pediatric Consultants Education Research Grants Committee ($4,925 2011-2012)

How genes determine SLE phenotype and outcome. Silverman ED, Kamphuis S, Beyene J, Scherer S. Alliance for Lupus Research (ALR) ($350,000 2010-2012)


Kawasaki disease: On our way to unraveling the pathogenesis. Yeung R. Canadian Institutes of Health Research ($425,214 2008-2011)

Kawasaki disease: On our way to unraveling the pathogenesis. Yeung R. Canadian Institutes of Health Research ($798,779 2011-2016)

Malignancy in Pediatric-onset SLE. Bernatsky S, Silverman ED. Leukemia & Lymphoma Society of Canada ($75,545.00 2010-2012)


Pediatric rheumatology optimized platforms for experimental research (proper project). Rosenberg A, Yeung R. CAN Platforms Grant (RIPP) ($60,000 2010-2011)

Pharmacogenetics of juvenile idiopathic arthritis – A genome wide association study on the efficacy and toxicity of methotrexate therapy. Schmeling H, Feldman BM, Siminovitch K Benseler S. Network Centres of Excellence ($240,000 2010-02012)


SickKids childhood CNS vasculitis platform: Promoting excellence in clinical care, empowering and educating patients and health care providers, and enhancing research internationally. Benseler S (PI). Paediatric Consultants Partnership’s Grants for Creative Professional Activity Grant ($10,000 2010)

Superantigens in autoimmunity. Yeung RSM. Canadian Institutes of Health Research ($461,325 2009-2012)


Tocilizumab in polyarticular JIA. Silverman E, Schneider R, Benseler S. Roche Pharmaceuticals ($65,000/year (2010-2013)

Towards a better understanding of Kawasaki Disease. Yeung R. Canadian Institutes of Health Research ($792,717 2011-2016)

Towards a better understanding of Kawasaki Disease. Yeung R. The Heart and Stroke Foundation of Canada ($239,158 2008-2011)

Towards a harmonized approach to the conduct of research in childhood arthritis worldwide. Yeung R, Feldman B, Wedderburn L, Prakken B. Province of Ontario Ministry of Research and Innovation, International Strategic Opportunities Program ($450,000 2010-2013)

Towards a wireless pain diary decision support system for youth with juvenile idiopathic arthritis. Stinson J, Feldman B, Laxer R, Spiegel L, Benseler S, Luca N. Canadian Institutes of Health Research (15,000 2010-2011)

UCAN (Understanding Childhood Arthritis Network) Planning Meeting – Towards a harmonized approach to the conduct of research in childhood arthritis worldwide. Yeung R. Canadian Institutes of Health Research, Meetings, Planning and Dissemination Grant ($29,924 2010-2011)

Understanding Childhood Arthritis Network (UCAN): Towards a harmonized approach to the conduct of research in childhood arthritis worldwide. Yeung R. Canadian Arthritis Network, Sustained Impact Platform Program ($115,000 2010-2011)

Validation of the children’s international mucositis evaluation scale. Sung L, Feldman BM. Canadian Institutes of Health Research (457,898 2010-2012)

Widening the therapeutic window in acute ischemic stroke with blood-brain-barrier permeability and its relationship with corresponding blood markers: implications for short and long-term outcomes. Kassner A, Yeung R. Heart and Stroke Foundation of Canada ($136,490 2010-2013)
Holland Bloorview Kids Rehabilitation Hospital AFP (9.5 FTEs)

Active consulting staff = 17 subspecialists

As a provincial facility, we see almost 7,000 children and youth on an outpatient basis and we have over 650 patient admissions each year.

Holland Bloorview offers both inpatient and outpatient developmental and rehabilitation services to the children and families of greater Toronto and provides tertiary services in pediatric rehabilitation to the Province of Ontario.

Sixth Annual Roszel Developmental Paediatrics Resident Research Day, Feb 25, 2011

Child Development Update Conference, Nov 11-12, 2011

First Holland Bloorview Teaching & Learning Day, Jan 2011

Medical Education – Chair: Dr. Golda Milo-Manson

Developmental Paediatrics Residency Program Director: Dr. Anne Kawamura

Resident Coordinators:
Dr. Laura McAdam and Dr. Elizabeth Jimenez

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<th>Year 2010/2011</th>
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<td>Medical students</td>
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<td>Developmental paediatrics subspecialty residents</td>
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SickKids’ Transplant Centre’s (TC) portfolio includes the heart, intestine, kidney, liver, and lung solid organ transplant programs; and the Group for Improvement of Intestinal Failure and Treatment (GIFT) program. We have one of the largest clinical paediatric solid organ transplant programs in North America, with over 1,000 children who have received a solid organ graft; and a world-class academic intestinal failure program. Our case volumes and clinical outcomes rank within the top 5-10 per cent of centres in North America. Within a family-centered model, we deliver cutting-edge treatment of end-stage organ failure from the fetal stage through to the teenage years. Patient care is enhanced by dedicated health-care workers who specialize in the treatment of organ failure and transplantation; interdisciplinary educational programs; medical fellowships; and active basic, translational, and clinical research programs.

The TC was developed to increase support for the transplant programs. Since official designation as a Centre, we have raised almost two million dollars in donations from the public and corporate sectors. This money is now being invested in our academic pursuits under the direction of committee leaders. Through our strong commitment to the creation of new knowledge, recruitment of new team members, incorporation of GIFT, and increased interdisciplinary collaboration we have seen a three-fold increase in the annual publication rate by TC members over the past decade.
In our capacity as Canada’s busiest paediatric transplant program, advocacy is an important part of our mandate. External roles of our Department of Paediatrics’ members during the past two years include:

<table>
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<th>Organization</th>
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<tr>
<td>Canadian Liver Transplant Study Network</td>
<td>David Grant, President</td>
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<tr>
<td>Canadian Blood Services Transplant Expert Working Group</td>
<td>David Grant, Member</td>
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<tr>
<td>Canadian Society of Transplantation</td>
<td>David Grant Board member, Alison Drabble, Board member and Chair, Associate members Committee</td>
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<tr>
<td>David Foster Foundation</td>
<td>Anne Dipchand, Medical Director</td>
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<tr>
<td>International Pediatric Lung Transplant Committee</td>
<td>Mindy Solomon, Board member</td>
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<tr>
<td>International Pediatric Transplant Association</td>
<td>Anne Dipchand and Upton Allen, Councillors</td>
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<tr>
<td>International Intestine Transplant Society</td>
<td>David Grant, Director, International Registry, Past President</td>
</tr>
<tr>
<td>Studies of Pediatric Liver Transplantation</td>
<td>SPLIT-Vicky Ng Co-Chair Research Committee</td>
</tr>
<tr>
<td>Trillium Gift of Life</td>
<td>Diane Hebert, Board member, Anne Dipchand Medical Co-Director</td>
</tr>
<tr>
<td>Transplant Now – <a href="http://www.transplantnow.com">www.transplantnow.com</a></td>
<td>Associate Editors: Anne Dipchand, Vicky Ng, Stacey Pollock-BarZiv, Melinda Solomon</td>
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Other notable achievements during the past two years include:

Award of the first Canadian Transplant Society Research Fellow to Darren Yuen who will work in Dr. Lisa Robinson’s laboratory.

Two prestigious awards by our nurses, including Moira Korus, Renal Transplant Nurse, who was awarded an Advanced Clinical Practice Fellowship from the Registered Nurses’ Association of Ontario, and Natalie D’Amato, Lung Transplant Nurse, who won the Ruth Duncan McCamus Nursing Award for Family-Centred Care.

A University of Toronto initiative in Composite Tissue Allograft Transplantation Leadership that will be co-directed by Dr. Ron Zuker, SickKids.

Launch of the Transplant Centre Biobank (Seema Mital) moving us towards our goal of leadership in personalized medicine.

Launch of the I-HOPE information technology platform for GIFT and transplantation (Information on Health Outcomes and Pediatric Experience) (Rulan Parekh, Stacey Pollock-BarZiv, Chris Battison).

Establishment of an inaugural Transplant Centre International Symposium on Viral Diseases in Pediatric Transplantation (Upton Allen,Vicky Ng, July 2011).

Promotion of our program and expertise through multiple chapters in the April 2010 edition of Pediatric Clinics of North America edition on “Optimization of Outcomes for Children after Solid Organ Transplantation” co-edited by Vicky Ng and co-authored by many of our Transplant Centre staff.

A collaboration with University Health Network to enhance documentation and quality of care of paediatric live kidney and liver organ donors.

A collaboration with University Health Network to enhance the care of adult intestine transplant recipients using the expertise of Dr. Yaron Avitzur, Department of Pediatrics.

Recruitment of a Data Analyst (Chris Battiston) and Project Manager (Katie Breckhill) for the Transplant Centre.

Restructuring of the Centre to establish principles for working together; formal committees with objectives, greater opportunities for input by team membership, and improved communication.
House Staff (Core Paediatrics)

Third Year Residents – PGY3s
Dr. Raghad Al-Abdwani
Dr. Salman Al-Khalifa
Dr. Sundeep Bola
Dr. Melissa Chan
Dr. Sylvia Cheng
Dr. Jackie Chiang
Dr. Joyce Ching
Dr. Lindsey Craw
Dr. Amy French
Dr. Luke Jagiello
Dr. Mikhail Katz-Lavigne
Dr. Shannon Knights
Dr. Eric Koelink
Dr. Rae Koffman
Dr. Charles Larson
Dr. Ripudaman Minhas
Dr. Amit Mukerji
Dr. Zoe Nugent
Dr. Melanie Penner
Dr. Cynthia Popalis
Dr. Alisa Rachlis
Dr. Natasha Saunders
Dr. Maher Shalabi
Dr. Navneet Sharma
Dr. Catalina Tamayo
Dr. Jaideep Kanungo
Dr. Celine Kim
Dr. Chana Korenblum
Dr. Sarah Kwon
Dr. James Leung
Dr. Kandice Mah
Dr. Ashley Morris
Dr. Sonia Menard
Dr. Laila Nurmohamed
Dr. Evelyn Rozenblyum
Dr. Neha Sharma
Dr. Shayan Somani
Dr. Chengning Wang

First Year – PGY1s
Dr. Aqeela Alhashim (neuro)
Dr. Yasser Al Nasser
Dr. Kate Amiel
Dr. Lauren Chad
Dr. Jennifer Das (Davis)
Dr. Mohamed Eltorki
Dr. Anne Fuller
Dr. Jessica Gantz
Dr. Rebecca Levy (Gurofsky)
Dr. Sarah Ironside (neuro)
Dr. Arnold Jacob
Dr. Michael Khoury
Dr. Lauren Kitney
Dr. Sarah Lord
Dr. Kate Marquardt
Dr. Anthony Merlocco
Dr. Tara Mullowney
Dr. AlexanDr.a Pennal
Dr. Amy Shafey
Dr. Leanne Shamrakov
Dr. Jacob Shin
Dr. Laura Simone
Dr. Michelle Simonelli
Dr. Joseph Wiley

Chief Residents – PGY4s
Dr. Julie Johnstone
Dr. Niraj Mistry

Associate Chief Residents - PGY4s
Dr. Leila Fazeli
Dr. Nikhil Pai
Dr. Deena Savlov
Dr. Shawna Silver
Paediatric Grand Rounds

In the 2010-2011 academic year, SickKids faculty, post-graduate trainees, students and community paediatricians attended the Department of Paediatrics Grand Rounds series. Its general aim is to have eminent child-health clinicians, scientists, and medical educators present state-of-the-art reviews of the latest research of relevance to child health. All presentations highlight the link between “bench and bedside,” demonstrating how new scientific advances translate into the best health care for children.

The 2010 Robert H.A. Haslam Lecture was delivered by Dr. Beth Malow of Vanderbilt University on “Sleep in autism: Helping children and their families get the rest they need”. Dr. Andrew Redington of our Cardiology Division presented an enlightening talk on “Tetralogy of Fallot: From children to adults and back again.” Dr. Manuel Carcao of Hematology discussed “Von Willebrand disease: A myriad of clinical entities” and Adam Dubrowski of our Learning Institute reviewed “Research in simulation-based health professions education: Building houses or making bricks?”

The 2010 Harry Bain Lecture was a masterful bench to bedside presentation concerning “Understanding pregnancy’s clock: The genetics of birth timing” by Dr. Louis Muglia of Vanderbilt. Dr. Lucy Wedderburn (University College London) gave a superb Abe Shore Lecture on “Decision points in childhood arthritis: Who chooses - physician, family, or immune system?” As part of a Paediatric Palliative Care Symposium, her colleague at UCL, Dr. Myra Bluebond-Langener, thoughtfully reviewed “Out of the mouths of babes: Engaging children’s voices in palliative care research and clinical practice.”

Dr. Susan Furth from Children’s Hospital of Philadelphia gave an excellent talk on “Chronic kidney disease in children: Growth delay, cardiovascular disease risk factors and risk of progression.” Dr. Martin Pusic of Columbia University taught us about “Improving the slope of the learning curve: The nature of deliberate practice in medical diagnosis” and Dr. Lisa Simpson from Cincinnati presented a provocative consideration of “Health services research: The evidence base for policy change.” Stanford University’s Dr. Atul Butte gave a rousing look into the prospects for “Data-driven personalized medicine.” Dr. John Wagner (Minnesota) presented the current status of “Epidermolysis bullosa: Attempting to remove one disease off the incurable list.” Dr. Justin Baker (St. Jude’s) discussed “Integrated palliative care practices to improve the quality of pediatric oncology care.” In the Barry Smith Lecture, Dr. Robert White of South Bend, Indiana explained “Sound! Lights! Action! Why the physical environment is important for newborns and their caregivers.” In the annual Medical Education Day, Dr. Richard Frankel of the University of Indiana expounded on “Making the path to professionalism into a lifelong voyage of discovery.” The annual Paediatric Update keynote speech by Dr. Arnold Munnich from Paris addressed “Advances in human genetics: What are the benefits for patients?”


There were two excellent Rounds on aspects of global health by colleagues from St. Michael’s Hospital, Drs. Shaun Morris and Diego Bassani (“The biggest piece of the puzzle: Understanding the causes of child deaths in India”) and Prabhat Jha (“The never ending story: Global child mortality in the 20th and 21st centuries”), and Dr. Edward Etchell (Sunnybrook) argued for ways of “Improving diagnostic safety.” The Department Chairs of Family Medicine (Lynn Wilson) and Paediatrics (our own Denis Daneman) jointly asked “Who’s looking after our children?” A variety of other high-quality talks enriched the year’s schedule.
Grand Rounds will continue to be held on Wednesdays from 9:00 a.m. to 10:00 a.m. in the Daniels Hollywood Theatre at SickKids. The Department of Paediatrics Grand Rounds Committee would like to acknowledge the help and support of the following: The Paediatric Executive Committee, Valerie Daniels, Department of Paediatrics, and Frank Ferrari and Sam Mendolia from the Audio–Visual Department at SickKids.

2010

July 7 – Dr. Anne Wormsbecker, Paediatric Medicine: Pneumococcus and a herd of elephants

July 14 – Drs. Ereny Bassilious, Jonathan Wasserman, Endocrinology: Newborn endocrinology: From glands to glans

July 21 – Drs. May Haasz, Alterkait Ahmed, Mark Tessaro, Emergency Medicine: The party’s over: Modern party drugs in the ED

July 28 – Drs. Nufar Marcus, Vy Kim, Immunology/Allergy: A tale of two kids: CIDs and SCIDs

August 4 – Dr. Badria Al Ghaithi, Dr. Turki Al Shareef, Nephrology: Toxic tubules and glum glomeruli: Acute kidney injury overview

August 11 – Dr. Sumit Gupta, Dr. Kevin Weingarten, Haem/Oncology: The good, the bad and the confusing

August 18 – Dr. Samiah AlZaidy, Dr. John Brandsema, Dr. Cyrus Boelman, Dr. Kevin Jones, Neurology: Ants in her pants: One girl’s odyssey

August 25 – Dr. Srinivas Murthy, Dr. Nisha Thampi, Infectious Diseases: The voodoo we do: Historical perspectives on modern-day challenges in infectious diseases

Sept 1 – Dr. Mike Seed, Dr. Mike Mendelson, Cardiology: Hypoplastic left heart syndrome

Sept 8 – Dr. Manuel Carcao, Haematology/Oncology: Von Willebrand disease: A myriad of clinical entities

Sept 15 – Dr. Andrew Redington, Cardiology: Tetralogy of Fallot: From children to adults and back again

Sept 22 – Dr. Adam Dubrowski, Education Researcher, Learning Institute: Research in simulation based health professions education: Building houses or making bricks?

Sept 29 – Dr. Myra Bluebond-Langener, True Colours Chair in Palliative Care for Children and Young People, UCL Institute of Child Health and Great Ormond Street, UK, Distinguished Professor of Anthropology, Rutgers University, Camden, NJ: Paediatric Palliative Care Research Symposium 2010: Out of the mouths of babies…: Engaging children’s voices in palliative care research and clinical practice

Oct 6 – Dr. Louis Muglia, Division of Endocrinology and Diabetes, Vanderbilt University, Nashville, TN: Bain Lecture: Understanding pregnancy’s clock: The genetics of birth timing

Oct 13 – Dr. Susan Furth, Chief, Division of Nephrology, Children’s Hospital of Philadelphia: Chronic kidney disease in children: Growth delay, cardiovascular disease risk factors and risk of progression.

Oct 20 – Dr. Beth Malow, Professor of Neurology, Vanderbilt University Med Ctr, Nashville, TN: Haslam Lecture: Sleep in autism: Helping children and their families get the rest they need

Oct 27 – Dr. Martin Pusic, Dept Pediatric Emergency Medicine, Columbia University, New York, NY: Improving the slope of the learning curve: The nature of deliberate practice in medical diagnosis

Nov 3 – Dr. Lucy Wedderburn, Professor of Paediatric Rheumatology, Rheumatology Unit, UCL Institute of Child Health, London UK: Abe Shore Lecture: Decision points in childhood arthritis; who chooses - physician, family, or immune system?
Nov 10 – Prof. James Giordano, Ph.D., Director, Center for Neurotechnology, Studies Chair, Academic Programs, Potomac Institute for Policy Studies, Arlington, VA: Bioethics Lecture: From a neurobiology of pediatric pain to a neuroethics of pediatric pain care

Nov 17 – Dr. Edward Echells, MSc, RFR CPC, Associate Director, University of Toronto Centre for Patient Safety and Sunnybrook Health Science Centre: Improving diagnostic safety

Nov 24 – Dr. Lisa Simpson, MB, BCh, MPH, FAAP, Director, Child Policy Research Center; Cincinnati Children's Hospital Medical Center; Professor, Department of Pediatrics, University of Cincinnati, OH: Health services research: The evidence base for policy change

Dec 1 – Dr. Shaun Morris and Dr. Diego Bassani, Centre for Global Health Research, St. Michael's Hospital, Toronto: The biggest piece of the puzzle: Understanding the causes of child deaths in India

Dec 8 – Dr. Tom Chau, Senior Scientist and Theme Leader, Development Innovation & Bloorview, Research Institute, Bloorview Kids Rehab, Associate Professor, Canada Research Chair in Pediatric Rehabilitation Engineering, Director of the Clinical Engineering Program, Institute of Biomaterials & Biomedical Engineering, University of Toronto: Connecting with my world: Access innovations for children and youth with severe motor impairments

Dec 15 – Holiday Rounds

Dec 22 – No Rounds

Dec 29 – No Rounds

Jan 5 – Dr. Nicola Jones, GI/Nutrition, SickKids: Autophagy in health and disease: Eating our way into a healthy future.

Jan 12 – Dr. John Wagner, Dept Pediatrics, University of Minnesota, Minneapolis: Epidermolysis bullosa: Attempting to remove one disease off the incurable list

Jan 19 – Dr. Justin Baker, Oncology, St. Jude’s Research Hospital, Memphis TN: Integrated palliative care practices to improve the quality of pediatric oncology care

Jan 26 – Dr. Edgar Jaeggi, Cardiology, SickKids: Fetal cardiology: Back to the future

Feb 2 – Atul Butte, MD, PhD, Assistant Professor, Stanford University, School of Medicine; Director, Center for Pediatric Bioinformatics, Lucile Packard Children’s Hospital: Data-driven personalized medicine

Feb 9 – Kelly L. Klump, Ph.D., FAED, Associate Professor, Co-Director of the Michigan State University Twin Registry (MSUTR), Department of Psychology, Michigan State University, East Lansing, MI: The genetic diathesis of eating disorders: Critical roles for puberty and ovarian hormones.

Feb 16 – Dr. Prabhat Jha, Director of the Centre for Global Health Research, Li Ka Shing Knowledge Institute and St. Michael’s Hospital. Endowed Chair for Disease Control, Dalla Lana School of Public Health: Global Health Day: The never ending story: Global child mortality in the 20th and 21st centuries

Feb 23 – Dr. Jim Whitlock, Head, Haematology/Oncology, SickKids: Cancer in Down syndrome: Recent insights into a unique clinical and biologic entity
March 2 – Dr. Richard Frankel, Professor of Medicine, University of Indiana at Indianapolis: Medical Education Day: Making the path to professionalism into a lifelong voyage of discovery

March 9 – Dr. Lynn Wilson/Dr. Denis Daneman, Professor and Chair, Dept Family & Community Medicine, University of Toronto: Who is looking after our children?

March 23 – Dr. Robert White, Newborn ICU, Memorial Children’s Hospital, South Bend, IN, Barry Smith Lecture: Sound! Lights! Action! Why the physical environment is important for newborns and their caregivers

March 30 – Dr. Brian Feldman, Head, Division of Rheumatology, SickKids: EBM: Building an evidence base for children with rare disease

April 6 – Dr. Stephen Porter, Head, Emergency Medicine, SickKids: Information science and the quality imperative in healthcare: Linking data to action

April 13 – Dr. Rae Yeung, Staff Rheumatologist SickKids: Redeeming relevance in immunology: Lessons learned from Kawasaki disease

April 20 – Dr. Charlotte Moore, Staff Physician, Paediatric Medicine, SickKids: Policy, politics and paediatric practice: The Ontario experience

April 27 – Dr. Arnold Munnich, Professor and Head, Genetics, Hospital Necker Enfants Malades, Paris, France: Annual Paediatric Update: Advances in human genetics: What are the benefits for patients? (Webcast)

May 4 – Dr. Peter Rugg-Gunn, Post Doctorate Fellow, Rossant Lab, Developmental & Stem Cell Biology, SickKids Sass-Kortsak Award: Stem cells and early mammalian development

May 11 – Dr. Eric Bouffet, Neuro Oncologist, Haematology/Oncology, SickKids: Paediatric low grade glioma

May 18 – Dr. Sanjay Mahant (General Pediatrics), Dr. Greg Wilson (Pathology) and Dr. Heather Onyett (Queen’s University): Clinical Pathology Conference

May 25 – Dr. James Rutka, Staff Neurosurgeon, Neurosurgery, SickKids: Update on paediatric brain tumors: Six dreaded words

June 1 – Dr. Edward RB McCabe, MD, PhD, Executive Director, Linda Crnic Institute for Down Syndrome, Anna and John J Sie Endowed Chair in Down Syndrome Research and Clinical Care; Professor, Department of Pediatrics, University of Colorado School of Medicine: DPLM Symposium: Nanotechnology and nanomedicine in paediatrics

June 6 – Dr. Anne Matlow, Medical Director, Infection Prevention & Control Programme; Medical Director, Patient Safety; Associate Director, University of Toronto Centre for Patient Safety; Dr. Jayant K. Deshpande, MD MPH, Senior VP/Chief Quality Officer and Associate Medical Director, Arkansas Children’s Hospital, Professor of Pediatrics and Anesthesiology, University of Arkansas for Medical Sciences; Dr. Conor McDonnell MD FCARCSI, Director of Patient Safety Program, Department of Anaesthesia & Pain Medicine, SickKids: Plain or peanut? Sugar or salt? A systems approach to M&M review.

June 15 – Dr. Denis Daneman and Friends, (Ron Laxer, Sarah Alexander, Kathy Boutis, Anne Griffiths, Upton Allen), Department of Paediatrics, SickKids: Pearls from the clinical front

June 22 – Awards Day

June 29 – Dr. David Malkin, Haematology/Oncology: Li-Fraumeni Syndrome: Changing the Face of Childhood Cancer at the Bedside and the Bench
Promotions/Recognition

Promoted to Professor of Paediatrics
Dr. Jamie Hutchison
Dr. Ann Jefferies
Dr. Patricia Parkin
Dr. Hilary Whyte

Promoted to Associate Professor of Paediatrics
Dr. Ari Bitnun
Dr. Stephen Freedman
Dr. Melanie Kirby
Dr. Paul Nathan
Dr. Miriam Weinstein
Dr. Timothy Bradley
Dr. Mark Friedberg
Dr. Christoph Licht
Dr. Michelle Shouldice
Dr. Elizabeth Donner
Dr. Annie Huang
Dr. Sanjay Mahant
Dr. Elizabeth Stephenson
Dr. Mark Feldman
Dr. Walter Kahr
Dr. Peggy Marcon
Dr. Shirley Tse

Those who reached normal retirement age
The following reached normal retirement age by June of 2010:
Dr. Sheila Weitzman
Dr. Victor Blanchette
Dr. Keith Tanswell
Dr. Peter Durie
Dr. Paul Munk

25 Years of Service Awards
The following were honoured for their 25 years of service to The Hospital for Sick Children in June of 2010:

Dr. Joanne Rovet
Dr. Gilbert Miller
Dr. Michelle Farine
Dr. Clive Schwartz
Awards

Teaching/Education Awards

Dr. Carolyn Calpin – R.H.A. Haslam Preclerkship Teaching Award -to the faculty member who has demonstrated excellence in Preclerkship teaching.

Dr. Marvin Gans – The Lionel Weinstein Clerkship Teaching Award -to the faculty member who has demonstrated excellence in clerkship teaching.

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

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

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

Dr. Denis Daneman – 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.

Dr. Reshma Amin – Subspeciality Teaching Award - to the faculty member who has demonstrated commitment to excellence in teaching the subspecialty residents and clinical fellows.

Dr. Michelle Shouldice – Continuing Medical Education Award -to the faculty member who has demonstrated excellence in course coordination for teaching in a Department of Paediatrics/University of Toronto Continuing Education sponsored event.

Clinical Awards

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

Dr. Ari Bitmun and Dr. Sarah Alexander – Junior Faculty Award for Clinical Excellence in Paediatric Medical Care -to a physician within the first 5-10 years of appointment to an Academic Health Sciences Centre, who has demonstrated excellence in the delivery of clinical care.

Research Awards

Dr. Chaim Roifman – Physician Research Award for Career Excellence to recognize sustained excellence by a physician who has generated a body of work with relevance beyond a specific field of study. The awardees will be more 15 or more years beyond the initial date of appointment as a faculty Member in an Academic Health Sciences Centre. This award was first awarded in 2005.

Dr. Uri Tabori – Junior Faculty Research Award to recognize outstanding achievements and progress in research by a physician during the first six years after his/her initial academic appointment and whose primary appointment is in the Department of Paediatrics, University of Toronto. This award was first awarded in 2005.

Dr. Prakesh Shah – for the Physician Researcher Scientific Accomplishment Award.

Paediatric Administrative Award

Ms. Ramona Zacharias – In recognition of an administrative support staff member in the Department of Paediatrics who has demonstrated outstanding performance and excellence in all aspects of their role. This individual possesses outstanding communication and interpersonal skills and is motivated to perform above and beyond their daily responsibilities. This award was first awarded in 2007.
Resident and Fellow Awards and Achievements

Teaching/Education Awards
Dr. Charles Larson (PGY3), Dr. Julie Johnstone (PGY4) – Christopher Ondaatje

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

CanMEDS Award – Subspecialty Trainee
Dr. Nadia Luca

CanMEDS Award – Core Paediatric Trainee
Dr. Melissa Chan

PeRLS Teaching Award
Dr. Walla Al-Hertani

Clinical Awards
Dr. Sylvia Cheng – The Saunders Prize – to a senior resident who has demonstrated excellence in clinical paediatrics.

Research Awards – Core Paediatrics
Dr. Amy French and Dr. Michael Khoury – 1st Place
Dr. Cynthia Popalis – 2nd Place

Research Awards Clinical Science – Junior Trainee
Rachel Vanderlaan – 1st Place

Research Awards Clinical Science – Senior Trainee
Dr. Omer Bar Yosef – 1st Place
Dr. Alène Toulany and Dr. Elinor Simons – 2nd Place

Research Awards Basic Science – Junior Trainee
Ye Jin – 1st Place

Research Awards Basic Science – Senior Trainee
Dr. Swasti Chaturvedi – 1st Place
Annual Resident and Fellow Research Day (May 31, 2011)

Oral Presentations

**Aimone A**, *Gastroenterology, Hepatology & Nutrition*
Impact of Iron Fortification on Malaria Incidence and Severity in Ghanaian Children. AM Aimone, S Zlotkin, S Newton, S Amenga-Etego, K Tchum, I Azindow, S Owusu-Agyei

**Chaturvedi S**, *Nephrology*
Slit2 Ameliorates Renal Ischaemia Reperfusion Injury. S Chaturvedi, S Tole, L Huang, A Bajwa, G-Y Liu, Y-W Huang, M Okusa, L Robinson

**Cheng S**, *Core Paediatrics*
Completing a Scholarly Project during Paediatric Residency Training: Motivators, Barriers, and Enablers. S Cheng, JC Johnstone, DA Nita, M Chan, L Nurmohamed, T Martimianakis, L Sung, A Atkinson

**Khoury M**, *Core Paediatrics*
The Association of Cardiometabolic Risk and High Body Mass Index in Adolescents is Mediated by Waist Circumference. M Khoury, C Manlhiot, S Dobbin, D Gibson, N Chahal, H Wong, J Davies, K Storner, O Makerewich, A Fisher, BW McCrindle

**Ossa J**, *Gastroenterology, Hepatology & Nutrition*
Subversion of the Host Innate Immune System by Adherent-Invasive Escherichia Coli Associated with Crohn Disease. JC Ossa, PM Sherman

**Vanderlaan R**, *Cardiology*
Evidence of Autonomic Reinnervation in Pediatric Heart Transplant Recipients Leads to Improved Exercise Performance and Overall Survival. R Vanderlaan, J Conway, D Manlhiot, BW McGrindle, AI Dipchand

**Williams B**, *Haematology/Oncology*
NK-92 Infusions Improve Survival in NOD/SCID Gamma Null Mice Bearing Acute Myeloid Leukemia Xenografts. BA Williams, X-H Wang, A Keating

**Yang C**, *Respiratory Medicine*
Exhaled Nitric Oxide Not Useful for Diagnosing Non-Atopic Asthma. CL Yang, E Simons, R Foty, T To, SD Dell

Poster Presentations

**Abdullah K**, *Paediatric Medicine*

**Akiyama T**, *Neurology*
Correlation Between Interictal High-Frequency Oscillations and Seizure Outcome in Pediatric Resective Epilepsy Surgery. T Akiyama, CY Go, A Ochi, IM Elliott, EJ Donner, SK Weiss, O Carter Snead III, JT Rutka, JM Dr.ake, H Otsubo

**Al Ghaithi B**, *Nephrology*
Atypical Case of Thrombotic Thrombocytopenic Purpura. B Al Ghaithi, S Radhakrishnan, N Mohammed, M Kirby, C Licht

**Al-Shareef T**, *Nephrology*
Effect of Varied Dialysate Bicarbonate Levels on Phosphate and Potassium Removal: A Pilot Study. K Srisuwan, T Al-Shareef, M Frieling, R Nemec, M Gajaria, E Harvey, D Geary

**Alabdulrazzaq D**, *Endocrinology*
A Novel Germline CDC73 (HRPT2) Mutation in an Adolescent with Atypical Adenoma: A Case Report. D Alabdulrazzaq, D Cole, E Sochett

**Al-hashim A**, *Neurology*
The Experience of The Hospital for Sick Children in Patients with Agenesis of Corpus Callosum: Neuroradiological and Clinical Evaluation. A Al-hashim, S Blaser, D MacGregor, C Raybaud
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Brosh N, Developmental Paediatrics

Chaudhry A, Clinical and Metabolic Genetics
Short Stature and Metaphyseal Changes in a Patient with Microduplication of Chromosome 12q13.2-q14.3 including LEMD3: Expanding the Phenotypic Variability in Patients with Duplications of Proximal 12q. A Chaudhry, DJ Stavropoulos, RI Hilliard, E Pope, M Marcon, S Miller, L Dupuis, R Mendoza-Londono

Chaudhry S, Clinical Pharmacology and Toxicology

Chen Y, Clinical and Metabolic Genetics
Epigenetic Dysregulation of Age-Dependant DNA Methylation in Beckwith-Wiedemann Syndrome. Y Chen, S Choufani, C Freedman, C Shuman, R Weksberg

Conway J, Cardiology
Donors Characteristics and Impact on Outcomes in Pediatric Heart Transplant Recipients. J Conway, C Chin, M Kemma, M Burch, A Barnes, MA Tresler, JN Scheel, DC Naftel, K Beddow, T Allain-Rooney, AI Dipchand

Denburg A, Haematology/Oncology
Pediatric Oncology Research in Low Income Countries: Ethical Concepts and Challenges. AE Denburg, S Gupta, S Joffe, SC Howard, RC Ribeiro, FA Antillon, R Vasquez, L Sung

Doshi S, Core Paediatrics
Is It Worth the Wait? A Systematic Review of Factors Affecting Increasing Wait Times and the Impact on Patient Outcomes in Pediatric Emergency Departments. S Doshi, K Mah, S Ratnapalan

Elvin A, Neonatology
Prevalence of Intestinal and Liver Failure After Necrotizing Enterocolitis. A Elvin, P Wales, AM Moore

El-Khuffash A, Neonatology
The Use of Targeted Neonatal Echocardiography to Confirm Placement of Peripherally Inserted Central Catheters in Neonates: An Assessment of Practice. A El-Khuffash, A Jain, PJ McNamara, E Ng, S Lee

Feigenberg-Inbar M, Clinical and Metabolic Genetics
Features of Complex Imprinting Disorders in a Child with Mosaicism for Genome-Wide Paternal Uniparental Disomy. M Feigenberg-Inbar, S Choufani, Y Chen, C Cytrynbaum, R Weksberg

French A, Core Paediatrics
School Attendance in Childhood Cancer Survivors. AE French, E Tsangaris, S Guger, M Barrera, R Brown, S Urbach, D Stephens, PC Nathan
Fung A, Cardiology
Increasing Burden of Environmental Risk Factors for Congenital Heart Disease in the Current Era. A Fung, M Safi, T Daljevic, C Ogaki, J Smythe, J Lougheed, H Rosenberg, T Mondal, S Mital

Garbutt A, Developmental Paediatrics
Effect of Prematurity on Phenotype in Children with Autism. A Garbutt, E Anagnostou, P Church

Gooden M, Nephrology
Xenophilus Aerolatus Peritonitis in a Six Year Old Male on Maintenance Peritoneal Dialysis. AK Tsampalieros, M Gooden, N Thampi, YCW Yau, EA Harvey

Gupta S, Haematology/Oncology
Treatment Related Mortality in Children with Acute Lymphoblastic Leukemia in Central America. S Gupta, FA Antillon, M Bonilla, L Fu, SC Howard, RC Ribeiro, L Sung

Haasz M, Emergency Medicine
Do Pediatric Blunt Trauma Patients Meeting Low-Risk Criteria Require Pelvic Radiographs? M Haasz, P Wales, S Beno, S Schuh

Ironside S, Neurology
Reliability of fMRI Activation during a Covert and Overt Verbal Fluency Task. S Ironside, G Eskes, A Newman, D Clarke, C Helmick, MP McAndrews

Jain A, Neonatology

Jain Ghai S/Al Maawali A, Clinical and Metabolic Genetics
Complex II Deficiency: A Case Report and Review of Literature. S Jain Ghai, A Al Maawali, J Cameron, N Mackay, BH Robinson, J Raiman

Jean-St-Miche E, Cardiology
Double Blind Randomized Controlled Crossover Trial of the Effects of Remote Preconditioning on Skeletal Muscle Metabolism During Exercise, A Pilot Study. E Jean-St-Michel, C Manlhiot, BW McCrindle, A Redington, G Wells

Jin Y, Clinical and Metabolic Genetics
Sotos Syndrome: Mutations in a Histone Methyltransferase Causes Targeted Alterations in DNA Methylation Profiles. Y Jin, S Choufani, C Cytrynbaum, Y Chen, R Weksberg

Johnstone J, Core Paediatrics
Pre-Departure Preparation for Travel to Rural Southern Tanzania: What Problems Should Trainees Expect to Encounter? JC Johnstone, J Rana, D Scolnik, K Chan

Jones KC, Neurology
Wallerian Degeneration Post Childhood Arterial Stroke: Beyond A Radiological Diagnosis. K Jones, C Hawkins, D Armstrong, R Askalan

Kanungo J, Core Paediatrics
Knights S, Core Paediatrics

Koelink E, Core Paediatrics
Anthropometric Measurement of School-Aged Children in Guyana, South America. LA Craw, NR Saunders, E Koelink, J Roth, L Aronson, MS Silverman, S Roth, B Ortuoste, D Scolnik

Lagman-Bartolome AM, Neurology
Pediatric Thalamic Strokes: Neurological, Cognitive and Behavioural Outcome. AM Lagman-Bartolome, R Westmacott, M Drake, M Tan, D MacGregor, R Askalan, M Moharir, G deVeber

Lee Chong A, Haematology/Oncology
Perspectives on Quality and Content of Information on the Internet for Adolescents with Cancer. JN Stinson, M White, V Breakey, A Lee Chong, I Mak, K Koekebakker Low, A Koekebakker Low

Leung J, Core Paediatrics
Nasogastric Tube Misadventures. J Johnstone, J Leung, J Friedman

Lipman T, Haematology/Oncology
Exhaustion of Tumour Initiating Cells by Combination Therapies with Telomerase Inhibition. T Lipman, P Castelo-Branco, C Zhang, L Hansford, R Tressler, E Walker, P Dirks, D Kaplan, U Tabori

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Examining the Impact of Socioeconomic Status on Cardiovascular Risk Factors and Health Behaviours in Youth. S Lord, C Manlhiot, B McCrindle

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Respiratory Depression Following Therapeutic Administration of Opioids in the Operating Room: An Opioid Pathway Pharmacogenetic Analysis. P Madadi, J Sistonen, R Gladdy, G Silverman, JC Carvalho, CJD Ross, BC Carleton, MR. Hayden, G Koren

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Mankad D, Developmental Paediatrics
Re-Organization of Motor and Language Function Following Left Hemispheric Acquired Stroke in Children. DB Mankad, D Fehlings, R Hung, E Donner

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McCoy B, Neurology
Clinical Predictors for Non-Convulsive Seizures Among Critically Ill Children. B McCoy, R Sharma, A Ochi, C Go, H Otsubo, JS Hutchison, EG Atenafu, CD Hahn

Menard S, Core Paediatrics

Mendelson M, Cardiology
Outcomes of Obstructive Pediatric Primary Cardiac Tumours: A 20 Year Single Centre Retrospective Review. M Mendelson, N Ahmad, C Manlhiot, B McCrindle, E Jaeggi, L Nield

Merino D, Clinical and Metabolic Genetics
Genome-Wide Copy Number Analysis Reveals Novel Somatic Mutations Associated with Choroid Plexus Tumorigensis. D Merino, A Shlien, M Pienkowska, U Tabori, D Malkin

Minhas R, Core Paediatrics
Developmental Concerns in Internationally Adopted Children. RS Minhas

Mohammed A, Neonatology
Vasopressin Improve Oxygenation in Neonates with Severe Persistent Pulmonary Hypertension of the Newborn. A Mohamed, N Nasef, V Shah, PJ McNamara

Morris S, Infectious Diseases
Sub-National, Gender and Age Distribution of Measles Deaths in India: Estimates from a Nationally Representative Study of over 12000 Child Deaths. SK Morris, DG Bassani, S Awasthi, R. Kumar, Shet, JRM Brandao, P Jha

Mouzaki M, Gastroenterology, Hepatology and Nutrition
Basiliximab to Allow Delayed Introduction of Calcineurin Inhibitors as Renal Sparing Protocol in Pediatric Liver Transplant Recipients. M Mouzaki, J Yap, V Avinashi, A Babu, A Fu, M Deangelis, K Murch, A Ghanekar, S Ling, B Kamath, Y Avitzur, A Fecteau, N Jones, S Ling, D Grant, V Ng

Nita D, Neurology
Phenotype-Genotype Correlations in Neuronal Ceroid Lipofuscinoses. DA Nita, B Baskin, P Ray, S Blaser, W Halliday, BA Minassian

Noyman I, Neurology
High-Dose Diazepam Therapy in Children with Continuous Spike-Waves during Slow-Wave Sleep (CSWS). I Noyman, C Go, T Akiyama, S Weiss, E Donner, H Otsubo, A Ochi

Nugent Z, Core Paediatrics
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Strengthening Families for Parents and Youth 12 – 16 years: An Adaptation of an Evidence-Based Model for Implementation with Families of At-Risk Youth. A Pemberton-Gaskin, E Goldberg, D Buhler
Penner M, Core Paediatrics
Prevalence of Pain and Impact on Activities in Children and Youth with Cerebral Palsy in an Outpatient Setting. M Penner, D Fehlings, L Switzer, N Binepal, U Narayanan

Popalis C, Core Paediatrics
Chronic Hepatitis B Virus (HBV) Infection in Childhood: 25 Years' Experience. C Popalis, LTF Yeung, S Ling, V Ng, C O’Connor, EA Roberts

Porat R, Clinical and Metabolic Genetics
Genome-Wide Copy Number Analysis Reveals Two Novel Loci for Susceptibility to Osteosarcoma. RM Porat, I Pasic, A Shlien, A Novokmet, N Golgoz, I Andrulis, J Wunder, D Malkin

Rodan L, Neurology
Frequency and Predictors of Recurrent Stroke in Children with Congenital Heart Disease. L Rodan, B McCrindle, C Manlhiot, D MacGregor, R Askalan, G DeVeber

Rozenblyum E, Core Paediatrics
Cytomegalovirus in Pediatric Systemic Lupus Erythematosus: Screening and Therapeutic Implications. E Rozenblyum, D Levy, E Harvey, D Hebert, E Silverman

Sadaka Y, Neurology
2010 Revisions to the “McDonald Criteria” for MS Diagnosis – Application to Children with Acute CNS Inflammatory Demyelination. Y Sadaka, LH Verhey, AD Sadovnick, A Bar-Or, RA Marrie, DL Arnold, B Banwell, and the Canadian Pediatric Demyelinating Disease Program

Saleh M, Clinical and Metabolic Genetics
Investigation of the Genotype-Phenotype Correlation in the Toronto Niemann-Pick Type C Disease Population. M Saleh, B Rigat, R Badilla-Porras, D Mahuran, M Mackrell, J Clarke, J Raiman

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Shaikh F, Haematology/Oncology
The Effect of Anticoagulation on the Risk of Traumatic Lumbar Punctures in Children with Acute Lymphoblastic Leukemia. F Shaikh, L Avila, C Macartney, S Williams, L Brandao

Shariat M, Cardiology

Shin J, Neurology
Increased Neurogenesis in Developing Succinic Semialdehyde Dehydrogenase Deficient Mice. J Shin, A Kim, J Zhao, BW Scott, L Shen, Y Wu, MA Cortez, O Carter Snead III, WM Burnham

Simons E, Respiratory Medicine
How Does the Timing of Home Environmental Tobacco Smoke Exposure during Childhood Affect the Age of Asthma Development? E Simons, D Stieb, T To, R Maineddin, S Dell

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Sulowski C, Emergency Medicine  
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Tal G, Respiratory Medicine  

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Anthropomorphic Growth in Patients with Congenital Heart Disease. C Tamayo, C Manlhiot, K Patterson, S Lalani, BW McCrindle

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Predictors of Early Symptomatic Seizures in Children with Cerebral Sino-Venous Thrombosis. CM Teh, T Go, R Askalan, G deVeber, D MacGregor, M Moharir

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Teenagers' Attitudes and Preferences on the Use of Chaperones during Intimate Physical Examinations. A Toulany, DK Katzman, E Goldberg, A Matlow, M Kaufman

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Van Limbergen J, Gastroenterology, Hepatology and Nutrition  
Patient-Driven Learning and Symptom Monitoring Using Handheld Technology: A New Perspective on Education and Counseling in the Multidisciplinary Pediatric Inflammatory Bowel Disease Team. J Van Limbergen, K Frost, K Uusoue, A Griffiths

Vandermorris A, Core Paediatrics  
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Verbeeten K, Core Paediatrics  
Association Between Childhood Obesity and Type 1 Diabetes: A Systematic Review and Meta-Analysis. KC Verbeeten, CE Elks, D Daneman, KK Ong

Verhey L, Neurology  
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Walsh C, Gastroenterology, Hepatology and Nutrition  

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Wolfe-Wylie M, Neonatology
Effects of Artificial Reproductive Technology on Successful Breastfeeding in Mothers of Twins Admitted to the NICU. M Wolfe-Wylie, N Coles, K O’Brien, S Unger

Wong P, Haematology/Oncology
Novel Notch 1 Mutations in Atm Mouse Model of T Acute Lymphoblastic Leukemia (T-ALL). PPC Wong, IR Matei, CJ Guidos, JS Danska

Wormsbecker A, Paediatric Medicine

Yazdani-Brojeni P, Clinical Pharmacology and Toxicology
A Systematic Review of the Fetal Safety of Interferon Alfa. P Yazdani-Brojeni, I Matok, F Garcia-Bournissen, G Koren

Zhao M, Neonatology
Contributing Factors of Poor Outcome in Outborn Very Low Birth Weight Infants. M Zhao, P Shah, S Lee, and the Canadian Neonatal Network

Zhukova N, Haematology/Oncology
The Effect of Summer Recreational Therapeutic Programs on Self-Reported Quality of Life in a Paediatric Cancer Population. N Zhukova, A Robertson, U Tabori, D Malkin

Children are one third of our population and all of our future.

Select Panel for the Promotion of Child Health
Departmental and Divisional Staff

Adolescent Medicine

Division Head
Dr. Debra K. Katzman

Full-Time
Dr. Eudice Goldberg
Dr. Miriam Kaufman
Dr. Karen Leslie

Part-Time
Dr. Herbert Joseph Bonifacio
Dr. Katherine Hick
Dr. Miriam Rossi
Dr. Rahul Saxena
Dr. Cathleen Steinegger

Clinical Fellows
Dr. Ian Chen
Dr. Sarah Kearney
Dr. Maya Kumar
Dr. Alene Toulany
Dr. Trisha Tulloch

Administrative Staff
Tracy DeSantis (Supervisor, Administrative Services)
Noreen Akhtar
Joy Gouldbourne

Cardiology

Division Head
Dr. Andrew Redington

Full-Time
Dr. Lee Benson
Dr. Tim Bradley
Dr. Rajiv Chaturvedi
Dr. Anne Dipchand
Dr. Mark Friedberg
Dr. Fraser Golding

Research Fellows & Associates
Dr. Xiaojing Dai
Tanya Daljevic
Dr. Gustavo LaRotta
Dr. Jing Li
Carly Ogaki
Mina Safi

Part-Time
Dr. Claudia Almeida
Dr. Jack Colman
Dr. Rejane Dillenburg
Dr. Ra Han
Dr. Alexandra Jevremovic
Dr. Anil Menon
Dr. Tapas Mondal
Dr. Norman Musewe
Dr. Lynne Nield
Dr. Kambiz Norozi
Dr. Erwin Oechslin
Dr. Ralf Rauch
Dr. Rachel Wald
Dr. Roxanne Walker
Dr. Eva Welsch

Adjuduct
Dr. Fred Keeley

Administrative Staff
Fe Berbano
Theresa Braggs
Esther Delea
Judy Grundy (Supervisor, Administrative Services)
Pamela Hardy
Susan Jessop
Shelley Kahn-Fortes
Diana Kuzmanovski
Jacqueline Moonsammy
Susan Morton
Eleanor Paulino
Ann Prosser

Clinical and Metabolic Genetics

Division Head
Dr. Daune MacGregor (Interim)

Full-Time
Dr. Sarah Bowdin
Dr. David Chitayat
Dr. Peter Kanno
Dr. Roberto Mendoza
Dr. Stephen Meyn
Dr. Julian Rainman
Dr. Komudi Siriwardena
Dr. Andreas Schulze
Dr. Joyce So
Dr. Rosanna Weksberg
Dr. Grace Yoon

Subspecialty Residents
Dr. Steven Greenway
Dr. Emilie Jean-St-Michel
Dr. Michael Mendelson
Dr. Varsha Thakur
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Dr. Yoichi Iwamoto
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- Dr. Ramses Badilla
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- Dr. Ayeshah Chaudhry
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I brought children into this dark world because it needed the light that only a child can bring.

Liz Armbruster