Our goal is to continuously evolve as one of the world's leading academic departments of Paediatrics, focusing on excellence in clinical, training of the next generation of paediatric health care professionals, and the generation of new knowledge through cutting edge research and creative professional activities.

– Denis Daneman, Chair/Chief of Paediatrics
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Report of the Chair of Paediatrics and Paediatrician-in-Chief

One can only characterize the 2013-14 academic year as jam-packed:

First, the opening of the Peter Gilgan Centre for Research and Learning at SickKids in October 2013 saw the repatriation of our researchers from six different sites to the main hospital campus. The building is simply magnificent.

Second, the CEO of SickKids, Mary Jo Haddad, retired after ten highly productive years at the helm. The new CEO, Mike Apkon, is the first paediatrician to lead the hospital in its long history. He hit the ground running in January 2014 and has quickly identified the important areas in need of ongoing attention: mainly information technology and ensuring the best possible access to child health care in Ontario.

Third, we had a vigorous year of recruitment, welcoming the following new faculty:

- Alene Toullany in Adolescent Medicine
- Emilie Jean St Michel in Cardiology
- Melanie Penner in Developmental Paediatrics
- Robert Bandsma in Gastroenterology
- Sumit Gupta in Haematology Oncology
- Mathieu Lemaire and Damien Noone in Nephrology
- Noma Dhlamini in Neurology
- Sarah Schwartz in Paediatric Medicine
- Charisse Kwan, Debra Schonfield and Mark Tessaro in Paediatric Emergency Medicine

Fourth, we continued our record of success at the Decanal Promotions Committee with the following:

1. Assistant to Associate Professor:
   a. Evdokia Anagnostou, Developmental Paediatrics
   b. Leo Brandao, Hematology
   c. Abha Gupta, Oncology
   d. Cecil Hahn, Neurology
   e. Binita Kamath, Gastroenterology/Hepatology/Nutrition
   f. Indra Narang, Oncology
   g. Karel O'Brien, Neonatology
   h. Julian Raiman, Critical Care Medicine
   i. Valerie Waters, Infectious Diseases

   This group comprises one clinician scientist, three clinician investigators and five academic clinicians.

2. Associate to Full Professor:
   a. Yigal Dror, Hematology
   b. Darcy Fehlings, Developmental Paediatrics
   c. Meredith Irwin, Oncology
   d. Karen Leslie, Adolescent Medicine
   e. Seema Mital, Cardiology
   f. Rulan Parekh, Nephrology
   g. Lisa Robinson, Neonatology
   h. Steven Schwartz, Critical Care Medicine
   i. Prakesh Shah, Neonatology

   This group includes six clinician scientists, one each of clinician investigator, clinician educator and academic clinician.
This amounts to a perfect record of 118 faculty members submitted for review by the Decanal Promotions Committee being successful over the past 8 years. The pivotal role played by our Departmental Committee in screening candidates, and most particularly that of the Committee Chair, Dr. Melvin Freedman, cannot be over emphasized. Mel will retire in earnest in June 2015 and pass the chair of the committee to Ron Laxer. Mel has been a member of our department for over 40 years, first as Hematologist, then as research Ethics Board Chair, and finally as Departmental Promotions Committee Chair and confidante, supporter and friend of the Department Chair. Mel brings together all the skills needed to do these jobs superbly: intelligence, diligence, integrity, sensitivity, sense of humour, directness. Thank you, Mel!

New chairs in the Department of Paediatrics include:

Jill Hamilton, Endocrinology, will be the inaugural Mead Johnson Chair in Childhood Nutrition, and Stan Zlotkin, Global Child Health, the Mining4Life Chair in Mineral Metabolism.

Despite a very tough funding environment, members of our faculty have been more successful than ever in garnering research grants. In addition, with a new initiative to nurture future researchers in 2013/14 we recruited one MD PhD trainee into our residency program. In 2014/15, there were four. Successful negotiations with the Alternate Funding Plan Branch of the Ontario Ministry of Health and LongTerm Care have led to the hiring of new faculty in Paediatric Emergency Medicine and Complex Care, and consolidation of the initiative in Palliative Care (Paediatric Advanced Care Team, PACT). A new set of requests have been submitted for the 2015/16 academic year.

Currently the Department of Paediatrics is involved in recruiting two Division Heads and reviewing a number of Divisions as their Heads reach the five year mark.

All in all, these and many other stellar achievements have made for ongoing excellence in the Department of Paediatrics. The countdown has started as The Hospital for Sick Children renews its leadership group with Surgeon-in-Chief changing at the end of 2014, Chief of Research in mid-2015, and Paediatrician-in-Chief/Chair of Paediatrics in mid-2016.

I remain awed by the accomplishments of our departmental members across all three pillars of academic paediatrics and beyond in social paediatrics and global child health. Thanks to everyone for their contributions.

Sincerely,

Denis Daneman

Future Impact

Each year we recruit a number of new faculty members, some to fill the vacancies that arise as a result of the retirement of senior faculty, some that represent new positions in our Department of Paediatrics. The yardstick is a simple one: excellence, not only in clinical care but also in medical education, research or other creative professional activities. These faculty members are all superbly well trained, either here or elsewhere, and represent not only the present, but more importantly the future of our department.

Here we profile 5 individuals recently recruited to our department: the future is secure in their hands.

Dr. Shaun Morris –
Developing perinatal kit to save lives

Dr. Shaun Morris earned his MD at Queen’s University and a Master’s of Public Health at Johns Hopkins University in Baltimore, MD. He began clinical training at SickKids in 2003 and joined the faculty in 2012 after completing a Pediatrician Scientist Training Program fellowship in global child health research. He is a Clinician Scientist in Infectious Diseases, Scientist and Principal Investigator at the Centre for Global Child Health, and Scientist-Track Investigator in Child Health Evaluative Sciences.

He is Assistant Professor of Paediatrics at U of T and Adjunct Professor at the Dalla Lana School of Public Health, and he is Honourary Scientist, Centre for Global Health Research at St. Michael’s Hospital.

Dr. Morris’ current research focuses on global health epidemiology, including newborn and childhood mortality, tropical infectious diseases, and vaccine preventable diseases. In 2013, he received the Grand Challenges Canada Stars in Global Health grant for developing an integrated perinatal kit aimed at saving newborn lives.

“One of the biggest global health problems is how many newborns die, very often from preventable causes. Women and families have hopes and dreams tied up in their pregnancy. It’s not acceptable,” says Dr. Morris, who has been using the kit in studies he’s conducting in Pakistan and Kenya. “I hope to show that this cost-effective kit works, and then turn it into a sustainable product that will go a long way in improving health outcomes for women and children in low income countries.”
Dr. Nomazulu Dlamini – Helping children who have had a stroke

Dr. Nomazulu Dlamini first joined SickKids in 2008 as a Clinical Research Fellow in the Stroke Program. Prior to this she had earned her medical degree at University College of London and completed her training in paediatrics and paediatric neurology. She returned to SickKids in September 2014 as an Assistant Professor and Staff Physician in Neurology and Stroke.

While a Staff Neurologist at Evelina London Children’s Hospital, she specialized in stroke, neuromuscular diseases and complex neurofibromatosis, helping to run the regional and national services.

It wasn’t until Dr. Dlamini was a senior trainee that she learned about the impact of childhood stroke on the individual and society, and that society’s understanding of the problem remained limited. This has inspired her journey.

“Stroke is one of the top 10 causes of death in childhood. It must be managed better,” says Dr. Dlamini. "At SickKids, I’m able to focus on stroke, which is my real burning interest. I will be part of the SickKids Stroke Imaging Laboratory the problem remained limited. This has inspired her journey."

Dr. Mathieu Lemaire – Translating knowledge for global benefit

Dr. Mathieu Lemaire earned his master’s and medical degrees at McGill University and joined SickKids full-time in August 2014, serving as staff nephrologist, scientist-track investigator, and assistant professor at U of T’s Faculty of Medicine.

In 2007, while a SickKids paediatric resident, he received a Norman Saunders Award for Excellence in Clinical Paediatrics. Following his training in nephrology, also at SickKids, he completed a PhD in Investigative Medicine (Genetics) at Yale, focusing on the genetics of rare paediatric kidney diseases.

As a clinician and researcher, he aims to have his scientific work translated to clinical care.

“For me, the greatest achievement would be to have an impact on patients’ clinical care based on my research. That would be incredibly fulfilling,” he says. "I believe that technological advances will help shorten the paths from hypothesis to pathophysiology, and from pathophysiology to therapy, thus benefiting our patients in a much shorter timeframe.”

“Now that genome sequencing is rapidly becoming cheaper and more reliable, the challenge is to show how incorporation of genomic data into clinical care will impact patient outcomes concretely,” he says. "Once this is established, and it may take a while before we get there, it will be our duty to make sure paediatric patients around the world benefit from that.”

Dr. Michelle Science – Preventing and Controlling infection transmission

Dr. Michelle Science is staff physician, Infectious Diseases, medical advisor, Infection Prevention and Control, and medical co-lead, Antimicrobial Stewardship Program. She earned her MD and Master’s degree in Health Research Methodology (Clinical Epidemiology) and completed the Clinician Investigator Program at McMaster University. Before joining SickKids full-time in 2012, she received tropical medicine training in Lima, Peru, following a paediatric residency and fellowship (Infectious Diseases) at SickKids.

As Medical Advisor for Infection Prevention and Control, Dr. Science is a key player in ensuring the proper policies and procedures are in place to stop and control the transmission of infection within the hospital. In the past year, she played a pivotal role in developing protocols in the event of a suspected Ebola case at SickKids.

“Safety remains an important issue for Dr. Science. "I look forward to optimizing patient safety and outcomes by playing a central role as we strive to be leaders and innovators in paediatric infection prevention and control and antimicrobial stewardship.”

Her other areas of interest include antimicrobial stewardship and the impact of Clostridium difficile infection in children. This year she undertook a quality improvement project in the NICU to understand the burden of C. difficile colonization in infants.

Dr. Alène Toulany – Communication in quality and adolescent medicine

Dr. Alène Toulany completed a VA National Quality Scholars Fellowship in 2013 at Dartmouth College’s Institute for Health Policy & Clinical Practice and U of T’s Centre for Quality Improvement and Patient Safety, and she is working on a master’s degree in Health Services Research at U of T’s Institute for Health Policy, Management and Evaluation.

Dr. Toulany chose paediatrics because she enjoys working with children and youth – the oldest of four, she grew up being a mentor for her younger siblings. Adolescent medicine was also a natural step, because much of the work in this field is about motivating the patient to make changes. The leap to quality followed the same path: The more she understood about the psychosocial issues of her patients and their families, the better she became at patient communication. She knew that in order to affect change, individuals have to be motivated – and with that knowledge she turned her attention to quality improvement.

“The essence of patient safety and quality improvement work is good communication and strong relationships. Change is personal and without strong relationships, doing the right thing for the right patient at the right time becomes more difficult. We teach this in our Paediatric Co-Learning Curriculum in Quality Improvement for faculty and trainees.”
Divisional Overview

The Division of Adolescent Medicine at The Hospital for Sick Children is an interprofessional group committed to promoting and providing excellence in adolescent health care, and collaborating with local, national and international communities in the areas of patient care, training, education and research.

Some of the exciting events of the year included: a retreat that resulted in a Leadership Charter and many “Wildly Important Goals”; the launch of the Transgender Youth Clinic with Endocrinology; the publication of a report with the Canadian Foundation for Health Improvement on transition in patients with complex care needs; and the development of a longitudinal fellowship rotation in the Young Families’ Program and; new involvement with STOMIP and the Paediatric Sleep Disorders Program. Members of the Division are involved in creating apps and websites for young people with diabetes, lupus solid organ transplant.

The Division has 5 programs, The Young Families Program (YFP); The Substance Abuse Program; The Good 2 Go Transition Program (G2G); The Eating Disorders Program and the SickKids Interprofessional Team for Youth (SITY) that continue to be active in clinical care, education, research, resource creation and international collaborations.

The Young Families’ Program. The Young Families Program continues to host a wide range of interprofessional education trainees from a variety of disciplines including medicine, nursing, and midwifery social work and has expanded the role for social paediatrics students into its clinical, research and educational programs. Research and QI projects have increased and include work in the areas of maternal and child outcomes, contraception, literacy and evidence-based health services for adolescent parents. Enhancing and strengthening community networks and affiliations is an active strategic focus. The program is developing an initiative that will offer evidence based parenting interventions, and increased collaboration with the Fraser Mustard institute.

The Substance Abuse Program provides continuum of care from outpatient to day treatment, incorporating best practices in clinical care, while providing learning for a variety of health professional trainees. The program also provides outreach to schools, group homes and youth-serving agencies across the GTA. A new partnership with LOFT Community Services and the Centre for Addiction and Mental Health (CAMH) has led to the creation of an Evening Program for Transitional Age Youth.

Good 2 Go Transition Program (Good 2 Go) continues to support SickKids staff and members of the paediatric and adult healthcare community in servicing the needs of youth in healthcare transitions. Highlights from the past year include successful response to a call from the MOHLTC to better understand the transition needs of youth with complex care needs through a partnership with Canadian Foundation for Healthcare Improvement. The past year has stressed our role as consultants/experts in transition at the provincial and national level, including recent examples as working group members on transition initiatives with Canadian Association of Paediatric Health Centres, the Child Youth Advisory Table of the Toronto Central LHIN and Provincial Council for Maternal and Child Health Child Youth Advisory Committee. Current research is in the areas of transition in eating disorders, solid organ transplant and complex care.

The Eating Disorders Program provides integrated clinical services (inpatient, day hospital, outpatient and consultation) to adolescents and their families. All aspects of the program are interdisciplinary and family-based as fits with best evidence based practice. The program continues to explore innovative treatments and their outcomes and to add to its research with studies on transition to adult care, evaluating a new refeeding protocol, and refining our treatment model for younger children with eating disorders. Educating current and new providers on best practices in eating disorders care remains a core mission of the program. Although we are not directly involved in planning or running the Child and Adolescent Eating Disorders Unit at Ontario Shores Centre...
for Mental Health Sciences we lobbied for many years to have an alternative to sending patients who needed residential care to the United States and expect to have close ties with this program.

SITY continues to expand its role in providing adolescent health care for young people with chronic illness or disability, and has added regular clinics in haematology and spina bifida. The Transgender Youth Clinic is operated jointly by Adolescent Medicine and Endocrinology twice a month. SITY is an important educational resource, providing continuity clinics for fellows and subspecialty residents and teaching about a broad range of adolescent issues. SITY continues to optimize the involvement of practitioners and trainees in a number of disciplines to role-model and deliver care in an integrated and interprofessional manner. Current research is in the areas of HPV immunization in solid organ transplantation, mood and eHealth.

Honours and Awards
Bonifacio, J: Winner of the 2013 Marvin Gerstein Award for Excellence in clinical Teaching, Department of Paediatrics. The Hospital for Sick Children at the University of Toronto, Toronto, Ontario, June 2013

Publications

Books and Chapters
Grants and Funding


Connecting Adolescents and Young Adults to Preventive Health Care Services, Klein JD, Sultani JS, The Society for Adolescent Health and Medicine (Katzman DK, Ford C), American Academy of Pediatrics, American Academy of Family Physicians, American College of Obstetricians and Gynecologists Merck Adolescent Health Consortium Grant. $3,100,000 USD. August 2014-August 2018

Design and initial testing of a wearable sleep sensor and mHealth intervention to promote sleep for adolescents. Stremler R, Cafazzo J, Katzman DK, Keiby K, Maser C, Pullyenayegam E. Canadian Institute of Health Research. $267,442 CAD. January 2014-September 2016


Effects of anorexia nervosa on peak bone mass. Kilbanais A, Katzman DK (Principal investigator at SickKids site), Misra M, Herzog D, Levitsky L, Bouxsein M, Russell M. National Institutes of Health/CFAR Health Canada for Clinical Trials Application at SickKids site and for project at-large. $5,000,000.00 USD. January 2011-January 2016

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


A Qualitative Study on the Experiences of Parents and Young Adults Regarding the Process of Transitioning from Pediatric to Adult Eating Disorder Programs. Dimitropoulous G, Colton R Olimsted M, Steinegger C, Kaufman M, Toulany A, Kovacs A. Allied Health Research Funding, Toronto General Hospital. $30000 CAD. January 2013-December 2013

A Qualitative Study to Explore the Barriers to Positive Airway Pressure in Children with Obstructive Sleep Apnea. Narang I, Toulany A, Baker A. Pediatric Consultants, The Hospital for Sick Children. $9,926.28 CAD. January 2014-December 2014

Street Involved Youth Study. Bonifacio J. Keenan Research Summer Student Program. St. Michael’s Hospital. $20,000 CAD. June 2014-August 2014

Use of Social Simulation in Asperger Adolescents. Bonifacio J. Innovation Funds Competition – St. Michael’s Hospital. $18,000 CAD. January 2013-December 2013


Staff

Division Head
Dr. Miriam Kaufman

Full-Time
Dr. Katherine Hick
Dr. Debra Katzman
Dr. Cathleen Steinegger
Dr. Alene Toulany

Part-Time
Dr. Joey Bonifacio
Dr. Ian Chen
Dr. Eudice Goldberg
Dr. Sarah Kearney
Dr. Rahul Saxena

Clinical Fellows
Dr. Anoud Al-Ansari
Dr. Zahra Alebrahemi
Dr. Mariano Macias
Dr. Renee Morgan

Subspecialty Residents
Dr. Mariel Keller
Dr. Chana Korenblum
Dr. Allison Rodrigues
Dr. Ashley Vandermorris

Administrative Staff
Noreen Akhtar
Joy Gouldbourne
Shanita Singh
Victoria Snell
The Division of Cardiology at The Hospital for Sick Children was established in 1938, as one of the first dedicated units treating children with congenital heart disease. Almost 80 years later, the Division remains one of the most prestigious and productive in the world.

As an integral partner in the Labatt Family Heart Centre, it forms an important part of a multi-disciplinary and “expert model of care” team, with dedicated cardiac intensive care facilities, world-leading imaging teams, an internationally renowned interventional cardiology and electrophysiology services, and one of the largest heart function and transplant groups.

The fellowship program attracts high caliber candidates from North America and around the world.

Research and development has always been at the forefront of the activities of the Division, and the current Faculty continues to perform at the highest level. It is a long-standing member of the Paediatric Heart Network, an NIH funded network of centres of excellence, houses the Congenital Heart Surgeons Society database, and leads the world in the clinical epidemiology and outcomes analysis of congenital heart disease. At a mechanistic level, our world leading imaging research spans all disciplines from CT, MRI, to echocardiography and fetal medicine, alongside this, the heart function and transplant research activities have made a world impact. Working closely with our surgical colleagues, the interventional cardiology program has been at the leading edge of the field for well over 20 years, and continues to develop novel interventions, hybrid procedures, and our multi-disciplinary imaging faculty is unsurpassed in cardiovascular functional research.

In summary, the Division, working in close collaboration with colleagues from surgery, anesthesia, intensive care, and all the specialties involved in the care of children with heart disease, goes from strength to strength in each of the clinical, educational, and research domains.

Divisional Overview

Honors and Awards

Friedberg, M: Junior Faculty Research Award Winner, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014


Hamilton, R: Best Student Paper Award for the paper entitled “Automated micro robotic characterization of cell-cell communication.” IEEE International Conference on Robotics and Automation – ICRA 2014, Hong Kong, China, 31 May-7 June 2014


syndrome and in human pluripotent stem cells during reprogramming and senescence in hypoplastic left heart pathologies. Pediatric Cardiology 2014: Epub Jun 2014


Books and Chapters


Grants and Funding


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


Biologic determinants of right ventricular remodeling in tetralogy of Falot. Mital S, Redington AN, McCrindle, B, Mertens L. Heart & Stroke Foundation of Canada. $150,634 CAD. July 1-2011-June 30-2012


CHIR Emerging Team in ARVC Research. Hamilton R. Canadian Institute of Health Research (CIHR). $2,499,925 CAD. December 1-2009-November 30-2014


Development of myocardial T1 mapping in children. Grosse-Wortmann L, Siemens Medical Solutions. $25,000 CAD. November 1-2013-December 31-2014


Effect of a pilot healthy lifestyle program on obesity prevention in overweight adolescents with dyslipidemia: a 3-arm randomized controlled clinical trial. McCrindle BW, Wong H, Chahal N, Manihiot M. Institute Danone Grant-in-Aid Program. $50,000 CAD. October 1-2010-October 31-2011 $135,000 (3 years to 2014)

EMPOWER: Enhancing breast milk production with dopamimetics in mothers of preterm neonates. Assessment of infant electrocardiograms to determine the presence of QTc interval prolongation and cardiac arrhythmias for the EMPOWER Trial. Azraei E, Campbell-Yeo M, Da Q, Niel LE. Sunnybrook Research Institute Funding, Canadian Institute for Health Research. $999,454 CAD. January 1-2013-September 30-2016

Exome sequencing for identification of rare genetic variants and novel genes contributing to Brugada Syndrome. Hamilton R. Rare Diseases Foundation and the BC Children's Hospital Foundation (BCCNF). $3500 CAD. September 1-2013-September 30-2014

Exome sequencing for RV remodeling after tetralogy of Fallot repair. Manickaraj AK, Mitai S. Heart and Stroke Foundation of Canada Research Fellowship Award. $83,000 CAD. July 1-2013-June 30-2015

Exome sequencing to identify the gene underlying Atrial Fibillation with a rare cause of pulmonary hypertension lethal to infants. Hamilton R. Rare Diseases Foundation and the BC Children's Hospital Foundation (BCCNF). $3500 CAD. May 1-2012-September 30-2014


Novel approaches to the prediction, diagnosis and treatment of cardiac late effects in survivors of childhood cancer. Nathan R Mitai S. Canadian Institutes for Health Research Team Grant. $2,797,749 CAD. October 1-2011-September 30-2016

Ontario initiative in personalized stem cell medicine. Rossant J, Mitai S. Canadian Institutes for Innovation. $9,932,011 CAD. April 1-2008-April 30-2014

Kawasaki Disease: On our way to unraveling the pathogenesis. Yeung R, McCrindle BW, Siminovich K. Canadian Institutes of Health Research. $192,548 CAD. June 1-2011-June 30-2012 ($798,779 CAD 5 years to 2017)


Novel approaches to the prediction, diagnosis and treatment of cardiac late effects in survivors of childhood cancer. Nathan R, Mitai S. Canadian Institutes for Health Research Team Grant. $2,797,749 CAD. October 1-2011-September 30-2016

Ontario initiative in personalized stem cell medicine. Rossant J, Mitai S. Canadian Institutes for Innovation. $9,932,011 CAD. April 1-2008-April 30-2014

Patterns and clinical significance of electro-mechanical dysynchrony in pediatric dilated cardiomyopathy. Friedberg, MK. Children’s Cardiomyopathy Foundation. $44,550 CAD. February 1-2012-September 30-2013


Quantification of diffuse myocardial fibrosis in congenital and acquired heart disease. Grosse-Wortmann L. labatt Family Heart Centre Innovation Funds. $23,000 CAD. March 21-2013-March 20-2015


TLR4 signaling in acute and chronic responses to remote ischemic conditioning. Redington AN, Rohailla S. Canadian Institute of Health Research. $360,099 CAD. March 1-2013-February 28-2016


Trial of beta blocker therapy (Atenolol) vs. angiotensin II receptor blocker therapy (Losartan) in individuals with Marfan syndrome. Lacro RV, Dietz HC, McCrindle BW, Bradley TJ. National Institutes of Health/National Heart, Lung and Blood Institute. $1,619,555 CAD. September 1-2011-June 30-2016

Vascular smooth muscle differentiation from patient iPS cells: development of a drug screening platform. Ellis J. SickKids Stem Cell Innovation Grant. $56,000 CAD. January 1-2013-December 31-2013
Divisional Overview

Through collaborations with the Centre for Genetic Medicine, Department of Paediatric Laboratory Medicine, and The Centre for Applied Genomics, the Division continues planning efforts to transform children’s health through individualized medicine. The effectiveness of genomic information in tailoring interventions and, ultimately improving health outcomes for children remains our greatest challenge. To address these rapidly emerging issues in genomic medicine, the Division has taken a leadership role in assessing the organizational needs for education as well as planning for a clinical service model that will support the new era of modern medicine.

This has been achieved in part through clinical leadership developing clinical pathways and processes building on the new knowledge from Next Generation Sequencing. Learnings from the whole genome sequencing of over 100 patients have resulted in the development of processes to disseminate this information with a goal to create clinical champions across the organization. Preliminary assessment and planning has been completed this year to build education tools that will be shared both internally and externally to build increased capacity in genomic knowledge while maintaining a leadership role in genomic medicine. Through the completion of an organizational clinical needs assessment for genomic medicine this year, findings from this assessment has resulted in a 3 year educational plan that will guide our knowledge transfer activities to ensure capacity building continues in genomic medicine.

Dr. Julian Raiman received a promotion to the rank of Associate Professor. The year also brought many successes for many trainees, including Dr. Maian Roifman, who was recognized as Winner of the 26th Annual National Pediatric Resident and Fellow Research Competition (Fellow Category), First Prize, Senior Trainee in Basic Science, Department of Paediatrics Research Day, Third Prize, Senior Trainee in Clinical Science, Department of Paediatrics Research Day, just to name a few.

The Division of Clinical and Metabolic Genetics has led very important teaching initiatives and is a host to a variety of training programs in medical genetics. The Royal College of Physicians and Surgeons-certified residency program in Medical Genetics and the Canadian College of Medical Geneticists-certified clinical fellowship programs in Medical and Biochemical genetics are the largest in Canada. This year, Dr. Melissa Carter became the Deputy Program Director for our training program. The Division is also home to the MSc Program in Genetic Counselling. Through its links to the Research Institute, the genetics centre and the Department of Paediatric Laboratory Medicine, the Division is actively involved in the training of scientists and physicians that work together translating new discoveries into clinical practice and realizing the ideal of individualized genomic medicine.

In May, the 22q11 Deletion Syndrome Clinic held their fourth annual International 22q at the Zoo Awareness Day at the Toronto Zoo for patients, families and health professionals. This year, the clinic also collaborated with clinic parents to offer a daylong educational workshop in conjunction with the Zoo event. This two-day event was attended by over 200 people, and offered workshops for parents and youth alike.

The 22nd annual symposium ”New Developments in Prenatal Diagnosis and Medical Genetics” was held on May 14, 2014. For 22 years this symposium provides updated information on the breakthroughs in prenatal diagnosis and medical genetics. There were more than 200 attendees including medical geneticists, genetic counsellors, pediatricians, obstetricians, midwives and family physicians and evaluations from attendees were excellent.

The first interdisciplinary genodermatosis clinic in Canada started at SickKids just over a year ago. The clinic reviews patients affected by complex genetic skin disease, facilitating assessment, genetic testing and counseling as well as providing management advice on the same day. The clinic has seen 35 children in its first year, and provides an excellent learning opportunity for trainees as well as fostering collaborations...
Honors and Awards

Bowdin, S: Winner of Margaret W. Thompson Award in recognition of teaching excellence, Division of Clinical and Metabolic Genetics, The Hospital for Sick Children, Toronto, Ontario, June 2014

Mendoza-Londono, R: Winner of Margaret W. Thompson Award – Excellence in Teaching, Division of Clinical and Metabolic Genetics, The Hospital for Sick Children, Toronto, Ontario, July 2013

Meyn, S: Winner of the Marie Lambert Lectureship, Paediatric Cancer Genetics in the Era of Genomic Medicine, Association des Médecins Généticiens du Québec Annual Conference, Montreal, Quebec, May 2014

Publications


Haverfield E, Das S. Molecular confirmation of nine cases of DiGeorge Syndrome and in Human Pluripotent Stem Cells during Fetal Reprogramming and Senescence in Hypoplastic Left Heart Syndrome and in Human Pluripotent Stem Cells during Cardiac Differentiation. American Journal of Pathology 2013: 183 (3): pp 720-734.


Sin YN, Ballantyne LL, Mukherjee K, St Amand T, Kyriakopoulos L, Schulze A, Funk CD. Inducible arginase 1 deficiency in mice leads to hyperargininemia and altered amino acid metabolism. Piose one 2013: 8(11), pp e80001.


Genetic and Epigenetic Determinants of Syndromic Intellectual Disability. Weksberg, R, Chitayat D, Ray P. Canadian Institutes of Health Research. $750,400 CAD. January 4-2013 – March 2018

Genetic signatures of paediatric cancer predisposition syndromes. Tabori U, Meyn MS, Malkin D, and Shlien A. McLaughlin Centre, Operating Grant. $50,000 CAD. June 1-2014-May 31-2015


Investigating the two-hit hypothesis for neurodevelopment disorders associated with recurrent copy number variants 22q11.2 microduplication and 15q11.2 microdeletion. Carter M. Physician Services Incorporated Foundation. $102,500 CAD. June 1-2014 – June 30-2016


Mutations in ERF gene as the new genetic causes of craniosynostosis – enabling parents and clinicians to understand why a child is affected. Bowdin S, Chaudhry A, Stockley T. Rare Disease Foundation. $3,500 CAD. September 2013 – September 2014


The Effect of Creatine Supplementation on Muscle Function in Childhood. Co-Inv. (Pi-Dr. Feldman) Myositis Myositis Association. $100,000 CAD. May 2013-April 2015

The Genetic Epidemiology of Autism; Family and Molecular Studies. Scherer SW, Szatmari R Carter M. Canadian Institutes for Health Research. $1,112,424 CAD. Jun 1-2013 – May 31-2018


Urea Cycle Disorder Research. PI. Private Restricted Donation. $200,000 CAD. March 2013 – February 2017

Staff

Division Head
Dr. Ronald Cohn

Full Time
Dr. Sarah Bowdin
Dr. Melissa Carter
Dr. David Chitayat
Dr. Peter Kannu
Dr. Saadet Mahmutoglu
Dr. Roberto Mendoza
Dr. Stephen Meyn
Dr. Julian Raiman
Dr. Tatiana Munoz
Dr. Rebekah Jobling

Clinical Fellows
Dr. Ramses Badilla
Dr. Lauren Chad
Dr. Michal Inbar-Feigenberg
Dr. Raymond Kim
Dr. Tatiana Munoz
Dr. Enaz Nasr

Subspecialty Residents
Dr. Almundheer Al Maawali
Dr. Ayeshah Chaudry
Dr. Soghra Jougehi Doust
Dr. Resham Ejaz
Dr. Andrea Guerin
Dr. Bita Hashemi
Dr. Rebekah Jobling
Dr. Natalya Karp
Dr. Sharon Moalem
Dr. Graeme Nimmo
Dr. Maian Roifman
Dr. Maha Saleh
Dr. Pierre Sinajon

Administrative Staff
Tamar Altschuler
Shetia Anover
Michelle Au
Laurie Baccia
Michael Delaney
Susan Dukhedini-Lalla
Denise Henry
Melanie Lameront
Brittany Marshman
Tina Martins
Andrea Pemberton
Deborah Taylor
Rozmin Visram
Khadine Wiltshire
Divisional Overview

In the 2013-2014 academic year, faculty members and trainees of Division of Clinical Pharmacology and Toxicology published more than 100 papers, based on 12 active research grants in various fields, including pregnancy outcomes of antidepressant exposure and drug excretion into breast milk.

One of the division’s major clinical activities, the Ontario Poison Center led by Dr. Thompson, continues providing clinical toxicology coverage for the province of Manitoba, in addition to Ontario. Responding to the increasing role of the center, we have recruited Dr. Connie Mackenzie as an assistant director of the center. There were more than 60,000 poison/overdose-related inquiries for the 2013-2014 academic year.

The Motherisk program led by Dr. Koren continues to be a flagship of the division. Dr. Koren and the Motherisk program and partners established 2 classes for children with Fetal Alcohol Spectrum Disorder in Northern Ontario.

As a new clinical, research and education focus of the division and led by Dr. Shinya Ito, a consultation service in pharmacogenetics and pharmacogenomics is being prepared with collaboration with the Genetic Medicine Center and the Department of Paediatric Laboratory Medicine. In order to drive this initiative further, Ms. Iris Cohn was recruited as a pharmacogenetics advisor of the division.

Honors and Awards

Nulman, I: Winner of Centre of Excellence for Early Childhood Development (CEECD) and the Strategic Knowledge Cluster on Early Child Development, Montreal, Quebec, April 24, 2014


Ito, S: Winner of Distinguished Service and Education award Canadian Society of Pharmacology and Therapeutics, Winnipeg, Manitoba, June 2014

Koren, G: Mentor award. Department of Pediatrics, The Hospital for Sick Children, Toronto, Ontario, June 2014

Publications


Grants and Funding


Canadian Prenatal Nutrition Program. Koren G. Breaking the Cycle. $70,000/yr CAD. April 1-2014-March 31-2017

Childhood Cancer-Late Effects of Treatment “Team grant competition. Neurocognitive-Phenome, Genotype, Epigenome and Nutriome in Childhood leukemia Survivors: N-PhenoGENICS. Ito S. Canadian Institutes of Health Research (Institute of Cancer Research). $1,898,381 CAD. April 2012-March 2017


Genotype Specific Approaches to Therapy in Childhood (GATC); Canadian Pharmacogenomic Network for Drug Safety (CPNDS). Ito S. Canadian Institutes of Health Research. $105,000/yr to The Hospital for Sick Children. June 2009-May 2015

Hair cortisol for stress in mothers of children with FASD. Koren G. Canadian Foundation for Fetal Alcohol Research. $24,000. September 10-2012-August 31-2014

Health Technology Assessment Research Program (UK): Interventions for hyperemesis gravidarum; Systematic review and economic evaluation. Vale L, Koren G. The National Institutes for Health Research. £264,401.80 EURO. July 1-2013-June 30-2014


Neurocognitive-Phenome, Genome, Epigenome and Nutrime in Childhood leukemia Survivors: N-PhenoGENICS “Childhood Cancer-Late Effects of Treatment” Team grant competition. Ito S. Canadian Institutes of Health Research. $1,898,381 (over 5 yr). June 2012 – May 2017


Post translactotory use of opioids in children with obstructive sleep apnea. Koren G. Canadian Institutes of Health Research-Drug Safety and Effectiveness Network. $99,000 CAD. July 1-2012-June 30-2013

Pregnancy outcome following gestational exposure to Muscle Care products. Koren G. Ontario Centers of Excellence. $59,000 CAD. July 1-2012-June 30-2014


Surveillance program for diclectin in pregnancy. Koren G, Duchesnay Inc. $168,000/yr CAD. July 1, 2012-June 30, 2017

Using a mobile community research laboratory to improve understanding, treatment and prevention of addiction and mental illness co-morbidities at the individual and community level: “The Ontario Communities Project” (Emerging Team Grant). Koren G. Canadian Institutes of Health Research. $749,336 CAD. July 1-2009-June 2014

**Staff**

Division Head
Dr. Shinya Ito

Full-time
Dr. Gideon Koren
Dr. Irena Nulman
Dr. Margaret Thompson

Part-time
Dr. Ian Ball
Dr. David Juurlink
Dr. Christopher Lazongas
Dr. Connie Mackenzie
Dr. Marco Sivilotti

Cross-Appointees
Dr. Sylvain Baruchel
Dr. Lidia Derewiany
Dr. Varon Finkelstein
Dr. Sheila Jacobson
Dr. Alejandro Nava-Ocampo
Dr. Shahnaz Chaudhry

Post-Doctoral Fellows
Dr. Tom Leibson
Dr. Nir Melamed
Dr. Shirin Namouz-Haddad
Dr. Gal Neuman
Dr. Jak Ozsarafati
Dr. Reo Tanoshima

Subspecialty Residents
Dr. Hafit Bergman
Dr. Jesse Goodwin
Dr. Shaun Hosein

Clinical Fellows
Dr. Eran Barzilay
Dr. Shahnaz Chaudhry
Dr. Yifat Gadot
Dr. Tom Leibson
Dr. Nir Melamed
Dr. Shirin Namouz-Haddad
Dr. Gal Neuman
Dr. Jak Ozsarafati
Dr. Reo Tanoshima

Administrative Staff
Niki Balamatsis
Sarah Bondy
Hila Halshtok
Leah Moscato
Joyceyn Peters-Adams
Victoria Snell
Donna Tedesco
Shannon Vanderkooi

Oxford University
Dr. Marco Sivilotti
Dr. Connie Mackenzie
Dr. Christopher Lazongas
Dr. David Juurlink

Dr. Ian Ball
Dr. David Juurlink
Dr. Christopher Lazongas
Dr. Connie Mackenzie
Dr. Marco Sivilotti

Genotype Specific Approaches to Therapy in Childhood (GATC); Canadian Pharmacogenomic Network for Drug Safety (CPNDS). Ito S. Canadian Institutes of Health Research. $105,000/yr to The Hospital for Sick Children. June 2009-May 2015

Hair cortisol for stress in mothers of children with FASD. Koren G. Canadian Foundation for Fetal Alcohol Research. $24,000. September 10-2012-August 31-2014

Health Technology Assessment Research Program (UK): Interventions for hyperemesis gravidarum; Systematic review and economic evaluation. Vale L, Koren G. The National Institutes for Health Research. £264,401.80 EURO. July 1-2013-June 30-2014


Neurocognitive-Phenome, Genome, Epigenome and Nutrime in Childhood leukemia Survivors: N-PhenoGENICS “Childhood Cancer-Late Effects of Treatment” Team grant competition. Ito S. Canadian Institutes of Health Research. $1,898,381 (over 5 yr). June 2012 – May 2017


Long Term Outcomes and Corresponding Vulnerability and Protective Factors in Adolescents with Fetal Alcohol Spectrum Disorder. Nulman I. Canadian Institutes of Health Research Award. $70,000 CAD. September 2013-July 2015

Divisional Overview

The Division of Developmental Paediatrics is situated at the Holland Bloorview Kids Rehabilitation Hospital. The division consists of full-time academic clinicians as well as a community section of developmental paediatricians. The main clinical focus of the division is on childhood neurodevelopmental and neuro-rehabilitation disorders. Comprehensive assessment and treatment programs are run for children and youth with conditions such as cerebral palsy, acquired brain injury, neuromuscular disorders and spina bifida. Inpatient services are provided for children with medical conditions requiring complex continuing care. Specialized assessment clinics provide diagnostic assessments for children and youth with autism spectrum disorder with clinics located at Holland Bloorview as well as regional developmental clinics situated throughout the metropolitan Toronto area. The division runs a large psychopharmacology clinic providing consultation for children and youth with complex neuro-behavioural needs.

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 in Canada. Paediatric, physiatry, and neurology residents and medical students are trained in applied childhood disability. A highlight of the division’s educational activities is the Child Development Update – a national conference held once every 3 years – chaired by Dr. Golda Milo-Manson and supported by the continuing educational office of The Hospital for Sick Children and the Department of Pediatrics. This conference attracts attendees from across Canada.

The division members actively lead research projects in applied childhood disability studies, in association with the Bloorview Research Institute led by Professor Tom Chau. Highlights include the creation of two Ontario-based research networks funded by the Ontario Brain Institute – one focused on autism spectrum disorder led by Dr. Evdokia Anagnostou and one focused on cerebral palsy led by Dr. Darcy Fehlings.

Honors and Awards

Anagnostou, E: Awarded a Canada Research Chair-Tier 2, Canada Research Chair, Toronto, Ontario, April 2014


Anagnostou, E: Best Oral Presentation, Harvey Stancer Research Day, Psychiatry, Supervisor, Awardee Name: Danielle Baribeau. University of Toronto, Department of Psychiatry, Toronto, Ontario, June 2014

Huber, J: Awarded The Hospital for Sick Children Humanitarian Award – Family Centered Care Advisory Council Award – Cochlear Implant Team, Toronto, Ontario, 2013

Huber, J: Award of Excellence for Inter-professional Collaboration – Canadian Association of Speech Language Pathologists and Audiologists – Cochlear Implant Team, The Hospital for Sick Children, Toronto, Ontario, 2013

Hung, R: Winner of the Spotlight Recognition Award, Inpatient Leadership, Holland Bloorview Kids Rehabilitation Hospital, Toronto, Ontario, 2014

Kawamura, A: Awarded Royal College Fellowship for Studies in Medical Education, Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, July 2013

Milo-Manson, G: Nominated, Royal College of Physicians and Surgeons of Canada Leadership Award “Leader of the Pack Award”, Toronto, Ontario, July 2013

Milo Manson, G: Awarded Royal College of Physicians and Surgeons of Canada Specialty Committee Exceptional Service Award, Toronto, Ontario, July 2013
Publications


Paediatric career decision making. The role of a summer pre-clerkship education program at Holland Bloorview Kids Rehabilitation Hospital. Orsino A, Schwellnus H, McDaman L. Paediatric Consultant's Education Innovation and Development. $4,957 CAD. 2014-2015


Therapists’ beliefs regarding the value of walking. Gibson B, Fehlings D, Narayanan U, Wright V, Teachman G. University of Toronto-Connaut New Researcher Award. $45,294 CAD. April 2012 – March 2014


Transfer of childhood to adulthood and adult care in DMD-determination of key elements to build a transition framework. Gibson B, Kingsnorth S, Biggar WD. Bloorview Research Institute. $12,000 CAD. July 2013-March 2014

Treatment of overweight induced by antipsychotic medication in young people with ASD. Anagnostou E, Veenstra-VanderWeele J, Harden B, Butter E, Anagnostou E. Health Resources and Services Administration (HRSA). $1,418,395 USD. April 2012-August 2015

Typical and atypical development of frontal lobe systems and the maturation of social cognitive function. Taylor MJ, Anagnostou E. Canadian Institutes of Health Research. $766,896 CAD. July 2012-June 2017

Working memory function in children with autism. Taylor M, Anagnostou E. Canadian Institutes of Health Research. $353,921 CAD. October 2010-September 2013

Provincial Neurodevelopmental Disorders Network (POND), Anagnostou E, Arnold E, Szatmari P, Schachar R, Scherer S. Ontario Brain Institute. $18,750,000 CAD. July 2013-June 2018

The Canadian Neuromuscular Disease Registry, Korngut L, McDaman L. ALS Canada, Jesse’s Journey, Families of SMA Canada. $10,000 CAD. January 2011-present


Transition to adulthood and adult care in DMD-determination of key elements to build a transition framework. Gibson B, Kingsnorth S, Biggar WD. Bloorview Research Institute. $12,000 CAD. July 2013-March 2014

Treatment of overweight induced by antipsychotic medication in young people with ASD. Anagnostou E, Veenstra-VanderWeele J, Harden B, Butter E, Anagnostou E. Health Resources and Services Administration (HRSA). $1,418,395 USD. April 2012-August 2015

Typical and atypical development of frontal lobe systems and the maturation of social cognitive function. Taylor MJ, Anagnostou E. Canadian Institutes of Health Research. $766,896 CAD. July 2012-June 2017

Working memory function in children with autism. Taylor M, Anagnostou E. Canadian Institutes of Health Research. $353,921 CAD. October 2010-September 2013
Divisional Overview

The 2013-2014 academic year for Pediatric Emergency Medicine (PEM) was a year of accelerating our success, both in clinical care of ill and injured children, and in academic productivity. We maintained our excellent performance in patient flow and efficiency despite increasing volumes. We now see over 65,000 patients a year – we are simply busy all year long. The Division continues to provide advanced training in PEM to more than 15 fellows a year in our 1 year and 2 year training tracks, and also supports the education of hundreds of residents and students who rotate through our department. Our educational success matches our clinical excellence, with faculty receiving an average score of 4.5/5 from trainees for effectiveness of education at the bedside.

Emergency medicine continues to develop itself as a leader of important hospital programs and practices. Dr. Suzanne Beno is now co-director of Trauma at SickKids, and has championed some important changes in how our program is organized and in planning for a renovated resuscitation space coming in 2015. Quality improvement efforts in the ED for pain management and safety/integrity of specimen collection have become models for practice elsewhere in the hospital. And the ED celebrate the go-live of electronic nursing documentation in June – a true game-changer for how we do our work with many positive benefits to care, with many lessons learned as the hospital prepares for further advances in information technology.

Increased academic productivity for PEM was visible on many fronts. Peer-reviewed published manuscripts during the academic year numbered more than 40, a 25% increase over the year prior. Total grant funding also increased, including some important large CIHR grants for multi-centre research through the Pediatric Emergency Research Canada (PERC) network. Divisional members were recognized by the Department of Pediatrics for important accomplishments for educational and research excellence, including Dr. Kathy Boutis for Scientific Accomplishment in Research, Dr. Yousef Etoom for Excellence in Community Teaching, Dr. Susanna Talarico with a POWER award, and Dr. Adrienne Davis who was recognized with the CANMEDS award for excellence as a fellow.

Honours and Awards

Beno, S: Winner of Faculty of the Year, Paediatric Emergency Medicine Point of Care Ultrasound, The Hospital for Sick Children, Division of Paediatric Emergency Medicine, Toronto, ON, June 2014

Beno, S: Recognition for Excellence in Advocacy/Leadership, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Boutis, K: Winner of Physician Researcher Award for Scientific Accomplishments, Department of Pediatrics, The Hospital for Sick Children, Toronto, Ontario, 2014

Boutis, K: Recognition for Excellence in Evidence-based Practice, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, 2014

Etoom, Y: Winner of the Community Paediatrics Postgraduate Award for Excellence in Teaching, Department of Paediatrics, University of Toronto, The Hospital for Sick Children, Toronto, Ontario, June 2014

Fischer, JW: Recognition for Excellence in Communication, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, 2013-2014

Kempinska, A: Recognition for Excellence in Clinical Teaching, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Kempinska, A: Recognition for Excellence in Evidence-based Practice, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Kwan, CW: Recognition for Excellence in Advocacy/Leadership, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, 2013-2014


Mizzi, T: Recognition for Communication & Collaboration Excellence Award, Division of Paediatric Emergency Medicine Educational Rounds, The Hospital for Sick Children, Toronto, Ontario, June 2014

Ostrow, O: Recognition for Excellence in Communication, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 5, 2014

Schneeweiss, S: Recognition for Excellence in Collaboration/Leadership, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Schneeweiss, S: Recognition for Excelling at Excellence, ER – Pain Management Working Group, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Schonfeld, D: Recognition for Excellence in Evidence-Based Practice, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Schonfeld, D: Recognition for Excelling at Excellence, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Scolnik, D: Recognition for Excelling at Excellence in Teaching, The Hospital for Sick Children, Division of Paediatric Emergency Medicine, Toronto, Ontario, June 2014

Scolnik, D: Recognition for Excellence in Advocacy/Leadership, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, 2013-2014

**Publications**


Benart R and Scolnik D: Topical lidocaine-epinephrine-tetracaine is effective in reducing pain during laceration repair with tissue adhesive in children. Evidence-Based Nursing 2013 Dec 24. [Epub ahead of print].


http://www.ibimapublishing.com/journals/OBES/2014/558641/a558641.html


Books and Chapters


Schuh S. Bronchiolitis. In: Rosen and Barkin’s 5-Minute Emergency Medicine Consult, Lippincott Williams & Wilkins, 2013. Invited expert state of the art review of therapy of this common disease.

Grants and Funding

Internal

A Deliberate Practice Method for Learning the Spectrum of Physical Examination Findings in Child Sexual Abuse. Boutis K (PA), David A, Pecaric M, Pusic M. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $6,000 CAD. January 2014-January 2015


Accuracy of point-of-care ultrasonography in pediatric ankle sprain injuries. Boutis K, Fischer J. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $4,000 CAD. January 2013 – December 2014


Climbing the Learning Curve – Teaching the Paediatric Emergency Physician How to Interpret Point-of-Care Ultrasound Images. Kwan CW, Boutis K. Faculty Development Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $3500 CAD. December 2013 – December 2014

D-PRIME: (Deliberate Practice of Image Interpretation in Medical Education), Boutis K, Pusic M. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $7,760 CAD. January 2013-December 2013


Putting the Pieces Together – Distal radius buckle fractures from the ED to the PCP. Kwan C, Boutis K, Thomas K. Internal Innovation Fund. The Hospital for Sick Children. $7,000 CAD. January 2013-December 2013

Ketamine Neurotoxicity in Children undergoing Procedural Sedation. Finkelstein Y, Boutis K, Hutchinson J, Maynes J. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $7,500 CAD. January 2012-December 2013


The Delicate Practice of Pediatric ECGs. Boutis K, Etoom Y, Pecaric M, Pusic M. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $6,000 CAD. January 2014-January 2015


Which pediatric trauma patients do not require chest radiographs? Schuh S, Weedenburg K, Wales P, Alsup J. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $4,800 CAD. December 2013-June 2014

Pusic M, Pecaric M, Etoom Y. Validating an Online Learning Intervention that Teaches Emergency Medicine, The Hospital for Sick Children. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $5,000 CAD. January 2014-January 2015


Is this best taught using simulation? Using the delphi method to develop a framework for a national general pediatric simulation-based training curriculum. Langenvin M, Drover A, Banks I, Pirie J, Shefrin A. Resident Funding, CHEO Research Institute. $2,000 CAD. August 2012-July 2014


Pharmacogenomic Determinants of Ketamine Neurotoxicity in Young Children. Finkelstein Y, Boutis K, Hutchison J, Post M, Soriano S, Kim R. McLaughlin Centre for Genomic Medicine 2012 Accelerator Grant, University of Toronto. $50,000 CAD. January 2012-December 2015


Divisional Overview

2013-2014 was another productive year for the Division of Endocrinology.

We continued to provide high quality, comprehensive care for children and youth with a wide variety of endocrine disorders. These efforts include care for patients with (i) diabetes, including type 1 and type 2 diabetes, diabetes that results from medications such as glucocorticoids, and diabetes secondary to cystic fibrosis; (ii) general endocrine disorders, including growth, thyroid disease, disorders of sex development, pubertal disorders and reproductive health concerns; (iii) abnormalities of calcium metabolism and bone health; and (iv) endocrine cancers, including thyroid cancer, adrenal cortical carcinoma, and pheochromocytoma.

In October of 2013, the Division expanded our clinical activities to include care for youth with gender dysphoria in the SickKids new Trans Youth Clinic.

The Division of Endocrinology is highly collaborative and is engaged in joint clinical programs with care providers from many different disciplines. Ongoing collaborations exist with social work, general pediatrics, general surgery, urology, genetics, oncology, orthopedic surgery, psychology, nuclear medicine, and respirology. The interdisciplinary medical-surgical SickKids Team Obesity Management Program (STOMP) continues to flourish, and, within Endocrinology, the Section of Paediatric and Adolescent Gynecology provides care to pre-teen and adolescent girls with gynecology disorders and to pregnant adolescents. The new Trans Youth Clinic was developed in collaboration with colleagues in the Division of Adolescent Medicine.

In addition to clinical care, the Division of Endocrinology continued our efforts to train future endocrinologists from Canada and around the world. This year, we had eight trainees in our subspecialty training program: five from Canada, one from Venezuela, one from the Netherlands and one from Australia.

The Division also maintained a substantial focus on research, with faculty having now secured several million dollars of funding. Diabetes remained the area of greatest focus with involvement in (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; (iii) the evolution of obesity and insulin resistance in young children; and (iv) prevention and treatment of the medical complications of diabetes. Our Juvenile Diabetes Research Foundation (JDRF)-sponsored Canadian Clinical Trial Network (CCTN) site is also very active, with three ongoing studies.

Newer research initiatives include the use of smart phones to help adolescents with the management of type 1 diabetes and studies regarding how sex steroids (estrogen and testosterone) affect brain development and contribute to male-female differences in cognition and in susceptibility to mental health disorders. Other areas of increased focus include endocrine cancers, such as adrenal and thyroid cancers, and a newly funded program directed at understanding how epigenetic factors may regulate the timing of puberty.

Honours and Awards

Allen, L: Awarded for Best Grand Rounds Presentation given by an external speaker for “Gynecological Emergencies” (scoring 4.94), Division of Pediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, 2013-2014

Allen, L: Named as one of “Toronto’s Best Doctors” in Toronto Life Magazine (30 selected from a polling of 1000 Toronto doctors) Toronto, Ontario, March 2014

Daneman, D: Winner of Lifetime Achievement Awards, Clinical and Scientific Section of the Canadian Diabetes Association, Toronto, Ontario, 2013
Publications


Books and Chapters


Grants and Funding


Adolescent type 1 diabetes cardio-renal intervention trial, AdDiT. Daneman D, Mahmud F, Sochett E, Curtis J. British Heart Foundation. £60,800 GBP March 27-2008-March 26-2013, Extension to no defined dollar amount until March 26-2017

A randomized controlled trial to evaluate the efficacy and safety of a gluten-free diet in patients with asymptomatic celiac disease and type 1 diabetes. Celiac and Diabetes:


CANadian pediatric weight management registry (CANPWR), Identifying the characteristics of successful change in Canadian pediatric weight management programs. Morrison K, Hamilton J, Ball G, Berail G, Buchholz A, Chanoine J, Legault D, Thabane L, Tremblay M. Canadian Institutes of Health Research. $943,636 CAD. September-1-2012-August 31-2017

Early identification of cardiac dysfunction in obese adolescents: mechanisms and modulation. Wells G, Banks L, McIndoe B, Hamilton J, Sned M, Noseworthy L, Mertens L. Canadian Institutes of Health Research. $100,000 CAD. October 1-2013-September 30-2014

Epiogenetic changes in DNA infants exposed to gestational diabetes in utero. Hamilton J, Palmert MR. Canadian Diabetes Association. $272,967 CAD. July 1-2012-June 3-2013

Food intake control in children. Anderson GH, Hamilton J, Luhovyy B, Thomas S. Canadian Institutes of Health Research. $660,000 CAD. September 1-2010-August 31-2015


Growth hormone therapy and bone quality in paediatric osteoporosis. Sochat CB, Grynpas M, Eli Lilly. $125,000 CAD. March 1-2006-February 28-2014

Health care utilization following thyroid cancer diagnosis in childhood. Wasserman J. POGO Research Unit Seed Funding Grant. $15,000 CAD. April 15-2013-April 15-2014


Simultaneous versus delayed initiation of real-time continuous glucose monitoring in children and adolescents with type 1 diabetes starting insulin pump therapy (CGM TIME Trial *timing of initiation of continuous glucose monitoring in established pediatric diabetes). Mahmud F, Curtis J. JDRF Canadian Clinical Trials Network. $400,532 CAD. August 1-2011-March 31-2015


The genetics and neuroendocrinology of short stature (GehNeSIS). Hamilton J, Lily International Growth Study. $358,542 CAD. March 1-2002-April 30-2015


Type 1 diabetes TrialNet: Toronto Clinical Centre. Wherrett DK. National Institute of Health. $535,000 CAD. May 1-2013-April 30-2014

**Staff**

**Division Head**
Dr. Mark R. Palmert

**Full-Time**
Dr. Denis Daneman
Dr. Jill Hamilton
Dr. Farid Mahmud
Dr. Kusiel Perlman
Dr. Etienne Sochat
Dr. Jonathan Wasserman
Dr. Diane Wherrett

**Part-Time**
Dr. Jacqueline Curtis
Dr. Susan Kirsch
Dr. Dori Kolton
Dr. Stacey Urbach

**Gynecology**
Dr. Anjali Aggarwal
Dr. Lisa Allen (Section Head)
Dr. Nicolett Cassia

**Endocrinology**
Dr. Alijk Satyak
Dr. Sanjukta Basak
Dr. Dr. Andrea Ens
Dr. Jennifer Harrington
Dr. Mark Inman
Dr. Dror Koltin
Dr. Lisa Allen (Section Head)

**Clinical Fellows – Gynecology**
Dr. Nicole Hubner

**Administrative Staff**
Saeedah Ahammad
Shaila Amiri
Suzanne Dionisio
Angela Edoo
Judy Grundy
Mary Mathew
Tymone Roberts
Zarine Tilak
Divisional Overview

GI/Hepatology/Nutrition is a very multi-faceted Division, which as a whole has responsibility for and expertise in a wide spectrum of acute and chronic luminal, hepatologic, and exocrine pancreatic disorders, performs diagnostic and therapeutic endoscopic procedures and oversees Nutritional support services within the hospital. Its 13 full-time faculty are committed to excellence in clinical care, to integration of care and research to the benefit of patients, and to education of the next generation of academic subspecialists and investigators.

Integration of clinical care and research is undertaken within multi-disciplinary Divisional Programs, notably in inflammatory bowel disease (IBD); hepatology; liver transplant; intestinal rehabilitation; clinical nutrition. Additional individual faculty interests include exocrine pancreatic disease, foregut motility disorders, celiac disease and gastrointestinal disorders associated with autism.

Clinical activity is high in both the in-patient and ambulatory settings. Hospitalized patients under the primary care of Divisional faculty and fellows are organized into the “GI” service (predominantly IBD); the liver transplant service; and the GIFT (group for intestinal failure therapy) service. Together these 3 services comprise the major proportion of patient days on the “Medical subspecialties” in-patient unit. Meanwhile, total ambulatory clinic visits have totaled over 6700 and ambulatory endoscopic procedures over 1500. Specialized and skilled nursing and dietetic professionals play key roles in ambulatory patient care.

Research by Divisional faculty is undertaken in individual laboratories (Drs. Bandsma; Gonska; Jones; Kamath; Muise; Sherman) and in affiliation with 3 different SickKids Centres of Excellence (Cystic Fibrosis; IBD; Transplant and Regenerative Medicine).

In an era where multicentre collaborative patient-based and translational research is so necessary, Divisional faculty maintain several key leadership roles in national and international research consortia. Drs. Binita Kamath and Vicky Ng have leadership positions in “CHILDREN” (the NIH-funded Childhood Liver Disease Research and Education Network). Dr. Simon Ling leads international portal hypertension studies and collaborates in the Hepatitis B Research Network and the Cystic Fibrosis Liver Disease Network. Drs. Yaron Avitzur and Vicky Ng participate in innovative research collaborations in the Pediatric Acute Liver Failure network, including iWITH, a multi-centre study of immune-suppression withdrawal in selected survivors of liver transplantation. Dr. Tanja Gonska contributes importantly to cutting-edge translational studies, including examination of pharmacologic means of ameliorating defective Cystic Fibrosis gene function. Dr. Aleixo Muise co-leads an international consortium in the exciting study of very early onset IBD with funding from the Helmsley Foundation and CIHR. Dr. Thomas Walters is on the executive steering committee of the NIH-funded PROTECT study in new onset ulcerative colitis. Dr. Anne Griffiths leads the Canadian Children IBD Network: a joint partnership of CIHR and the C.H.I.L.D. Foundation.

Honours and Awards

Amir, A: Winner of The Canadian Society of Transplantation Pediatric Transplant Abstract Award, Toronto, Ontario, 2014

Avitzur, Y: Winner of the Teaching and Mentorship Award, Division of Gastroenterology, Hepatology and Nutrition, The Hospital for Sick Children, Toronto, June 2014

Bandsma, R: Winner of the Naspghan-Nestle Nutrition Young Investigator Development Award, Chicago, US, September 2013
Burghardt, K: Winner of the Young Investigator and Travel Award, World Transplant Congress, June 2014

Jones, NL: Winner of the Education Excellence Award, Canadian Association of Gastroenterology, Toronto, Ontario, January 2014

Muise, A: Winner of the New Investigator Partnership Prize, Institute of Nutrition, Metabolism and Diabetes (INMD), Canadian Institute of Health Research, Toronto, Ontario, February 2014.

Muise, A: Winner of the Young Investigator Award, Canadian Association of Gastroenterology, Toronto, Ontario, February 2014.

Walters, TD: Winner of the Best Clinical Trial Design Award, North American Society for Pediatric Gastroenterology, Hepatology and Nutrition, Fort Lauderdale, Florida, October 2013

Sherman, P: Winner of the Fellow of the Canadian Association of Gastroenterology, Toronto, Ontario, March 2014

Sherman, P: Winner of the Career Research Excellence Award, Department of Paediatrics, The Hospital for Sick Children, University of Toronto, Toronto, Ontario, May 2014

Valentino, P: Winner of CHES Exceptional Trainee award, 2014

Walsh, C: Winner of the Poster of Distinction Award, North American Society for Pediatric Gastroenterology, Hepatology and Nutrition, Philadelphia, USA, October 2013


### Publications


Biliary complications after paediatric liver transplantation. Ghanekar A, Kamath B. Transplant and Regenerative Medicine Centre, SickKids. Ashley’s Angels Foundation Pilot Grant. $12,553 CAD. Dec 1-2012-Dec 31-2013


Canadian Pediatric Clinical Scientist Program. Jones NL. BC Research Institute for Children and Women’s Health. $150,000 CAD. Apr 1-2012-Mar 31-2015

Canadian Pediatric Clinical Scientist Program. Jones NL. Manitoba Institute of Child Health. $50,000 CAD. Apr 1-2012-Mar 31-2015

Canadian Pediatric Clinical Scientist Program. Jones NL. The Hospital for Sick Children Foundation. $300,000 CAD. Apr 1-2012-Mar 31-2015

Canadian Pediatric Clinical Scientist Program. Jones NL. Women’s and Children’s Health Research Institute. $35,000 CAD. Apr 1-2012-Mar 31-2015


Cholangiocyte differentiation from stem cells: Biliary disease in a dish. Kamath B, Ghanekar A. SickKids Research Institute Stem Cell Innovation Grant. $56,000 CAD. Dec 1-2012-Dec 31-2013


Creating teams to solve critical issues in Crohn’s disease team grant. Snapper S, Muise AM. Translational Immunology (HTI)/Helmsley Trust Pilot Program Grants in Crohn’s Disease. $400,000 USD. Jan 1-2012-Dec 31-2013

Defining very early onset IBD-CCFA PROKIDS: NEDPICS. Muise AM. Crohns and Colitis Foundation of America. $100,000 USD. Jan 1-2014-Dec 31-2014

De novo autoimmune hepatitis in pediatric liver transplantation. Elong U, Avitzur Y. Yale Liver Center Research Grant. $10,000 USD. Jun 1-2013-Jun 30-2016


Epithelial cell signaling responses to attaching-effacing intestinal pathogens. Sherman P. Canadian Institutes of Health Research. $170,000 CAD. July 1-2013-January 1-2018

Establishing the Global Registry for Outcomes of Vances in Children. Ling SC. The Hospital for Sick Children Paediatric Consultants Creative Professional Activity Grant. $9,817 CAD. April 1-2013-March 31-2014


Extension and expansion of the sweat rate sub-study as part of the G551D observation study (GOA-32). Gonska T. Cystic Fibrosis Foundation Therapeutics, Inc. $10,162 USD. January 1-2014-March 31-2015


Immunosuppression withdrawal for stable pediatric liver transplant recipients (WITH). Feng S, Ng V, Avitzur Y. National Institutes of Health. $210,586 USD. July 21-2012-June 30 2017

Impact of feeding type and nutrient fortification on the gut microbiome of very low birth weight infants. O’Connor D, Unger S, Croizot K, Hagleiseb G, Kiss A, Mack D, Sherman P.

Stintzi A. Canadian Institutes of Health Research. $496,254 CAD. July 1-2013-December 31, 2016

IMPACT: A multi-centre randomized controlled trial evaluation the impact of regular telephone contact with an IBD nurse during transition from pediatric to adult care. Nguyen G, Griffiths A, Crohn’s and Colitis Canada.

$122,380 CAD. 2013-2014

Induced pluripotent stem cell models of Alagille syndrome. Kamath B, Ghanekar A. Aalagille Syndrome Alliance Foundation.

$50,000 USD. January 1-2013-December 31, 2015

Innate regulation and growth failure in pediatric Crohn’s disease. Denson L, Griffiths AM, Walters TD.

Crohn’s and Colitis Foundation of America GIA

$9,981 CAD. August 1-2013-July 31, 2014

Practical evaluation of the AKI4W program. Uc A, Gonska T.

$1,004,253 CAD. January 24-2014-February 28, 2019


$509,125 CAD. January 1-2010-December 31, 2014

Risk Stratification & Identification of Immunogenetic and Microbial Markers of CD. Kugathasan S, Walters TD, PRO-KIIDS Consortium. Crohn’s and Colitis Foundation of America Special Purpose Grant.

$1,000,000 CAD. July 2011-2013

Pediatric longitudinal study of elemental diet and stool microbiome composition. Griffiths A. National Institutes of Health. $40,000 CAD. 2011-2013


POSITIVE study (ancillary study – autoimmunity and allergy in pediatric solid organ transplantation). Mital S, Upston A. Foster B, Aylur Y. Canadian National Transplant Research Program. $1,500,000 CAD. June 1-2013-May 31, 2018

Predicting response to standardized paediatric colitis therapy: The PROTECT Study. Hyams J, Denson L, Kgagathasan S, Sylvester F, Gupta N, Walters TD.

National Institutes of Health (NIDDK) U01 Multi-centre Clinical Study. $1,200,000 CAD. July 1-2013-December 31, 2015

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. $63,000 USD. January 1-2014-Dec 31, 2019


$509,125 CAD. January 1-2010-December 31, 2014


Role of ATG16L1 in Crohn’s disease. Jones NL. Crohn’s and Colitis Foundation of Canada.

$125,000 CAD. January 1-2012-December 31, 2014


Sweat rate sub study as part of the G551D Observational Study (GOAL). Gonska T. Cystic Fibrosis Foundation Therapeutics Inc. $26,000 USD. September 1-2011-August 31, 2013


$720,000 CAD. October 1-2011-September 30, 2016

The role of NADPH oxidases in Crohn’s Disease. Brumell J, Muise AM. Canadian Institutes of Health Research.

$771,358 CAD. October 1-2009-September 30, 2014

Therapy development for cystic fibrosis patients in Qatar. Bear CE, Ratjen F, Ray P, Goska T, Moraes T. Al Qamri Holding Group/Al Qamri SickKids CF Therapy Programme.

$1,004,253 CAD. January 24-2014-February 28, 2019

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**Staff**

**Division Head**

Dr. Anne Griffiths

**Full-Time**

Dr. Yaron Aylurz

Dr. Robert Bandsma

Dr. Tanja Gonska

Dr. Nicola Jones

Dr. Binita Kamath

Dr. Simon Ling

Dr. Margaret Marcon

Dr. Mariena Mouzaki

Dr. Alexio Muise

Dr. Vicky Ng

Dr. Philip Sherman

Dr. Thomas Walters

**Part-Time**

Dr. Glenn Berall

Dr. Peter Church

Dr. Thomas Walters

Dr. Ines Loverdos

**Nurse Practitioners**

Maria D’Angelis

Karen Frost

Joley Johnstone

Silvana Oppedisano

Krista Murch

Constance O’Connor

Ambulatory Nurses

Zenaida Chinea

Vikki Scaini

Alison Stewart

IBD Nurse

Krista Ussoue

TPN Nurse

Debra Harrison

---

**GI Procedure Nurses**

Carol Fitzmaurice

Donna Stevenson

Kelly Wimbush

**Dieticians**

Andrea Carpenter

Ines Martinicino

Laura Vresk

**Administrative Staff**

Saeedah Ahmad

Chona Callejo

Margaret Johnson

Ashley Lau

Ivette Milanes Abreus

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Margaret Johnson

Ashley Lau

Ivette Milanes Abreus

Lilatool Shakur

Suzanne Shek

Barbara Zimmnowdski
Divisional Overview

The Division of Hematology/Oncology provides diagnostic services and specialist care for children up to 18 years of age with cancer and non-malignant blood disorders. The Division is the largest of its kind in Canada and among the largest such programs worldwide, with approximately 360 new cancer cases registered in the pediatric oncology program this past year. The Division is the designated centre for hematopoietic stem cell transplantation for patients up to 18 years of age in Ontario and the Atlantic provinces; the majority of the approximate 100 transplants performed this year were for children with cancer, with others performed for children with benign hematologic disorders, severe immunodeficiency disorders or genetic diseases. The number of in-patient days for pediatric hematology/oncology/BMT cases this year was approximately 13,800, a decrease from the prior year attributable in part to efforts focused on reduction in length of stay. The number of ambulatory care visits was slightly up from the prior year at 21,250, as were day hospital visits at 11,500, reflecting an ongoing trend to transition of care from the inpatient to ambulatory setting.

Reflecting the size and diversity of its clinical services, the Division is organized into six sections and three programs: the Leukemia/Lymphoma section (Section Head, Dr. Johann Hitzler); the Solid Tumor section (Section Head, Dr. Meredith Irwin); the Neuro-oncology (brain tumor) section (Section Head, Dr. Eric Bouffet); the Blood and Marrow Transplantation section (Section Head, Dr. Maarten Egeler); the Hematology section (Section Head, Dr. Yigal Dror); the long-term follow-up (Aftercare) program (Program Head, Dr. Paul Nathan); the New Agents and Innovative Therapies program (Program Head, Dr. Sylvain Baruchel); and the Cancer Genetics program (Program Head, Dr. David Malkin). Dr. Sarah Alexander serves as the program’s Clinical Director. The Hematology section has large clinical and research programs in pediatric thrombosis and hemostasis, the pediatric hemoglobinopathies and the inherited and acquired pediatric marrow failure syndromes and myelodysplasias. The Division is an active member of the Children’s Oncology Group (COG), the largest pediatric cancer clinical trials group in North America (SickKids Principal Investigator, Dr. Sarah Alexander), 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 COG Phase I Consortium (Principal Investigator, Dr. Sylvain Baruchel), and is an active participant in activities of the Histiocyte Society, New Approaches to Neuroblastoma Therapy (NANT), and the Therapeutic Advances in Childhood Leukemia (TACI) clinical trials consortia. Over 250 clinical trials enrolments occurred this year. The Division, in collaboration with the Pediatric Oncology Group of Ontario (POGO), supports a network of pediatric oncology satellite centres in the Greater Toronto and surrounding areas, with over 5800 visits to satellite centres this year. 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 completion of an MIBG facility on 8A of the hospital, offering an important new treatment modality for children with neuroblastoma, and the conversion of 4 inpatient rooms to negative pressure rooms, which will allow immunocompromised children requiring this isolation to remain on the Oncology unit.

The Division’s training program for pediatric hematology/oncology, the largest such program in Canada, underwent successful re-accreditation by the Royal College of Physicians and Surgeons of Canada in 2013. The Division’s Training Program Director is Dr. Michaela Cada. The Education Program in the Division also includes a very large international training program in pediatric hematology/oncology and offers subspecialty training opportunities in areas such as the pediatric leukemias/lymphomas, neuro-oncology, neuroblastoma, blood and marrow transplantation, bone marrow failure and pediatric thrombosis and hemostasis. One such trainee, Sears Childhood Cancer Fellow Dr. Hisaki Fujii, was awarded the 2013 David Smyth Award from the Canadian Blood and Marrow Transplant Group in recognition of his research on the creation of a humanized mouse model of chronic graft-vs-host disease conducted under the mentorship of Dr. Maarten Egeler.
Research in the Division spans basic science to clinical care with a special focus on translational research. Approximately one-half of the Division’s 30 full-time Faculty have appointments as clinician scientists or clinician investigators in the Department of Pediatrics with parallel appointments in the Research Institute. Research in the Division is multidisciplinary, involving health care professionals with expertise in a variety of areas (e.g., nursing, psychology, social work, pharmacy). The Division is committed to facilitating knowledge exchange through international partnerships with a particular focus on countries lacking the health care resources available in Canada. Two such initiatives are currently underway in collaboration with SickKids International: the Global Sickle Cell Disease Network, under the leadership of Dr. Isaac Odame, and the Caribbean Collaboration in Pediatric Cancer and Blood Disorders, under the leadership of Dr. Victor Blanchette.

The Administrative team for the Division comprises Dr. Jim Whitlock (Division Head), Amita D. Naipaul (Director, Child Health Services) and Denise Ferreira (Manager, Business Operations).

Honours & Awards

Bouffet E: Award for Excellence in Pediatric Clinical Research, Society for Neuro-Oncology, San Francisco, California, November 2013

Gupta S: Winner of the Edward Christie Stevens Fellowship, Toronto, Ontario, July 2013

Gupta S: Winner of the Starr Medal, Toronto, Ontario, July 2013

Gupta S: Winner of the Elizabeth Arbuthnot Dyson Fellowship, Toronto, Ontario, July 2013

Gupta S: Winner of the Joseph M. West Family Memorial Fund, Toronto, Ontario, July 2013

Publications


Al-Faraj E, Millar BA, Irwin MS, Gupta A. Isolated late CNS relapse in a young adult 10 years after initial treatment for neuroblastoma. Pediatric Hematology Oncology 2014: Apr 21 [Epub ahead of print].


Wilkins KL, D’Agostino N, Penney AM, Barr RD, Nathan PC. Supporting adolescents and young adults with cancer through transitions: Position statement from the Canadian task force on adolescents and young adults with cancer. Pediatric Hematology Oncology 2014: Jan 1 [Epub ahead of print].


Grants and Funding


A randomized study of IVIG vs IVIG with high dose methylprednisolone in rapidly augmenting platelet counts in childhood ITP. Carcao M, Blanchette V. Behring. $296,388 CAD. October 2009 – September 2013


An international network to determine the origins and improve survival for children with mismatch repair gene mutations affected by malignant brain tumors. Tabori U. *b.r.a.i.n. child.* $68,700 CAD. January 2011-December 2013


Anti-tumor activity of lucitanib in preclinical pediatric tumor models. Baruchel S. $80,000 CAD. May 2013 – April 2014


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 CAD. January 2010 – December 2014


Does baseline coagulation profile and exercise induced change in hemostatic profile explain phenotypic variability between hemophilia A and hemophilia B patients: a comparative cohort study”. Carcao M. Pfizer. $119,500 CAD. February 2013 – January 2015


Examining the relationship between white matter integrity and the speed of neuronal processing in children with brain tumours. Mabbott D, Tabori U, Bouffet E. Canadian Institute of Health Research. $640,915 CAD. April 2012 – March 2017


Incorporation of rFVIII into platelets as a potential therapy in patients with inhibitory antibodies to factor VIII. Kahr WHA. Canadian Hemophilia Society. $1,633,012 USD. April 2013-December 2016

Infographic development: Fertility preservation program. Gupta A, Lorenzo A. The Canadian Cancer Foundation. $291,000 CAD. April 2012 – March 2015


Molecular insights into gray platelet syndrome. Kafr WHA. Canadian Institutes of Health Research Canada. $821,637 CAD. July 2012 – June 2017

Molecular mechanisms of clonal & malignant myeloid transformation in inherited bone marrow failure syndromes. Dör Y, Scherer S, Cada M, Shago M. Canadian Fanconi Anemia Research Institute Grant Fund. $291,000 CAD. April 2012 – March 2015


Myc-mediated cell extrinsic signaling in brain tumour progression. Huang A. Brain Tumour Foundation of Canada, Richard Motyka Brain Tumour Research Fellowship. $100,000 CAD. January 2014-December 2016


Incorporation of rFVIII into platelets as a potential therapy in patients with inhibitory antibodies to factor VIII. Kahr WHA. Canadian Hemophilia Society. $150,000 CAD. June 2013 – May 2015


National Pediatric Hematology/Oncology Education Resource. Rayar M, Punnett A. University of Toronto


Neuroblastoma (MBIG) and acute leukemia phase I/II trials at The Hospital for Sick Children. Whitlock J, Baruchel S, Irwin MS, Hitzer J, Punnett A. Alex’s Lemonade Stand. $80,000 CAD. January 2011 – December 2013.


CI Memorial Fund and Garron Family Cancer Centre. $96,000 CAD. January 2012 – December 2014.


Open-label safety and tolerability of dabigatran etexilate mesilate given for 3 days at the end of standard anticoagulant therapy. Multi-centre, multinational, non-randomised, uncontrolled single arm trial to investigate tolerability and safety of dabigatran etexilate solution in children 1 to <12 years of age. Brandão LR. Boehringer Ingelheim. $46,915.50 CAD. February 2012 – January 2014.

Open-label safety and tolerability of dabigatran etexilate mesilate given for 3 days at the end of standard anticoagulant therapy. Multi-centre, multinational, non-randomised, uncontrolled single arm trial to investigate tolerability and safety of dabigatran etexilate solution in children 1 to <12 years of age. Brandão LR. Boehringer Ingelheim. $46,915.50 CAD. January 2011-December 2014.


Pathfinder 5: A multinational, open-label, non-controlled trial on safety, efficacy and pharmacokinetics of NCC 0129-0000-1003 in previously treated paediatric patients with severe haemophilia A. Carcao M. Novo Nordisk. $21,959.00 USD/pt + $14,500 start-up. May 2013 – June 2016.


Open-label safety and tolerability of dabigatran etexilate mesilate given for 3 days at the end of standard anticoagulant therapy. Multi-centre, multinational, non-randomised, uncontrolled single arm trial to investigate tolerability and safety of dabigatran etexilate solution in children 1 to <12 years of age. Brandão LR. Boehringer Ingelheim. $46,915.50 CAD. January 2011-December 2014.


Pathfinder 5: A multinational, open-label, non-controlled trial on safety, efficacy and pharmacokinetics of NCC 0129-0000-1003 in previously treated paediatric patients with severe haemophilia A. Carcao M. Novo Nordisk. $21,959.00 USD/pt + $14,500 start-up. May 2013 – June 2016.


Pilot study for the standardization of diagnostic techniques of CVL. Mitchell L, Brandão LR. Brystol-Myers-Squibb. ~USD$8,000/per case. October 2012 – September 2013.


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 SickKidsT. Fisher B, Hebert D, Ng V, Solomon M. SickKids Transplant and Regenerative Medicine Centre Grant. $50,000 CAD. January 2013 – December 2014

Rodin: Research of determinants of inhibitor development among previously untreated patients with haemophilia. Carcao M, Blanchette V. University Medical Center Utrecht. €250/patient. October 2007-September 2013

SickKids MIBG and phase I leukemia programs. Whitlock JA. Alex’s Lemonade Stand: Foundation for Childhood Cancer. $233,280 CAD. July 2011-June 2014

Stratifying and targeting pediatric medulloblastoma through genomics. Malikin D, Taylor M, Marra C. Genome Canada. $9,724,200 CAD. July 2011 – June 2015

Studies of alpha granule formation in human megakaryocytes and platelets. Kehr WHA. Canadian Institutes of Health Research Canada. $689,721 CAD. April 2010-March 2015

Targeting hypoxia to overcome drug resistance, combining TH-302 and standard chemotherapy in rhabdomyosarcoma and neuroblastoma murine models. Baruchel S, Merck Serono. $70,000 CAD. January 2014 – January 2015

Targeting metastatic neuroblastroma. Irwin MS, Kaplan DR. Canadian Institutes of Health Research. $771,485 CAD. January 2014 – December 2019

Targeting the integrin-linked kinase (ILK) in rhabdomyosarcoma. Malkin D. Canadian Institutes for Health Research. $381,270 CAD. March 2012 – February 2015

Targeting thrombospondin-1 in medulloblastoma. Huang A, Zadeh G. Canadian Institute of Health Research. $762,000 CAD. April 2012 – March 2017

TCDD with Transfusions Changing to Hydroxyurea (TWITCH): A Phase III randomized clinical trial to compare standard therapy (erythrocyte transfusions) with alternative therapy (hydroxyurea) for the maintenance of lowered TCD velocities in pediatric subjects with sickle cell anemia and abnormal pre-treatment TCD velocities. Kirby M, Williams S, Odamo I. National Heart, Lung, and Blood Institute. $23,000,000 CAD. April 2009-March 2014


Terry Fox New Investigator award Examination of tumor initiating cells by targeting their self-renewal capacity with telomerase inhibition. Tabori U. The Terry Fox Foundation. $450,000 CAD. September 2010 – August 2013

The ICHANGE (International Childhood Astrocytomas and Epigenomics) Jabado N, Majewski J, Rak J, Huang A, Kisingter T and Zadeh G. Genome Canada. $10,000,000 CAD. January 2013 – December 2017

The role of histones in the development of pediatric diffuse intrinsic pontine glioma. Hawkins C, Bouffet, E. Canadian Cancer Society Research Institute. $1,250,000 CAD. January 2014 – December 2019


THOR methylation for detection of minimal residual disease in cancer. Tabori U. MARs Innovation. $150,000 CAD. January 2013 – December 2013


Dr. James Whitlock

Division Head

Dr. Oussama Abid

Full-Time Faculty

Dr. Sarah Alexander

Dr. Muhammad Ali

Dr. Ute Bartels

Dr. Sylvain Baruchel

Dr. Victor Blanchette

Dr. Eric Bouffet

Dr. Leonardo Brandão

Dr. Michaela Cada

Dr. Manuel Carcaño

Dr. Helén Chan

Dr. Yigal Dor

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Dr. Ron Grant

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Dr. Sumit Gupta

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Dr. Melanie Kitty

Dr. David Malkin

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Dr. Lillian Sung

Dr. Uri Tabori

Dr. Sheila Weitzman

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Dr. Nicole Inch

Dr. Normand Lapierre

Dr. Aubrey Maze

Saima Alvi

Dousa Bakry

Moira Garraus

Joerg Krueger

Stephan Leucht

Marta Wiljełtow

Clinical Associates

Dr. Jennifer Adamski

Dr. Eshsan Al Faraj

Dr. Amal Al Sabahi

Dr. Tahani Bin Ali

Dr. Deepak Chellapandian

Dr. Eman El Shamsi Taryam

Dr. Mohammed Essa

Dr. Eric Fu

Dr. Hitaki Fujii

Dr. Ibrahim Gherias

Dr. Ana Guerreiro Stucklin

Dr. Stephanie Heidemann

Dr. Sakara Hutspardol

Dr. Rahul Krishnatre

Dr. Ritten Kumar

Dr. Verónica Leoni

Dr. Sharon McLean

Dr. Naureen Mushtaq

Dr. Rungrate Natesrininkul

Dr. Sapna Oberoi

Dr. Katherine Patrick

Dr. Mattia Rizzi

Dr. John Roy

Dr. Christine Sabapathy

Dr. Gabriele Zamperlini

Dr. Antonella Zanette

Dr. Nataliya Zhukhova

Subspecialty Residents

Dr. Lesleigh Abbott

Dr. Natasha Alexander

Dr. Ali Amid

Dr. Julie Bennett

Dr. Jack Brzezinski

Dr. Sylvia Cheng

Dr. Aamir Denburg

Dr. Fyeza Hasan

Dr. Arnold Jacob

Dr. Dave Lysecki

Dr. Stacey Marjerrison

Dr. Meera Rayar

Dr. Jennifer Seelisch

Dr. David Stammers

Dr. Thai Tran

Dr. Anita Villani

Dr. Marta Wiljełtow

Research Fellows

Laura Avila

Daniel Mengenstern

Brent Williams

Administrative Staff

Ingrid Argirooulos

Haniad Attar-Eibard

Charmaine Borja

Enda Brennan

Meagan Carreira

Sandra Carbone-Walker

Denise Ferreira

Michelle Gouveia

Connie Gillio

Tiffany Jiminez

Natalasha Lajli

Catherine Lim Shue

Philippa McCaffrey

Eleanor Paulino

Irme Polyzogopoulos

Samantha Ramlacock

Ana Sofia Tiago

Arlene Zaldivar

Irene Zuniga

Irene Zuniga

Ana Sofia Tiago

Samantha Ramlacock

Ana Sofia Tiago

Samantha Ramlacock

Ana Sofia Tiago

Samantha Ramlacock

Ana Sofia Tiago

Samantha Ramlacock

Ana Sofia Tiago

Samantha Ramlacock

Ana Sofia Tiago
Divisional Overview

Under the leadership of Dr. Grunebaum, the Division of Immunology and Allergy continues to be a world-leading center for the diagnosis, understanding and management of primary immune deficiencies as well as complex allergic conditions.

The Primary Immunodeficiency (PID) Program in the Division of Immunology and Allergy at The Hospital for Sick Children is the largest of its kind in Canada and one of the largest in the world. Last year, we provided medical services to more than 2000 patients, referred from physicians and hospitals locally, nationally and internationally. The number of referred patients has steadily increased over the last decade, reflecting enhanced awareness by health care providers as well as better appreciation of the immune system roles among growing number of human ailments, such as uncontrolled inflammation and malignancy (Coles, Paediatr Child Health 2013; O’Gorman et al., J Med Case Rep 2013; Bates et al., LymphoSign Journal. 2014). The division provides consultation and management services for children and adults with primary immune deficiencies through its various clinics and collaborates internationally in advancing care for such patients. Some clinics serve patients with complex immune abnormalities and genetic defects, thereby leading to improved diagnosis and classification of PID (Bousfiha et al., JOCI 2013). Other clinics are dedicated to the short- and long-term management of patients undergoing bone marrow transplantation or gene therapy for severe inherited immune deficiencies. Additionally, a novel clinic focusing on infants diagnosed through the newly implemented Ontario Newborn screening for severe immune deficiency was established this year, serving patients from all across the province. The Division is also responsible for the Immunology Isolation Unit, where every year 5-10 patients with various severe immune defects from across Canada are managed with life saving allogeneic hematopoietic stem cell transplantation or autologous gene corrected cells (Broides et al., J Clinical Cellular Immunology, 2014).

The innovative efforts and experience of our division in transplantation for PID is a model for many other centers across the world (Griffith et al., JACI 2014).

The Division of Immunology and Allergy has been particularly active in improving the understanding and management of patients affected by inherited purine defects (Grunebaum et al., BJH 2013; Grunebaum et al., Curr Opin Allergy Clin Immunol. 2013). In addition, we contributed significantly to the understanding and management of other primary immune defects such as ZAP70 and CD3 deficiencies (Kim et al., JACI 2013; Poliani et al., JACI 2013; Muñoz-Ruiz et al., BMC Immunology 2013).

The Hypo-gammaglobulinemia Program at SickKids, established more than 20 years ago by Dr. Roifman and Brenda Reid CNS, is recognized globally for its innovative approach and long-term follow-up of over 200 patients requiring regular immunoglobulin replacement. This program transformed the therapy of hypo-gammaglobulinemic patients from multiple hospital-based admissions, to truncated visits at the short stay unit and subsequently to community treatment. The proficiency of our team coupled with convenient care at a medical centre closer to home, provides patients with the personalized treatment they require. To further improve care for some patients, home therapy programs using primarily subcutaneous infusions are underway. Additionally members of the division are involved in several studies assessing the safety and efficacy of new brands of immunoglobulins, many of them led internationally by Dr. Roifman.

The Allergy Program in our division focuses on the diagnosis and management of children with complex allergic diseases. These conditions include multiple or difficult to treat food, drug and latex allergy, anaphylaxis, urticaria and asthma.
Mary patients with complex allergic diseases are seen each year by the division, while other patients are referred to the Division’s community affiliated clinics of Drs. Aspen, Feaney, Hummel and Lavi. Indeed the close interaction with the community is one of the strengths of the Allergy program. The Division also offers inpatient consultation for allergic community is one of the strengths of the Allergy program. Indeed the close interaction with the community is one of the strengths of the Allergy program. Many patients with complex allergic diseases are seen each year by the Division’s community affiliated clinics of Drs. Aspen, Feaney, Hummel and Lavi. Indeed the close interaction with the community is one of the strengths of the Allergy program. The Division also offers inpatient consultation for allergic diseases, such as expertise in adverse reactions to drugs (Hildebrand et al., Pediatrics 9: 2014; biological agents, anaesthetics and chemotherapy in medically complex children, including those suffering from cancer or receiving blood and organ transplants. For children with complex medical conditions suffering also from adverse drug reactions, the DART (Drug, Adverse Reaction and Toxicology Clinic) out-patient consultation clinic provides targeted diagnostic and management strategies, while collecting important data about this population. The DART clinic has demonstrated significant clinical impact in this vulnerable population. Some of the experience gained in the management of drug reactions was recently reported (Kavadas FD et al., Allergy Asthma Clin Immunol. 2013). Food allergy, affecting increasing number of children, is another major focus of the Division. Dr. Grunebaum has reignited the quest to establish a Food Allergy and Anaphylaxis focus within Sickkids. Indeed this year, generous funding, provided primarily by Amy Kaiser and Ken Rotman with the help of Sickkids Foundation, enabled our division to officially launch a Food Allergy and Anaphylaxis Program. This innovative program combines clinical, educational and research expertise for the advancement of the diagnosis, management and understanding of pediatric and adult severe allergic conditions. In addition, our Allergy team, with Dr. Upton as the PI and Dr. Hummel as a coinvestigator, began a peer reviewed funded study that will help better diagnose and treat children with suspected milk allergy.

Providing education in Immunology and Allergy to trainees in pediatric and Adult program from the University of Toronto, across Canada and beyond continues to be the main focus for the Division. Dr. Grunebaum is the Director of the Pediatric Clinical Immunology and Allergy Residency Program. The training program also hosts all Sickkids pediatric residents for 4 weeks as well as up to 24 trainees from other pediatric, and or allergy/immunology programs from across Canada. Mrs. Sandra Mendonca has been instrumental in coordinating all these trainees. Dr. Rolfman directs the high caliber trainees arriving for the internationally acclaimed immunology fellowship Program. Dr. Rolfman also supervises research performed by many of the Division’s trainees. Impressively, in 2013 our program underwent accreditation by the Royal College of Physicians and Surgeons of Canada and received an excellent review with no identifiable flaws, thereby continuing a flawless record since its establishment in 1990.

**Staff Profiles**

Dr. Grunebaum’s research continues to focus on better understanding of the mechanisms and treatment for inherited purine defects, an important cause for severe immune deficiency in children (Manson et al., Ped Radiol 2013, Somich et al., Immunol Res. 2013, Grunebaum et al., Curr Opin Allergy Clin Immunol. 2013). Following the identification of a unique life threatening abnormality in the lungs of adenosine deaminase (ADA) deficient patients, a master student in Dr. Grunebaum’s lab used animal and cell models to elucidate the mechanisms responsible for the lung phenotype, i.e. defect in surfactant metabolism (Dhanju et al., JACI 2014). In 2013, Dr. Grunebaum was also awarded the Donald and Audrey Campbell Research in Immunology Chair by The Hospital for Sick Children and the University of Toronto. This Chair enabled Dr. Grunebaum to initiate innovative studies of the role of regulatory T cells in various inherited and acquired immune dysregulation conditions. Additionally, with the support of the Food Allergy and Anaphylaxis Program, Dr. Grunebaum’s lab has begun studying platelet-activating factor in severe allergic conditions.

Dr. Chaim Rolfman continues to lead national and international initiatives in primary immune deficiency. Dr. Rolfman, who is also the Chair & Scientific Director of not for profit organization Immunodeficiency Canada, is one of the main driving forces in establishing newborn screening for severe immune deficiency in Ontario. He is now extending his efforts to include other Canadian provinces. In addition, Dr. Rolfman launched and is the Chief Editor of a new open-access journal, LymphoSign Journal, dedicated to exploring the molecular basis and treatment of various immune disorders. Under the guidance of Dr. Rolfman, The Jeffrey Modell Research Laboratory for the Diagnosis of PID (Canadian Center for PID) continues to help health care providers from various fields and countries in the diagnosis of complex immune abnormalities that significantly impact patients’ management (Al-Zahrai et al., JACI 2013; Boonyawat et al. J Clin Immunol 2013; Sharfe et al., JACI 2013). Dr. Rolfman also has contributed to international efforts to better understand the pathogenesis of many primary immune deficiencies (Berglund et al., Blood 2013). Dr. Rolfman also moderated many of the quarterly Jeffrey Modell Canadian Immunodeficiency Network Video Conferences hosted by Immunodeficiency Canada, which has been attended by a rapidly growing number of participants from across Canada.

Dr. Adelle Atkinson is in her 9th year as the Director of Post Graduate Medical Education in the Department of Paediatrics. She continues to excel as an outstanding educator, and the training program continues to attract the brightest stars. In recognition of her achievements, Dr. Atkinson was nominated for the PAIRO Residency Program Excellence Award once again in 2013/14. The PAIRO Award recognizes Residency Program Directors who consistently provide an exceptionally positive and rewarding experience for the residents, while producing physicians who are expertly trained to deal with the challenges of their upcoming career. Dr. Atkinson was the recipient of the Harry Bain award in 2014 for excellence in Clinical teaching at The Hospital for Sick Children. Dr. Atkinson continues to give 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. In the last two years, Dr. Atkinson has also led a Department of Pediatrics initiative to attract and retain pediatric trainees who will be our future clinician scientists. Dr. Atkinson is currently the Acting Associate Dean of Admissions and Financial Aid for the undergraduate medical program. In addition to the extensive educational commitments, Dr. Atkinson runs a novel clinic studying drug allergies in medically complex patients, providing an important clinical service to this tertiary care population.

Dr. Julia Upton, an Academic Clinician in the Division of Clinical Immunology and Allergy, continued her focus on food allergy this year. Her food allergy research on the evaluation of testing with baked milk to predict the safe ingestion of baked milk in unbanked milk allergic children started enrollment. Further work in allergy included a review of the treatment applications of an exciting biological substance involved in anaphylaxis called platelet-activating factor (PAF) (Upton J and Vadas P Current Treatment Options in Allergy 2014) and an e-book chapter examining the utility of various tests as biomarkers of severe anaphylaxis (Upton J and Vadas P Biomarkers for Severity of Anaphylaxis. Future Science Group, UK, 2014). Dr. Upton was the senior responsible author for the best case-report award at the annual allergy meeting of Canadian Society of Allergy and Immunology (Ching JCY et al, Allergy, Asthma & Clinical Immunology 2014). Dr. Upton contributed to clinical research in Immunology (Ngan B et al LymphoSign Journal 2014) and as a co-investigator evaluating a new intravenous gammaglobulin product. Dr. Upton is also extensively involved in the education of medical students, as well as trainees in Pediatrics and Allergy/Immunology. She contributed to the planning and execution of the first national OSCE for Clinical Immunology and Allergy trainees and was honored to accept the invitation to join the Royal College of Physicians and Surgeons Examination Committee for Clinical Immunology and Allergy.
Brenda Reid, Clinical Nurse Specialist, has been instrumental in providing leadership to nurses across the country in the management of primary immune deficient patients. She leads a network of nurses across the country in developing PID nursing protocols in conjunction with Immunodeficiency Canada. She works with Newborn Screening Ontario on SCID screening and has developed education materials and protocols for Newborn screen positive babies with severe immune deficiency. Additionally, Brenda has contributed enormously to the research and education generated by our division.

Honors and Awards

Atkinson, A: Winner of The Harry Bain Award in 2014 for excellence in clinical teaching at The Hospital for Sick Children, Toronto, Ontario, June 2014


Grunebaum, E: Winner of the Donald and Audrey Campbell Chair in Immunology, University of Toronto, Toronto, Ontario, 2013-2018

Upton, J: First place in abstract competition in “Case Reports” at the Canadian Society for Allergy and Clinical Immunology (CSACI) Toronto, Ontario, October 2013

Publications


Grunebaum E, Cohen A, Roifman CM. Recent advances in understanding and managing adenosine deaminase and purine nucleoside phosphorylase deficiencies. Current Opinion in Allergy and Clinical Immunology 2013: 13 (6): pp 630-638.


Books and Chapters


Grants and Funding

Campbell Research in Immunology, Grunebaum E. Sickkids Foundation, $400,000 CAD. November 2013 – October 2018


Food allergy research: Food allergy initiative. Kaiser A, Rotman K, Grunebaum E. SickKids Foundation, $1,000,000 CAD. September 2013 – August 2018

Jeffrey Modell Research Laboratories for the diagnosis of primary immunodeficiencies. Roifman CM. Jeffrey Modell Foundation. $250,000 CAD. January 2013 – December 2017

Multicenter, open-label, historically controlled, phase III study to assess the efficacy, tolerability, safety and pharmacokinetics of Kedrion IVIG 10% in adult and pediatric subjects with Primary Immunodeficiency (PID). Roifman CM, Upton J, Reid B, Kasprowicz A, Murgua L. Atlantic Research Group/Kedrion SPA. $21,000 CAD. January 2013-December 2013

Presentation and Outcome of Zap 70 deficiency, Roifman CM. Jeffrey Modell Foundation. $50,000 CAD. January 2013 – December 2015

Presentation and outcome of Zap 70 deficiency, Roifman CM. Immunodeficiency Canada. $300,000 CAD. January 2013-December 2018

SCID newborn screening at the Canadian Centre for Primary Immunodeficiency, Roifman CM. Immunodeficiency Canada. $125,000 CAD. June 2013 – June 2018

The Canadian collaborative effort to discover the molecular basis underlying primary immunodeficiency and devise accordingly novel treatments. Roifman CM, Haddad E. CI Society and Octapharma. $400,000 CAD. January 2013 – June 2016

T cell dysregulation in allergy. Grunebaum E. SickKids Foundation. $50,000 CAD. May 2013 – April 2014

Staff

Division Head
Dr. Eyal Grunebaum

Full-Time
Dr. Adelle Atkinson
Dr. Chaim Roifman
Dr. Julia Upton

Clinical Assistant
Dr. Vy Kim

Part-Time
Dr. Maria Asper
Dr. Stephen Feanny
Dr. David Hummel
Dr. Sasson Lavi

Senior Scientist- Emeritus
Amos Cohen, PhD

Clinical Fellows
Dr. Nemer Al Otaibi
Dr. Yoram Faitelson

Subspecialty Residents
Dr. Amy French
Dr. Alison Haynes
Dr. Allison Kwan

Research Associate
Nigel Sharfe, PhD

Research Technologists
Lorand Cimpeon
Tom Grunberger
Ariana Karanxha
Weixian Min
Boris Pereiman

Medical Lab Technologist
Harjit Dadi
Andrea Newell
Vikita Rana

Administrative Staff
Joanne Bresciani
Jessy Delbraganza
Megan Dunbar
Sandra Mendonca
Carrrie Smith
Barbara Zimnowodski
Divisional Overview

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

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, and the American Society for Transplantation, the International Pediatric Transplant Association, the Canadian AIDS Research Group, the SickKids Caribbean Cancer Initiative and the Government of the Bahamas).

Our research initiatives include multicentered paediatric HIV studies that relate to maternal-to-child transmission and studies on new antiretrovirals, vaccine studies and research into the mechanisms of host susceptibility to viral infections and related conditions. These conditions include EBR-related post-transplant lymphoproliferative disorder (PTLD), influenza illness, infections in patients with cystic fibrosis, HIV, and encephalitis. Multicentered trials relating to the diagnosis and prevention of infections in transplant patients are ongoing. In addition, we participate in national surveillance studies (IMPACT) and national collaborative paediatric studies through the Paediatric Investigators Collaborative Network on Infections in Canada (PICNIC).

Honors and Awards


Morris, S: Winner of Award for Teaching Excellence, Pediatric Resident Lecture Series. Department of Pediatrics, University of Toronto, The Hospital for Sick Children, Toronto, Ontario, June 4, 2014
Publications


Neurodevelopmental outcomes of pre- and perinatal exposure to antiretroviral treatment in HIV-uninfected children. Smith M, Read SA, Bitnun A, CANFAR. $80,000 CAD. 2012 – 2014


Prospective surveillance for pediatric TB disease in Canada. Kitai I, Morris S. Canadian Paediatric Surveillance Program. $22000 CAD for the first year and $18 000 CAD in subsequent years. 2013 – 2016


Prospective Surveillance of Tuberculosis in Canadian Children. Morris S PI, Kitai I. The Hospital for Sick Children Department of Pediatrics Grant for Creative Professional Activity. $10,000 CAD. April 2014-April 2016


Short-Chain Fatty Acids in the Cystic Fibrosis Lung. Grasmann H, Waters V. SickKids CF Center. $50,000 CAD. February 1-2014-January 31-2015

Start Up Operating, Morris S. The Hospital for Sick Children, Research Institute. $300,000 CAD. October 2013-October 2016

Start Up Support. Morris S. The Hospital for Sick Children, Department of Pediatrics. $150,000 CAD. January 2012-December 2014

The CF lung microbiome and persistent versus eradicated Pseudomonas aeruginosa. Waters V, Gutman D. US CF Foundation. $83,000 USD. April 1 2014-March 31 2015

The role of Pseudomonas aeruginosa and the lung microbiome in Pseudomonas eradication in cystic fibrosis. Waters V. Canadian Foundation of Infectious Diseases Summer Student Research Award (Lauren Smith). $4,000 CAD. May 1-2014-August 31 2014
Divisional Overview

Dr. Keith Tanswell retired from clinical practice in December 2013. The Division of Neonatology is immensely grateful to Dr. Tanswell for his many years of service and leadership and wishes him a happy and rewarding retirement. Congratulations to Dr. Eugene Ng on his appointment as Chief, Department of Newborn and Developmental Paediatrics, at the Sunnybrook Health Sciences Centre. The Division also applauds Dr. Hilary Whyte on her appointment as Medical Director of SickKids International. Dr. Whyte has stepped down as Medical Director of the NICU, but will continue as the medical lead of the Acute Care Transport Services (ACTS). The Medical Directorship of the SickKids NICU has been taken up on an interim basis by Dr. Andrew James. We wish all appointees every success in their new leadership roles.

The Level III perinatal NICUs at the Mount Sinai Hospital and Sunnybrook Health Sciences Centre remain extremely busy. In the past year, the Mount Sinai Hospital NICU changed to a mixed Level II/III acuity model in preparation for their much anticipated move to a new state-of-the-art facility in October 2014. Over the past year, the SickKids NICU, in collaboration with the Division of Neurology, established a neonatal neurocritical care service, incorporating enhanced monitoring and follow-up of newborns with brain injury.

The Division’s Neonatal-Perinatal Fellowship Training Program is one of the largest in North America, attracting trainees from almost every continent. Recent times have seen a surge in applications from Canadian-trained Residents. We heartily congratulate our Fellowship trainees who notched up a 100% success rate in the recent FRCP(C) examinations. The Annual Neonatal Research Day was again a great success. Dr. Prakesh Shah, who led the Research Day organizing committee for many years, has now handed over the reins to Dr. Dany Weisz. A structured training program in echocardiography continues to be offered to selected trainees, leading to neonatologist-performed echocardiography being adopted and supported at all three sites.

Research output from the Division of Neonatology remains robust and members of the Division at all three sites continue to be well-supported by major funding agencies. Of particular note, Dr. Prakesh Shah was awarded a CIHR Applied Chair in Reproductive, Child and Youth Health Services and Policy Research. Significant funding and research output at Mount Sinai Hospital is derived from activities based around the Canadian Neonatal Network (CNN) database and by CNN-led quality improvement initiatives. Dr. Sharon Unger continues as the clinical lead on several large multi-centre clinical trials studying benefits of human milk and human-milk-based fortification. At SickKids, basic research in Lung Biology continues to be a strong focus as is echocardiography-based research on the ductus arteriosus conducted by Dr. Patrick McNamara. A large amount of collaborative research is also undertaken with Faculty from the Divisions of Surgery and Neurology and in health informatics with Faculty from the University of Ontario Institute of Technology. Clinical trials remain a focal point at Sunnybrook under the leadership of Dr. Elizabeth Asztalos, who continues to head the Centre for Mother, Infant and Child Research.

Honors and Awards


McNamara, P: Winner of the Robert Good New Faculty Award for Sustained Teaching Excellence, Department of Physiology, University of Toronto, Toronto, Ontario, Canada, 2013.

McNamara, P: Winner of the Pediatric American Society Travel Award for Predictors of Post-Ligation Cardiac Syndrome in Neonates after Introduction of Targeted Milrinone Treatment, Pediatric Academic Societies Annual Meeting, Vancouver, British Columbia, Canada, 2014.

**Publications**


Kear A, Callum J, Jankov RR it is safe to co-infuse dextrose-containing fluids with red blood cells? The Journal of Paediatrics and Child Health 2013: 49 (8): pp 687-691.


Books and Chapters


Grants and Funding


Phase II development of TnECHO app – PPHN and PDA. McNamara PJ, El-Khuffash A. Ikaria Inc. $18,000 CAD. November 1-2013-December 31-2014.


An Annual Report

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Phase II development of TnECHO app – PPHN and PDA. McNamara PJ, El-Khuffash A. Ikaria Inc. $18,000 CAD. November 1-2013-December 31-2014.


An Annual Report

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Phase II development of TnECHO app – PPHN and PDA. McNamara PJ, El-Khuffash A. Ikaria Inc. $18,000 CAD. November 1-2013-December 31-2014.


An Annual Report

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Phase II development of TnECHO app – PPHN and PDA. McNamara PJ, El-Khuffash A. Ikaria Inc. $18,000 CAD. November 1-2013-December 31-2014.


Divisional Overview

In 2013-2014, the complexity of clinical care delivered and the number of patients treated by the Nephrology team continued to grow. The Nephrology Fellowship program saw a number of changes that further enhanced the opportunities for state-of-the-art clinical and research training. The research profile of the division continues to increase, as demonstrated by the number of successful grant applications, the high quality of the journals in which the work is published, and the number of invitations to speak at leading national and international conferences.

We were fortunate to recruit two new faculty members to the Division of Nephrology in 2014. Dr. Damien Noone, who completed his fellowship training in Ireland, England, and here at SickKids, will participate in all aspects of care of children with kidney disease, with a special focus on the renal manifestations of systemic vasculitis. Dr. Mathieu Lemaire completed his clinical fellowship training at SickKids, followed by advanced research training in Genetics at Yale University. Dr. Lemaire will participate in the care of children with genetic forms of kidney disease, and his research program will aim to elucidate the underlying mechanisms of such disease. The recruitment of these two rising stars will undoubtedly allow the Division of Nephrology to develop unique innovations in clinical care and scientific discovery.

Publications


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


Primary EBV infection in the immunosuppressed setting of organ transplantation: Determinants of the outcomes of virus-host interaction. Allen UD, Beyene J, Dipchand AI, Grunebaum E, Hébert D, Husain S, Mazzulli T, Ng VL, Read SE, Robinson JL, Teller R, Weitzman SS. Canadian Institutes of Health Research. $509,125 CAD. April 2010-October 2014


Regulation of leukocyte-endothelial interactions. Robinson LA. Natural Sciences and Engineering Research Council of Canada. $170,000 CAD. June 2012-June 2017


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

The Role of Slt/Robo Signaling in renal inflammation. Canada Research Chair (Tier II). Robinson LA. Canada Research Chairs Program. $500,000 CAD. July 2010-June 2015

Staff

**Division Head**
Dr. Lisa Robinson

**Full-Time**
Dr. Christoph Licht
Dr. Diane Hébert
Dr. Elizabeth Harvey
Dr. Rulan Parekh
Dr. Tino Piscione
Dr. Valerie Langlois

**Part-Time**
Dr. Denis Geary
Dr. Rachel Pearl
Dr. Seetha Radhakrishnan

**Clinical Fellows**
Dr. Mamdoh Alsehli
Dr. Shireen Bakhsh
Dr. Rahul Chanchlani
Dr. Joana Dos Santos
Dr. Ismail Dursun
Dr. Damien Noone
Dr. Sharon Roussou
Dr. Sibylle Tschumi

**Adjunct**
Dr. Leo Levin

**Honorary**
Dr. Gerald Arbus

**Administrative Staff**
Anna Corpuz
Dana Debernyj
Ramnarine Mohabir
Bernard Singh
Victoria Snell
Andrea Verdugo
Burnett Wint
Divisional Overview

The major foci of the clinical and academic activities of the Division of Neurology are epilepsy, stroke, headache, neurometabolic disease, neuromuscular disease, neurogenetics, sleep disorders, movement disorders, neuroinflammatory diseases, functional neuroimaging, neonatal neurology and neuro-intensive care. Our neonatal neurology program has been enhanced with the arrival of Dr. Vann Chau this past July, 2013. The Division’s strength in neuromuscular disease and research has been enhanced with the arrival of Dr. James Dowling in September 2013, a clinician scientist from the University of Michigan. In the coming year we will have two additional staff: Dr. Blathnaid McCoy, currently a superfellow in our Epilepsy program will join our full time faculty in the epilepsy program and Dr. Noma Dlamini, a former stroke fellow will join our stroke program.

Several faculty need honourable mention for their endeavours over the past year including Dr. Carter Snead, Dr. Cristina Go, Elizabeth Ferguson, Rohit Sharma and all those from SickKids who were involved in developing the recently published Provincial Epilepsy Monitoring Unit (EMU) guidelines for Ontario. These guidelines now represent the standard for EMUs across the province. In addition, Dr. Cecil Hahn is to be commended for his work expanding our cEEG (continuous electroencephalography) program in Neurophysiology, collaboratively with our intensive care units.

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.

Honors and Awards

Cortez, M: Senior Member, Development of standards for recordings and interpretation of immature rodent EEG, Working Group 2, Translational Task Force of the Neurobiology Commission of the ILAE/AES, Stockholm, Sweden, June 2014

delVebber, G: Winner, Child Neurology Society’s 2014 Bernard Sachs Award, Saint Paul, Minnesota, November 2013

MacGregor, D: Winner of the Athabasca University Centre for Innovative Management “Excellence in Research Scholarship Award” Athabasca, Alberta, January 2014

Miller, S: Appointed President, Society for Pediatric Research, 2013-2015
Miller, S: Winner of the John Stobo Prichard Award, The International Child Neurology Association, Department of Pediatrics, University of Toronto, Toronto, Ontario, May 2014

Minassian, B: Winner of the Norman Saunders “Jacob’s Ladder International Research Prize” for Outstanding Scientist, Department of Paediatrics, University of Toronto, Toronto, Ontario, May 2014

Mohari, M: Runner-up CanMeds Faculty Teaching Award, Division of Neurology, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

Ochi, A: Winner of the Neurology Staff Clinical Teaching Award, Department of Pediatrics, University of Toronto, Toronto, Ontario, June 2014

Moharir, M: Runner-up CanMeds Faculty Teaching Award, University of Toronto, Toronto, Ontario, May 2014

Scientist, Department of Paediatrics, University of Toronto, Toronto, Ontario, May 2014

Minassian, B: Winner of the Norman Saunders “Jacob’s Ladder International Research Prize” for Outstanding Scientist, Department of Paediatrics, University of Toronto, Toronto, Ontario, May 2014

Ochi, A: Winner of the Neurology Staff Clinical Teaching Award, Department of Pediatrics, University of Toronto, Toronto, Ontario, June 2014

Tein, I: Chair, Neurometabolic Disorders Treatment Update (plenary session) XIIth International Child Neurology Congress, Iguaçu, Brazil, May 2014

Tein, I: Co-Chair, NINDS International Mitochondrial Disease Common Data Element Working Group for Development of common data elements for mitochondrial trials/studies. January 2014 - present

Tein, I: Supervisor of Neurology resident Lance Rodan MD’s research project which won first Prize for best oral presentation of Research in Metabolic Session of the XIIth International Child Neurology Congress, Iguaçu, Brazil, May 2014

Tein, I: Member, Executive Board, the International Child Neurology Association. May 2010 to May 2014 and May 2014- May 2018

Tein, I: Member, Editorial Board, Journal of the International Child Neurology Association, May 2012 to present

Tein, I: Member, Education Committee, The International Child Neurology Association. May 2014 to May 2018

Tein, I: Chair, Neurometabolic Disorders Treatment Update (plenary session) XIIth International Child Neurology Congress, Iguaçu, Brazil, May 2014


Tein, I: Appointed President, The International Child Neurology Association, May 2014-May 2018


Weiss, S: CamMeds Faculty Award, Division of Neurology, The Hospital for Sick Children, Toronto, ON, SickKids Department of Pediatrics Continuing Education Award. June 2014. Department of Pediatrics, University of Toronto, Toronto, Ontario, June 2014

Widjaja, E: Excellence in Teaching, Department of Medical Imaging Fellowship Program, University of Toronto, Toronto, Ontario, July 2013 – June 2014

Publications


Hahn CD. To cool or not to cool: does neonatal cord blood provide the answer? Pediatric Critical Care Medicine 2013: July 14 (6): pp 650.


Books and Chapters


Grants and Funding


A study to assess the safety, tolerability and pharmacokinetics of multiple doses of ISIS 396443 delivered intracereally to patients with infantile onset spinal muscular atrophy (SMA). Vajcar J. Canadian PI (only site), ISIS Pharmaceuticals, (Per patient includes study initiation of $20,000 USD). Total amount per pt $49,826 USD (inclusive of OH) & approximately 4 pts. July 2013-July 2015.


$2,500,000 CAD. 2013-2017


Characterizing neuropsychological aspects of patients affected with Bardet-Biedl syndrome. Heon, E, Kerr EN. SickKids International Developmental Neurology Program (IDNP). $1 million USD. 2012-2017


Childhood cerebral palsy integrated discovery network “CP-NET”. Fahings D, deVega B, Fahings M, Menon R, Rosenbaum P Scherer S. Ontario Brain Institute. $5,000,000 CAD. June 2013-May 2018


Clinical genetic testing for autosomal recessive hereditary spastic paraplegia. Ray PN, Yoon G, Baskin B. NIH Office of Rare Diseases Research Collaborative Education and Test Translation Program. $197,000 USD. 2010-2015

Co-clinical trials in Mice and Humans in Autism. Anagnostou E, Lurch J. Azriel Foundation Brain Canada. $250,000 CAD. April 2014-March 2019


Community response to wind turbine noise in rural settings. Pohl D, Venkateswaran S, Banwell B, Yeh EA. CIHR. $300,000 CAD. April 2012-March 2015


Development of a MEG-compatible articyography system for the assessment of brain function and oromotor dynamics. Cheyne D, Chau T, Pang EW, Steele CM, van Lieshout R Donner EJ. Natural Sciences and Engineering Research Council of Canada & Canadian Institutes of Health Research. $390,000 CAD. September 1 2010 – August 2013

Curing adult polyglucosan body disease in mouse. Minassian BA. The Adult Polyglucosan Body Disease Research Foundation. $113,000 USD. July 2012 – June 2015

Developing instructional approaches suited to the cognitive and motivational needs of struggling adult readers. Greenberg D, Lovett MW, Graesser A, Fijters J, Brunan-Martin L. Center for the Study of Adult Literacy: (R305C12001) Funded as the first National Research and Development Center on Cognition and Adult Literacy, Institute of Education Sciences (US Department of Education). $10,000,000 USD. 2012-2017

Development, implementation and dissemination of a standardized approach to the care of paediatric multiple sclerosis: a national consensus guideline of management strategies including treatment of acute relapses, immunomodulation, and escalation therapy to increase patient safety and prevent early-onset neurological disability. Pohl D, Venkateswaran S, Banwell B, Yeh EA. CIHR. $300,000 CAD. April 2012-March 2015

Clinical genetic testing for autosomal recessive hereditary spastic paraplegia. Ray PN, Yoon G, Baskin B. NIH Office of Rare Diseases Research Collaborative Education and Test Translation Program. $197,000 USD. 2010-2015


Community response to wind turbine noise in rural settings. Pohl D, Venkateswaran S, Banwell B, Yeh EA. CIHR. $300,000 CAD. April 2012-March 2015


Development of a MEG-compatible articyography system for the assessment of brain function and oromotor dynamics. Cheyne D, Chau T, Pang EW, Steele CM, van Lieshout R Donner EJ. Natural Sciences and Engineering Research Council of Canada & Canadian Institutes of Health Research. $390,000 CAD. September 1 2010 – August 2013
Development of frontal lobe cognitive functions: Timing, structure and connectivity. Taylor MJ, Duesburg S, Agnagnostou E, Pang EW. Canadian Institutes of Health Research. $875,000 CAD. April 1-2012–March 31-2017

Developmental investigation of memory capacity using functional neuroimaging. Taylor, MJ. Natural Sciences and Engineering Research Council of Canada Discovery Grant. $150,000 CAD. 2009-2014


Development of frontal lobe cognitive functions: timing, structure and connectivity. Taylor MJ, Duesburg S, Agnagnostou E, Pang EW. Canadian Institutes of Health Research BSc. $875,000 CAD. 2012-2017

Dissociating cognitive and motor components of healthy and dysfunctional expressive language development in children. Pang EW, Cheyne D, De Nil L, Roberts SW. Canadian Institutes of Health Research. $871,125 CAD. October 2008-September 2013


Eplink/Ontario Brain Institute. $50,000 CAD. Snead C. Project Genetic Database. Minassian BA. $50,000 CAD. 2012-2014

Identification of carnitine-responsive cardiomyopathy and myopathy in adult patients with dilated and hypertrophic cardiomyopathy and limb girdle weakness. Faghfoory H, Tein I. Physicians’ Services Incorporated Foundation of Ontario. $15,616 CAD. October 2012-September 2014

Identifying the genes for the prototypical and most common generalized epilepsies of children through whole exome sequencing. Minassian B, Andrade D. McLaughlin Centre. $50,000 CAD. 2012-2014

Identifying the genes and underlying causes for intractable epilepsies by next generation sequencing, Minassian BA, Mahmutoglu S. McLaughlin Centre Accelerator Grants in Genomic Medicine. $75,000 CAD. 2013-2014


Early childhood behavior: Relations to early brain structure/ function and maternal mood. Oberlander T, Brant RF, Chau V, Grunau RE, Lim KI, Miller SP, Misri S, Rurak DW, Wiebe SA. Canadian Institutes of Health Research. $1,139,616 CAD. April 2012-March 2017


Ergometric training in mitochondrial myopathies. Lehn I. Knights of Columbus Fund for Mitochondrial Disorders. $1,000 CAD. February 2012-January 2014


Gene discovery for malignant hyperthermia susceptibility. Dowling, JJ. McLaughlin Centre Accelerator Grant, University of Toronto. $75,000 CAD. May 2014-April 2015


Genetics of temporal lobe epilepsy, Minassian B, Andrade D, Bassett A, Kings T, Chow E. Ontario Brain Institute. $70,000 CAD. December 2011-July 2013


GLUT1 deficiency and response to ketogenic diet. Matmutoglu S, Kobyashi J, Donner E. Canadian Institutes of Health Research. $45,000 CAD. 2012-2014

Identification of carnitine-responsive cardiomyopathy and myopathy in adult patients with dilated and hypertrophic cardiomyopathy and limb girdle weakness. Faghfoory H, Tein I. Physicians’ Services Incorporated Foundation of Ontario. $15,616 CAD. October 2012-September 2014

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Identification of carnitine-responsive cardiomyopathy and myopathy in adult patients with dilated and hypertrophic cardiomyopathy and limb girdle weakness. Faghfoory H, Tein I. Physicians’ Services Incorporated Foundation of Ontario. $15,616 CAD. October 2012-September 2014

Identifying the genes for the prototypical and most common generalized epilepsies of children through whole exome sequencing. Minassian B, Andrade D. McLaughlin Centre. $50,000 CAD. 2012-2014

Identifying the genes and underlying causes for intractable epilepsies by next generation sequencing, Minassian BA, Mahmutoglu S. McLaughlin Centre Accelerator Grants in Genomic Medicine. $75,000 CAD. 2013-2014

Id


Magnetoecephalography (MEG) measures of sensorimotor plasticity in hemiplegic CP during Constraint Induced Movement Therapy (CIMT): Combining MEG and MRI to improve localization of epileptic brain activity. Cheyne D, deVeber G. Canadian Institutes of Health Research. $309,000 CAD. April 2014-March 2017


Neurological Outcome of poyglucemia in Neonatal Encephalopathy. Tam EY. Hahn CD, Chau V, Miller SP. Canadian Institutes of Health Research. $703,747 CAD. April 2014-Mar 2019


New approaches to intractable epilepsy-The Epilepsy Discovery Project: Improving Working Memory in Children with Active Epilepsy (Subproject of Group grant). Kerr EJ. Ontario Brain Institute. $50,000 CAD. March 2013-March 2018

New approaches to intractable epilepsy: Phase II of The Ontario Brain Institute Discovery Project. Minassian BA. The Ontario Brain Institute. $250,000 CAD. 2014-2019


Nicotinic acetylcholine receptor PET imaging in patients with myasthenia gravis. Katsberg H, Metzer U, Bril V. Myasthenia Gravis Foundation of America. $50,000 USD. January 2013-January 2014


Personalized medicine for the treatment of epilepsy. Cossette P, Minassian BA. Genome Canada. $11,000,000 CAD. July 2013 – June 2017


Post-marketing retrospective and observational study: Utilization and effectiveness analysis of Gamunex in Guillain-Barré Syndrome (GBS). Vajsar J. Grifols Inc. $11,000 CAD. March 2014 – March 2015

The Children's Stroke Project. deVeber G. Auxilium Foundation. $1,800,000 CAD. July 2009 – July 2014

Think fast! The role of automaticity in the cognitive control of action. Cheyne D. NSERC Operating Grant. $145,000 CAD. 2014 – 2020


Towards the correction of the Rett-like phenotype of MeCP2-deficient mice. Sneed OC. Canadian Institutes of Health Research. $3,965,250 USD. September 2011-August 2016


Vitamin D Clinical Trial. Yeh, EA, Banwell B, Makhani N, Veith R, Marrie, RA. Dairy Farmers of Canada. $80,000 CAD. January 2012-April 2015

Staff

Division Head
Dr. Steven R Miller

Full-Time
Dr. Rand Askalan
Dr. Vann Chau
Dr. Gabrielle deVeber
Dr. Elizabeth Donner
Dr. James Dowling
Dr. Cecil Hahn
Dr. Daune MacGregor
Dr. Berge Minassian
Dr. Mahendranath Moharir

Scientific Staff
Dr. Douglas Cheyne
Dr. Miguel Cortez
Dr. Elizabeth Kerr
Dr. Maureen Lovett

Honorary
Dr. Golda Milo-Manson
Dr. Elysa Widjaja

Residents
Dr. A. Alhashim
Dr. A. Aziz
Dr. A. Barnaga
Dr. S. Irwin
Dr. E. Kozumichewa
Dr. C. Lai
Dr. M. Nababi Nouri
Dr. I. Siddiq
Dr. S. Sonty

Research Fellows
Dr. S. Baba
Dr. G. Longoni
Dr. M. Nakajima
Dr. Y. Sato

Clinical Fellows
Dr. R. Aiyubu
Dr. N. Mishra
Dr. T. Okanishi
Dr. K. Okanari
Dr. S. Sakuma

Subspecialty Fellows
Dr. A. Andrade
Dr. D.M. Ba-Armah
Dr. S. Bigi
Dr. C. Boelman
Dr. F. Borlot
Dr. C. Fernandez-Carbonell
Dr. J.C. Jones

Administrative Staff
Laurie Carvalho
Vicki Corris
Erin Crawford
Maureen Hodge
Nicole Kral
Fatima Ledo
Marilyn McLaughlin
Susy O’Neill
Wendy Ricketts
Barbara Zimmowdski

Quantitative neuroimaging markers of executive dysfunction in children with frontal lobe epilepsy. Widjaja E. $1,171,869 CAD. September 2011 – August 2013


Divisional Overview

The Division of Paediatric Medicine continues to play an integral role in the Department of Paediatrics, with respect to clinical care, quality improvement, education and research. This year has seen a transition in leadership, with Jeremy Friedman moving into the role of Associate Chair Clinical for the Department of Paediatrics and Michelle Shouldice into the role of Division Head for Paediatric Medicine. The Division’s diverse and active Sections include: General Paediatric Hospital Medicine (inpatient and ambulatory), Complex Care, Paediatric Advanced Care Team (palliative care), Child Maltreatment Paediatrics (SCAN), Paediatric Dermatology and Community Paediatrics. Representatives from each of these sections play active roles within the hospital, and also maintain key leadership roles in national and international professional organizations.

Dr. Carolyn Beck continues to provide exceptional leadership for the inpatient hospital medicine section. A staged approach of consolidation of inpatient physician staffing has begun, transitioning to a dedicated group of hospitalists who are either full time Division members, or attend here at least half-time (with the remainder of their clinical work as hospitalists in one of our regional paediatric partner hospitals). The inpatient general pediatric units have experienced sustained high patient volumes and an increase in acuity and complexity, requiring increased attention to optimizing systems and processes, while maintaining a focus on quality and safety. Carolyn Beck, Charlotte Moore Hepburn and Trey Coffey have been at the helm of new initiatives in this area, in partnership with Dinarte Viveiros and Kate Langrish. The Division continues to lead Departmental quality initiatives and to meet or exceed targets, including ED length of stay for admitted patients, discharge medication reconciliation, discharge times and transfer times. The Streamlined Care Unit (SCU) continues to offer efficiencies through cohorting of patients with predictable clinical trajectories. A new model of care, called the Alternative Care Environment (ACE) was conceptualized this year. The objective of ACE is to optimize utilization of bed space for patients requiring inpatient admission, who do not require overnight nursing care. The Division’s work on iPASS, led by Trey Coffey and Zia Bismilla, and part of a national research collaborative, has continued to support enhanced patient care through attention to handoff/transfer of clinical care not only within the Division, but also more widely throughout the Department. Clinical practice guidelines have been developed for asthma and bronchiolitis, and an interdivisional collaboration is underway with Haematology with a view to optimizing care for patients with sickle cell disease requiring hospital admission.

In other areas of the Division, Dr. Catherine Birken was recognized this year with a Departmental award for outstanding clinical contribution, for her innovative work in the STOMP early years program, addressing the growing problem of obesity in young children. Dr. Eyal Cohen was recognized for his outstanding contributions to the care of children with complex medical conditions with a Junior Faculty Clinical Excellence Award. The complex care program continues to grow, now following more than 300 patients with components of the model, such as care plans, taken up by other Departmental programs. Julia Orkin, a new addition to the Division faculty, joined Eyal Cohen in the complex care program this year. The complex care satellite at North York General Hospital, headed by Ronik Kanani, is already at capacity and a new satellite was launched at Toronto East General Hospital. The Paediatric Advanced Care Team, led by Adam Rapoport, has experienced tremendous growth, with an emerging fellowship training program. Academic productivity in PACT has dramatically increased. A plan is in place to continue to expand outpatient palliative care through community partnerships and outreach support. Dr. Lee Ford-Jones was honoured by the Canadian Paediatric Society in recognition of her outstanding advocacy for the health and welfare of children, with the prestigious Victor Marchessault Advocacy Award.
Education remains a key area of activity in Paediatric Medicine, with a significant proportion of core training for University of Toronto undergraduate students and pediatric residents provided by Divisional faculty, including the active Community Section. Under the newly-appointed Michael Weinstein, Divisional Director of Education as of February 2014, active efforts are underway to optimize continuity of care and bedside teaching for medical students and residents on the inpatient units, adjusting to changes in trainee work hours, family-centered rounds and efficiency mandates. Division members continue to be recognized for their outstanding contributions to education through teaching awards, including awards for postgraduate teaching granted to Drs. Parkin, Birken, Mozes and Talarico, and awards for undergraduate (Dr. Bernhardt) and continuing (Dr. Miriam Weinstein) education. Innovative curriculum development is actively underway in Paediatric Dermatology, Paediatric Maltreatment, and Child Maltreatment. Physicians in Paediatric Medicine continue to play key leadership roles in undergraduate and postgraduate education within the Division, University and Learning Institute, and participate actively in Royal College committees and examination boards. A Divisional focus on education scholarship was consolidated this year, with the appointment of Zia Bismilla as the lead, and is expected to contribute to the growth and development of what is an emerging area of strength for the Division.

The Division continues to offer a large, diverse and active fellowship program, with a total of 23 fellows in the 2013/14 academic year, hailing from Canada, the US, Europe, the Middle East, and Mexico. Sarah Schwartz has been appointed Fellowship Director for the Division, and track directors are in place for each of the specific fellowship programs within the Division. Clinical fellows in general paediatric hospital medicine play an active role on the 7B inpatient unit, and admitting services, and provide high quality trainee on call coverage for general pediatrics. The academic general paediatric fellowship continues to thrive, with fellows developing skills in clinical epidemiology, health services research, and public health. A new stream of the AGP fellowship was added this year in global health.

Active fellowship programs which are unique in Canada continue in Paediatric Dermatology, Child Maltreatment, Paediatrics, and Community Paediatrics, with a new fellowship beginning in Paediatric Palliative Care in 2014.

The Paediatric Medicine Research Program has continued its exponential growth and success. With areas of focus in patient-based outcomes research, health services research, global health research and a well-established innovative primary care research network (TARGET Kids), Division members have been exceptionally productive this year. Sustained success in grant support for research endeavours is evident, with Divisional faculty holding a total of more than 40 million dollars of grant funding, and numerous peer-reviewed publications. Dr. Astrid Guttmann continues to play a leadership role in child health services research and health policy, with a tremendously productive research program and has been appointed to the position of Chief Science Officer at the Institute for Clinical Evaluative Sciences (ICES). She was selected for the Divisional research award this year in recognition of her significant contributions. In recognition of his successful program of research, Jonathon Maguire was selected for Young Investigator Awards by the Canadian Paediatric Society and CIHR.

Paediatric Dermatology remains the busiest ambulatory clinical service in the Department. The Dermatology Section continues to provide outstanding clinical care for children with rare dermatologic conditions and those requiring interdisciplinary approaches. Headed by Elena Pope, the section provides leadership nationally and internationally in the field, is tremendously active in education at all levels, and offers a unique and popular fellowship training program which is building clinical and academic capacity. This year, Dr. Pope cochaired the World Congress of Paediatric Dermatology in Madrid, Spain. Academic activity within the Section has led to success in grant funding and numerous publications which are improving the course of clinical care for children with rare skin conditions.

The SCAN Program continues to grow under new leadership, with the transition of Michelle Shouldice into the Division Head role. Tanya Smith, a nurse practitioner with 20 years experience in the field heads up the sexual abuse/assault program. Emma Cory, a paediatrician who has been with SCAN for 10 years, and is recognized widely clinically and by the courts for her expertise in child physical abuse, neglect and failure to thrive, was appointed SCAN co-Director in February 2014. Clinical activity continues both on site at the hospital, and at the downtown Child and Youth Advocacy Centre, a model partnership between medical, mental health, child protection and police services. An active fellowship program is in place, training paediatricians who will build capacity in Canada and internationally. Certification in Child Maltreatment Paediatrics by the Royal College is pending and the Toronto fellowship program will apply for accreditation this upcoming year. A successful annual National Symposium on Advanced Practices in Child Maltreatment Paediatrics was held in Toronto in 2013, attended by more than sixty paediatricians and nurses who provide care and expert opinions in child maltreatment cases. An interprofessional clinical research program in child maltreatment continues to develop, with increasing poster presentations and publications arising from the team.

This outstanding group of clinicians, educators and researchers has had a tremendously successful year and remains dedicated to working together to improve the health and welfare of children through general pediatric clinical care, a commitment to education, and scholarship. Important collaborations with the Division’s downtown partner St. Michael’s hospital, Toronto area regional hospitals, community pediatrics, primary health care providers, and research networks are essential to the Division and continue to grow. Congratulations on an excellent year!

Honors and Awards

Bernhard, N: Winner of the RHA Haslam Preclerkship Teaching Award, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

Birken, C: Winner of the POWER Award for excellence in postgraduate teaching, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

Birken, C: Winner of the award for Outstanding Clinical Contribution (with Jill Hamilton/STOMIP), Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

Cohen, E: Winner of the Junior Faculty Award for Clinical Excellence in Paediatric Medical Care, Department of Paediatrics, The Hospital for Sick Children, Toronto, Ontario, June 2014

Cohen, E: Winner of the Inaugural Visiting Innovator, Center for Child Health Policy, Stanford University, Stanford, California, March 2014

Ford-Jones, L: Canadian Pediatric Society Victor Marchessault Advocacy Award, Canadian Pediatric Society, Canadian Pediatric Society Conference, Montreal, Quebec, June 2014

Guttmann, A: Division of Paediatric Medicine Research Award, The Hospital for Sick Children, Toronto, Ontario, July 2013

Kanani, R: Winner of the Lionel Weinstein Clerkship Teaching Award, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

Maguire, J: Winner of the CIHR New Investigator Award, Ottawa, Ontario, July 2013
Maguire, J: Winner of the Young Investigator Award, Canadian Paediatric Society, Edmonton, Alberta, June 2013

Mozes, Y: Winner of the Marvin Gerstein Award, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

PACT team: Promising project for pediatric healthcare professionals, the people’s choice award (voted best app by all conference attendees), and the Mobile Med award, HackingHealth Kids, The Hospital for Sick Children, Toronto, Ontario, May 2014

Parkin, P: Winner of the POWER Award for excellence in postgraduate teaching, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

Pope, E: Winner of the 2014 Recognition by Faculty of 1000 (F1000), London, United Kingdom, 2014

Talarico, S: Winner of the POWER Award for excellence in postgraduate teaching, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014

Weinstein, M: Winner of the 2014 Recognition by Faculty of 1000 (F1000), London, United Kingdom, 2014

Weinstein, M: Winner of the Colin R. Woolf Award for Teaching Excellence in Continuing Professional Development, Continuing Professional Development in the Faculty of Medicine, at the University of Toronto, Ontario, 2013

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**Publications**


Radhakrishnan DK, Deil SD, Guttmann A, Shariff SZ, Liu K, To T. Trends in the age of diagnosis of childhood asthma. Journal of Allergy and Clinical Immunology 2014 Jun 27.


Cardiac Antibodies as a Mechanism for Right Ventricular Hypertrophy in EB. Sajic D, Pope E, Lara-Corrales I, Hamilton R. Canadian Dermatology Foundation. $5,000 CAD. September 1-2013-August 31-2014

CARE to SLEEP. Study. Cohen E, Kerity K. Norman Saunders Complex Care Research Grant Competition. $3,681 CAD. November 1-2012-November 30-2013


Closing the Gap: A Handoff Curriculum for Medical Students. Schwartz SB, Bismilla Z. Paediatric Consultant's Education Research Grant. $5,000 CAD. December 1-2013-December 31-2014


Diagnostic Delay in Pediatric Acute Leukemia: Characteristics, Predictors and Associations with Outcome. Surog L, Guttmann A. The Hospital for Sick Children Department of Paediatrics Creative Professional Activities Grant. $9,824 CAD. December 1-2012 – Present


Do vitamin D fortified cheese and yogurt products support vitamin D status and functional outcomes in young children. Weiler H, Rauch F, Maguire J. Dairy Farmers of Canada. $33,287 CAD. September 1-2013-June 30-2014


Ensuring effective newborn screening: The case of cystic fibrosis. Miller F, Guttmann A. Canadian Institutes of Health Research, Operating Grant. $771,524 CAD. July 1-2010 – June 30-2014

Epidermolysis Bullosa: Clinical Characterization and Outcomes Database. Pope E, Lara-Corrales I, Lee M. EB Medical Research Foundation. $12,709 CAD. December 17-2013-December 31-2014


Exome sequencing a family with Gene-negative Epidermolysis Bullosa. Surocicais/ichthyosis Bullosa of Siemens. Pope E, Lara-Corrales I, Hamilton R. Rare Disease Foundation. $3,500 CAD. September 4-2013-September 2-2014

Education Development Fund, Faculty of Medicine, University of Toronto

$9,537 CAD. March 1-2014 – February 28-2015


Education Development Fund, Faculty of Medicine, University of Toronto

$19,075 CAD. January 1-2014 – December 31-2014


$10,000 CAD. January 1-2013 – December 31-2013


$520,983 CAD. February 1-2012-September 30-2013


$154,820 CAD. October 1-2012-November 30-2012

Inflammatory Bowel Disease in Immigrants to Canada and their Children: Epidemiology and Access to Specialist Care Children's Hospital Academic Medical Organization and Ontario Ministry of Health and Long-term Care Academic Health Sciences Centres, Benichou E, Guttman A.

AHP Innovation Fund.

$57,485 CAD. January 1-2012 – December 31-2012


$913,872.00 CAD. January 1-2014 – December 31-2019


$315,121 CAD. January 1-2013-July 31-2017


$91,000 CAD. January 1-2013-January 31-2014


$10,000 CAD. September 1-2012–March 31, 2013


$90,000 CAD. January 1-2011-December 31-2013

Molecular diagnostics to improve the care of children with complicated pneumonia. Wadhwa A, Weinstein M. Pediatric Consultants Partnership, The Hospital for Sick Children.

$10,000 CAD. January 1-2013 – December 31-2014


$541,567 CAD. August 1-2011-June 31-2016


$2,342,887 USD. November 1-2012 – October 30-2013


$25,000 CAD. October 1-2013-October 30-2014


$25,000CAD. October 15-2013-October 15-2014


$9,981 CAD. November 1-2013 – November 1-2014

Wadwa A, Weinsteim M. Pediatric Consultants Partnership, The Hospital for Sick Children.


**Surgical interventions and outcomes of children with trisomy 13 and 18 in Ontario. Nelson K, Mahant S, Cohen E, Guttmann A. Norman Saunders Complex Care Research Grant Competition.** $20,000 CAD. November 1-2012-December 31-2013


Start-up Operating. Birken C. **SickKids Research Institute.** $114,780 CAD. September 1-2012-August 31-2014


The Influence of Temperament on Outdoor Play in Early Childhood. Sharp J, Birken CS, Maguire J, Parkin PC, Lebovic G, Barsky S, Abdulah K. **Academic Pediatric Residents Investigator Award (RA) Program.** $5,000 CAD. September 1-2010-August 31-2010

The Rural/Urban Divide in Inflammatory Bowel Disease: Access, incidence, outcomes and access to care in Canada. Benchimol E, Guttmann A. **Janssen Future Leaders in IBD Grant.** $75,000 CAD. November 1-2012 – October 31-2014


The Validation of isoEB for Patients with Epidermolysis Bullosa. Pope E, Bruckner A. **EB Medical Research Foundation and Jackson Gabriel Silver Foundation.** $17,136 CAD. January 8-2014-December 31-2014


Understanding the effects of social, behavioural and metabolic factors on early childhood growth trajectories among Aboriginal Canadians. Hanley AJ, Birken CS, Hamilton JK, Harris SB, Maguire JL, Parkin PC, Rae J, Zinnman B. **CHIR Operating Grant.** $208,768 CAD. April 1-2013 – March 31-2018


Divisional Overview

The Division of Respiratory Medicine is committed to excellence in patient, care, education and research.

Our multidisciplinary team continues to provide comprehensive inpatient and outpatient respiratory programs for a full range of paediatric pulmonary diseases including asthma, cystic fibrosis, primary ciliary dyskinesia, chronic respiratory insufficiency, lung disease due to prematurity, congenital malformations, patients with end-stage lung disease requiring lung transplantation and sleep related respiratory disorders. Our Respiratory Medicine Program also provides a comprehensive range of ambulatory and diagnostic services.

Our ambulatory clinics have had approximately 4600 patient visits this past year and are comprised of: Asthma Clinic, Complex Respiratory Care/Home Ventilation clinic, Craniofacial/Sleep clinic, Cystic Fibrosis clinic, General Respiratory clinic, Hereditary Hemorrhagic Telangectasia clinic, Interstitial Lung Disease clinic, Primary Ciliary Dyskinesia clinic, Lung Transplant clinic, Narcolepsy clinic, Sleep Disorders clinic, Tracheoesophageal Fistula clinic.

Over the past year, we have performed over 6500 diagnostic tests and these have included Flexible Bronchoscopy, Pulmonary Function Testing, Polysomnogram (Sleep Studies) and Exercise Tests.

The Paediatric Lung Transplant Program is led by two of our faculty, Dr. Melinda Solomon and Dr. Hartmut Grasemann. They provide expert pre-transplant, post-transplant and follow-up care to our paediatric lung transplant population. Last year we had the highest number of pediatric lung transplantations since the inception of the program in 1995.

The Sleep Medicine Program has undergone a significant expansion this past year and as such, is the largest and most comprehensive paediatric sleep program in Canada. We currently have 3 physicians, Dr. Indra Narang (Director), Dr. Reshma Amin and Dr. Suhail Al-Saleh committed to the care of paediatric patients with sleep related breathing disorders. Our sleep diagnostic facility is now open 7 days a week and is able to perform up to 35 Polysomnograms (PSG’s) per week for both in and out-patients. In addition, we provide a range of specialized sleep clinics including general sleep clinic, multi-disciplinary sleep clinic, narcolepsy clinic and Dreams (joint Sleep/ENT) clinic. Our Dreams clinic, working alongside Dr. Evan Propst now provides state of the art Cine MRI scans of the airway for the comprehensive assessment of children with persistent sleep disorders despite conventional surgical interventions. In addition, Suhail Al-Saleh has started a collaborative program with the craniofacial program which has resulted in a specialized craniofacial sleep clinic in 2014 that follows children with syndromic craniosynostosis longitudinally.

The Home Ventilation program, led by Dr. Reshma Amin and Dr. Theo Moraes, continues to be the largest program in the country providing comprehensive care to over two hundred children at risk of or requiring long-term ventilation. This past year the program has partnered with Holland Bloorview Rehabilitation Hospital to streamline and coordinate care of these children. The program continues to grow annually with more children initiated on non-invasive and invasive ventilation this past year than ever before.

The faculty is continually looking for new ideas or methods to improve patient care and the services we provide. Some of our current innovative projects include:
Dr. Reshma Amin leads a hospital initiative at SickKids to develop a formal electronic integrated care pathway for children receiving long-term ventilation to decrease length of stay and enhance patient safety.

Dr. Melinda Solomon co-leads the SickKids Cystic Fibrosis Quality Improvement project (CF QI) to improve the nutritional status of cystic fibrosis patients.

Dr. Theo Moraes is piloting the “Smoking Cessation Program” in The Hospital for Sick Children to help family members of patients to quit smoking in the interest of their child’s health.

Dr. Felix Ratjen is developing screening guidelines for hereditary hemorrhagic telangiectasia and has been working with an international team of experts to develop international standards of care for cystic fibrosis.

Dr. Sharon Dell, alongside Dr. Priscilla Chu in the Division of Surgery has established a new multi-disciplinary Tracheoesophageal Fistula (TEF) for the comprehensive treatment of patients with this condition.

Dr. Suhail Al-Saleh, our newest faculty member to our division was appointed to Assistant Professor in the Department of Paediatrics in the Faculty of Medicine, University of Toronto, in July 2013.

Dr. Indra Narang was promoted to Associate Professor in the Department of Paediatrics in the Faculty of Medicine in June 2014.

Dr. Reshma Amin was cross-appointed to the Institute of Health Policy, Management and Evaluation as an Assistant Professor in June 2014.

Dr. Neil Sweezy joined the University of Toronto Undergraduate Medical Education as the Director for Comprehensive Research Experience for Medical Students (CREMS) Programs at the Faculty of Medicine.

Dr. Sharon Dell, who is the director of the Clinical Epidemiology and Health Care Research graduate program in IHPME at the University of Toronto, is currently working on the expansion of the program to include MD-PhD students from the Faculty of Medicine at the University of Toronto.

The following are the education initiatives:

**Education**

The Division’s role in education has continued its excellence at all levels of training: medical students, core residents, subspecialty residents, fellows as well as in continuing medical education. Our training program, led by Dr. Melinda Solomon, is accredited by the Royal College of Physician and Surgeons. Dr. Reshma Amin continues to be the Undergraduate Medical Education lead for the Division.

Dr. Suhail Al-Saleh, along with Drs. Indra Narang and Reshma Amin have developed a paediatric Sleep Medicine Fellowship Program.

Research

Research continues to grow and develop. The major research focus include the markers of early lung disease in preschool children, determining outcome measures for clinical trials in cystic fibrosis as well as clinical and epidemiological studies in patients with asthma, cystic fibrosis and various respiratory diseases and sleep disorders.

Dr. Padmaja Subbarao continues as the co-director and co-principal investigator of the Canadian Healthy Infant Development (CHILD) Study along with Dr. Malcolm Sears of McMaster University. CHILD is still the largest birth cohort in Canadian history with over 3600 participants. Dr. Subbarao has successfully received research funding from the Canadian Institutes of Health and Research (CIHR) for her project on lung function in preschool children.

Dr. Theo Moraes has a research program centered on viral inflammation in the lung with a focus on respiratory syncytial virus (RSV). He was a co-author on a recent Nature Medicine manuscript describing a novel role for matrix metalloproteinases in the regulation of interferon levels post viral infection. His lab cultures primary human nasal epithelial cells to better understand viral infections. More recently these cultures are being evaluated as a tool for a more personalized medicine approach in the management of CF.

Our newest faculty member to the division, Dr. Suhail Al-Saleh was recently appointed the SickKids Research Institute as a Project Investigator, and is currently working on the effects of sleep disordered breathing on health related quality of life in children with medical complexity as well as the prevalence of sleep disordered breathing in children with different underlying medical diagnoses.

Dr. Indra Narang is currently conducting a large clinical trial evaluating cardiopulmonary and neurocognitive performance in obese children with obstructive sleep apnea. More recently, she has been appointed as an executive member and the paediatric co-chair of a large sleep network, the Canadian Sleep and Circadian Network involving adult and paediatric sleep researchers across Canada to establish a nationwide research program.

Dr. Reshma Amin’s research program focuses on improving patient safety and quality of care for children receiving long-term ventilation. She is currently developing and validating a Canadian tool to assess competency for caregivers of children receiving long-term mechanical ventilation. She is also prospectively studying the ‘experience’ of transition for ventilator assisted adolescents and their family caregivers, in collaboration with WestPark Rehabilitation hospital.

Dr. Felix Ratjen continues to have several research projects sponsored by industry and non-industry funding agencies. He has a long standing interest in assessing early intervention strategies in cystic fibrosis as well as in developing outcome measures for pediatric lung diseases. Dr. Ratjen and his team just recently validated multiple breath washout technology as an early disease marker in CF. This lead to four interventional studies involving hypertonic saline, dornase alfa and most recently ivacaftor, a CFTR potentiator. These studies performed in school age children form the basis for the development of a core site for multiple breath washout testing in North America which has been developed in close collaboration with Dr. Jane Davies at the Royal Brompton in London, who is leading the core facility for the European Clinical Trial network. This infrastructure is currently being used for interventional studies involving CFTR modulating therapies. In parallel, Dr. Ratjen’s team continues to validate the technology for use in younger children with the future goal of using this methodology for interventional studies in infants and preschool children.

For a more complete description of our research interests, please visit our website.
Publications


| Radhakrishnan D, Dell S, Goddard M, To T. Trends in the age of diagnosis of childhood asthma. Journal of Allergy and Clinical Immunology. 2014: [Epub ahead of print]. |
Molecular diagnostics to improve the care of children with complicated pneumonia. Wadhwa A. Pediatric Consultants Partnership, SickKids Hospital, Toronto. $10,000.00 CAD. July 2013-June 2014

Phase 3, randomized, double-blind, placebo-controlled, parallel-group study to evaluate the efficacy and safety of lumacaftor monotherapy and in combination with ivacaftor in subjects aged twelve years and older with cystic fibrosis, homozygous for the F508del-CFTR mutation. Ratjen F. Vertex Pharmaceuticals Inc. $14,426.00 CAD per patient. July 15 2013 – December 31 2014

Primary human nasal epithelial cell culture in CF to test for responses to CFTR modulators. Moraes T. $14,426.00 per patient. July 2013-June 2014

Screening for Pompe’s disease in children with central hypventilation. Narang I. Genzyme Canada. $30,000.00 CAD. March 1 2014-April 30 2016

SHIP (Saline hypertonic in preschoolers) study – planning grant. Rosenfeld M, Ratjen F. Cystic Fibrosis Foundation Therapeutics Inc. $205,764.00 USD. November 1 2013-October 31 2014

Short-chain fatty acids in the cystic fibrosis lung. Grasemann H, Waters V. SickKids CF Center Catalyst Research Grant. $50,000.00 CAD. June 30 2014-December 2015


**Staff**

- **Division Head**
  - Dr. Felix Ratjen

- **Full-Time**
  - Dr. Suhail Al-Saleh
  - Dr. Rekha Amin
  - Dr. Sharon Dell
  - Dr. Hartmut Grasemann
  - Dr. Theo Moraes
  - Dr. Indra Narang
  - Dr. Melinda Solomon
  - Dr. Padma Subbarao
  - Dr. Neil Sweezy

- **Part-Time**
  - Dr. Peter Bikanganga
  - Dr. Joanna Massam
  - Dr. Charlotte Miller
  - Dr. Denis Gurwitz
  - Dr. Elizabeth Tullis

- **Cross-Appointees**
  - Dr. Neha Sharma

- **Research Associates**
  - Dr. Sanja Stanojevic
  - Dr. Suhail Al-Saleh
  - Dr. Dhaliwal
  - Dr. Tadhg O’Flynn

- **Subspecialty Residents**
  - Dr. Sundeep Bola
  - Dr. Jackie Chiang
  - Dr. Tamizan Kherani
  - Dr. Sarah Kwon
  - Dr. Tara Mullowney
  - Dr. Zoe Nugent
  - Dr. Neha Sharma

- **Research Fellows**
  - Dr. Ester Maria Pizzaro

- **Administrative Staff**
  - May Brydges
  - Gemma Edwin
  - Beverley Nutt
  - Jessica Pereira
  - Victoria Snell
Divisional Overview

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

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

The Division of Rheumatology has one of the largest paediatric rheumatology fellowship training programs in North America and is fully accredited by the Royal College of Physicians and Surgeons of Canada. In April 2013 the Division of Rheumatology underwent Accreditation. The Program received full and unconditional approval from the Royal College.

Honors and Awards

Feldman, B: Winner of the Canadian Rheumatology Association, Distinguished Investigator Award, Whistler, British Columbia, 2014

Feldman, B: Winner of the Ho Family Chair in Autoimmune Diseases, The Hospital for Sick Children, Toronto, Ontario, 2013

Schneider, R: Winner of the Paediatric Academic Leadership, Clinical Educator Award, Paediatric chairs of Canada, Ottawa, Ontario, 2013

Schneider, R: Winner of the Charles Mickie Fellowship Award, University of Toronto, Faculty of Medicine, Toronto, Ontario, 2014

Schneider, R: Runner-up for the Department of Paediatrics Faculty Mentorship Award, The Hospital for Sick Children, Toronto, Ontario, 2014

Tse, S: Dafna Gladman Award Recipient, Ogryzlo Day, University of Toronto, Toronto, Ontario, 2014

Yeung, R: Inaugural Chair, Hak-Ming and Deborah Chiu Chair in Paediatric Translational Research, The Hospital for Sick Children, University of Toronto, Toronto, Ontario, 2013


Periodic Fever Syndrome in Canada: Canadian Pediatric Society Prevalence Study. Dancey E, Benseler S, Junker A, Laxer RM (Co-PI), Mettuenn R, Turner L, Gattorno M. Canadian Pediatric Society, Novartis Pharmaceuticals Inc. $73,270 CAD. September 1-2010-September 1-2014


Tocilizumab in Polyarticular JIA: Silverman ED, Schneider R, Benseler S. Roche Pharmaceuticals. $195,000 CAD ($65,000 CAD/year) January 1-2010-July 1-2013


Staff

Division Head
Dr. Brian Feldman

Full-Time
Dr. Ronald Laxer
Dr. Deborah Levy
Dr. Shirley Tse
Dr. Rae Yeung

Cross-Appointees
Dr. Nicholas Blanchette
Dr. Karoon Danayan
Dr. Hans Dosch
Dr. Clare Hutchinson
Dr. Gordon Soon

Clinical Associate
Dr. Linda Hiraki

Part-Time
Dr. Bonnie Cameron
Dr. Rayfel Schneider
Dr. Earl Silverman
Dr. Lynn Spiegel

Research Fellows and Associates
Dr. Daniela Ardelean
Dr. Julie Barsalou
Dr. Ezequiel Borgia
Dr. Lily Lim
Dr. Mira van Veenendaal

Audrey Abad
Shazia Ali
Trang Duong
Haddas Grosbein
Alicia Hilderley
Dan Ignas
Reena Kainth
Marjorie McLimont
Lawrence Ng
Shehla Sheikh

Clinical Fellows
Dr. Buthaina Al-Adba
Dr. Maya Gerstein
Dr. Rachana Hasija

Subspecialty Residents
Dr. Alisa Rachlis
Dr. Evelyn Rozenblum
Dr. Dax Rumsey
Dr. Rebeka Stevenson

Administrative Staff
Michelle Blimkie
Olga Bogas
Lynn Brown
Krystal Chiu
Anna Corpuz
Denise Ferreira
Michael Figueiredo
Tanya Lorenc
Kamela Ramlackhan
Tania Viseu
Sara Walker
Joanna Walsh
Faculty Awards

Teaching/Education Awards

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

Dr. Dror Koltin – The Lionel Weinstein Clerkship Teaching Award to the faculty member who has demonstrated excellence in clerkship teaching

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

Dr. Adelle Atkinson – 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. Yehuda Nofech-Mozes – 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. Yousef Etoom – Postgraduate Community Teaching Award in recognition of excellence in the teaching of paediatric residents within community-based hospitals and offices

POWER Awards

For outstanding contributions for Postgraduate Teaching

Dr. Pat Parkin
Dr. Catherine Birken
Dr. Eddy Lau
Dr. Briseida Mema
Dr. Suzanne Talarico

Dr. Shaun Morris – 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. Anupma Wadhwa – Subspecialty Teaching Award to the faculty member who has demonstrated commitment to excellence in teaching the subspecialty residents and clinical fellows

Dr. Shelly Weiss – 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
Faculty Development
Dr. Gideon Koren – Faculty Mentorship Award

Clinical Awards
Dr. Ron Grant – 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. Eyal Cohen – 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

Dr. Catherine Birken and Dr. Jill Hamilton – Outstanding Clinical Contribution Award: STOMP

Research Awards
Dr. Phil Sherman – 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 awardee will be more 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. Kathy Bouts – Mid-Career Research Award

Dr. Mark Friedberg – 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.

Paediatric Administrative Award
Sue Morton – 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. Joanna Humphreys (PGY3) and Dr. Michael Khoury (PGY4) – Christopher Onstadte Award to a senior resident for excellence in clinical teaching as nominated by core paediatric residents.

Dr. Adrienne Davis – CanMEDS Award – Subspecialty Trainee

Clinical Awards
Dr. Nicole Coles – The Saunders Prize to a senior resident who has demonstrated excellence in clinical paediatrics.

Core Paediatrics
Dr. Kamini Raguram and Dr. Julia Sharp (tie)

Junior Trainee – Basic Science
Patrick Sin-Chan

Senior Trainee-Basic Science
Dr. Maian Roifman

Senior Trainee-Clinical Science
Dr. Amanda Hauck and Dr. Melanie Penner (tie)

Oral Presentations

Amir, Achiya, Gastroenterology/Hepatology/Nutrition

Allergy and autoimmunity following solid organ transplantation
Prevalence, natural history and risk factors. A Amir, N Marcus, E Grunebaum, A Dippchand, D Hebert, V Ng, T Walters, Y Aizontur

Furlong, Kyla, Infectious Diseases


Lee, Grace, Paediatric Medicine

Non-cow’s milk consumption is associated with lower serum 25-hydroxyvitamin D in early childhood. GJ Lee, CS Birken, PC Parsoni, G Lebovic, Y Chen, MR L’Abbé, JL Maguire

Raghuram, Kamini, Core Paediatrics

Direct reprogramming of mouse fibroblasts into airway epithelium. K Raghuram, A Wong, J Rossant

Rolfman, Maian, Clinical & Metabolic Genetics

Novel alterations in placental DNA methylation associated with IUGR. M Rolfman, S Choufani, S Drewlo, S Keating, J Kingdom, R Weksberg

Sun, Liquin, Cardiology

Feasibility of comprehensive hemodynamic assessment in the normal late gestation human fetus by phase contrast MRI and T2 mapping. L Sun, M Al-Rujaib, J van Amerom, E Jangki, L Grosse Wortmann, S-J Yoo, CK Macgowan, M Seed

Poster Presentations

Amid, Ali, Haematology/Oncology


Abbott, Leigh, Haematology/Oncology

Accrual of adolescents and young adults with cancer to eligible clinical trials: a report from the National Cancer Institute of Canada Clinical Trials Group (NCIC-CTG).


Adamski, Jennifer, Haematology/Oncology

The impact of initial radiation in infants and the re-irradiation of recurrent disease on the survival of ependymoma patients at The Hospital for Sick Children, Toronto. J Adamski, M Taylor, U Tabori, A Huang, U Bartels, R Krishnatry, N Lapierriere, C Hawkins, E Bouffet

AI Adba, Buthaina, Rheumatology

Epidemiology and biologic treatment patterns of systemic juvenile idiopathic arthritis in Ontario. B Al Adba, R Schneider, E Silverman

AI Hashim, Aqra, Neurology

Agness of corpus callosum: Clinical and neuroradiological evaluation. A Al Hashim, D MacGregor, S Blaser, C Raybaud

AI Khattabi, Fadia, Paediatric Medicine

Retinocytosis and traumatic head injury in infants and children. F Al Khattabi, A Rizwan, S McIntyre, A Ellis, AV Levin, M Shouldice

Alphonse, Martin, Rheumatology

Inositol 1,4,5-triphosphate 3-kinase C (ITPKC) regulates NLRP3 inflammasome activation in Kawasaki Disease (KD). M Alphonse, TT Duong, J Burns, RSM Yeung

Amid, Ali, Haematology/Oncology

Ayed, Miriam, Neonatology
Outcome of infants with necrotising enterocolitis (NEC): The impact of laparotomy versus pententoneal drainage. M Ayed, P Shah, A Lodha, ED Skarsgard, SickKids Lee, AM Moore

Bahi, Allison, Endocrinology
Endocrine manifestations of hepatoblastoma. A Bahi, J Wasserman, F Mahmud

Bakel, Leigh Anne, Paediatric Medicine
Pediatric hospital conditions: Is impact associated with the existence of clinical practice guidelines. LA Bakel, A Merglen, E Cohen, PC Parkin

Baksh, Shireen, Nephrology
Nephrotic syndrome associated with schimke immuno-osseous dysplasia (SIOD). S Baksh, D Hebert

Bakhsh, Sundeep, Respiratory Medicine
Sleep disordered breathing in pediatric patients with functionally single ventricle. S Bola, S Dhanju, S Al-Saleh, R Amin, I Narang

Boelman, Cyrus, Neurology
Phenotype-genotype of a large Jeavons syndrome cohort. C Boelman, L Brungá, B Minassian (POSTER S2)

Burghardt, Karolina, Gastroenterology/Hepatology/Nutrition
Critical appraisal of current implications for pediatric intestinal transplant and proposal of new listing criteria. K Burghardt, PW Wales, N de Silva, D Stephens, D Grant, Y Avitzur

Chacko, Anila, Infectious Diseases
Changes in morbidity and mortality between the pre-and postcombination antiretroviral therapy (cART) era in HIV-infected children. A Chacko, M Science, C Arneson, G MacDougall, S Read, A Bitnun

Chanchlani, Rahul, Nephrology
Cognitive and neurobehavioural profile and its relation with genotopy mutation in boys with Duchenne muscular dystrophy. R Banchani, S Smile, G Yoon, M Mosleh, A Snider, L McAdam

Basak, Sanjukta, Endocrinology

Bili, Sandra, Neurology
A new computerized tool detects subtle differences in information processing speed in children with MS. S Bili, RA Marrie, C Till, EA Yeh, N Akbar, A Feinstein, S Banwell

Blichowski, Monica, Neurology
Girt2 channel function is necessary for infantile spams-like seizures induced by GABA(β1) receptor agonists. M Blichowski, A Shephard, L Shen, MA Cortez, O Carter Snead

Bola, Sundeep, Respiratory Medicine
Sleep disordered breathing in pediatric patients with functionally single ventricle. S Bola, S Dhanju, S Al-Saleh, R Amin, I Narang

Boelman, Cyrus, Neurology
Phenotype-genotype of a large Jeavons syndrome cohort. C Boelman, L Brungá, B Minassian (POSTER S2)

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Changes in morbidity and mortality between the pre-and postcombination antiretroviral therapy (cART) era in HIV-infected children. A Chacko, M Science, C Arneson, G MacDougall, S Read, A Bitnun

Chanchlani, Rahul, Nephrology
Incidence of post-transplantation hyperglycemia and new-onset diabetes after transplant (NODAT) in pediatric solid organ transplant recipients. R Chanchlani, J Hyeon Choi, J Vasilevska-Ristovska, V Ng, A Dipchand, D Solomon, D Hebert, SJ Kim, RS Parekh

Chaudhry, Ayeshah, Clinical and Metabolic Genetics
Phenotypic spectrum associated with PTCHD1 deletions and truncating mutations. A Chaudhry, A Noor, B Degagne, K Baker, CF Boerkoel, LA Bok, A Brady, D Chitayat, D Oyment, L Filges, B Helm, HT Hutchison, LJ Bone Jeng, F Lauemnries, FL Raymond, W Roberts, R Rupps, CTRM Schrandt-Stampel, DJ Stawumpslos, SJ rat Stevens, ERA Thomas, A Toutain, S Vergano, SW Scherer, JB Vincent, MT Carter

Cheng, Sylvia, Haematology/Oncology

Citro, Barbara, Cardiology
Tissue Doppler imaging echocardiographic reference values for left and right ventricle in children during exercise. B Citro, A Dragulescu, M Minihani, C Siorach, C Manihisti, MK Friedberg, L Mertens

Coles, Nicole, Core Paediatrics
Abnormal glucose metabolism in adolescents with polycystic ovarian syndrome. N Coles, K Bremer, X Yan, S Whites, M Hamilton

Collins, Jovian, Core Paediatrics
Analysis of the hidden curriculum at the University of Toronto Pediatric program through trainee reflections. J Collins, A Atkinsin, M Martinamanakis, A Matlow

Dagher, Marc, Gastroenterology/Hepatology/Nutrition
Overweight, central obesity and cardiometabolic risk factors in pediatric liver transplant recipients. M Dagher, VL Ng, A Carpenter, S Rankin, M De Angelis, Y Avitzur, M Mouzaki

D'Alessandro, Lisa, Cardiology
Abnormal glucose metabolism in adolescents with polycystic ovarian syndrome. N Coles, K Bremer, X Yan, S Whites, M Hamilton

D'Alessandro, Lisa, Cardiology
Parental perceptions towards non-invasive prenatal genetic testing in high-risk pregnancies. L D'Alessandro, V Thakur, M Sali, N Duti, E Jaeggi, S Mitai

Dang, Frances, Gastroenterology/Hepatology/Nutrition
miR-142-3p directly regulates autophagy-dependent gene ATF1G61 in Crohn's Disease. F Dang, D Rodrigues, M Ibomy, NL Jones

Davis, Adrienne, Emergency Medicine
The big score & prediction of mortality in pediatric trauma. A Davis, F Razik, T Malik, A Pizzolato, P Wales, D Stephens, S Schuh

Delano, Kaitlin, Clinical Pharmacology and Toxicology
Rates of fetal polydrug exposures in methadone-maintained pregnancies from a high-risk population. J Garety, G Koren

De Souza, Bradley, Core Paediatrics
Gastric flora in gastrostomy fed children with neurological impairment on acid suppression medication. B De Souza, E Cohen, S Mahant, S Richardson, Y Avitzur, A Rapoport

Downie, Mallorie, Core Paediatrics
Cardiac outcome and second-line treatment in patients with Kawasaki Disease non-responsive to IVIG. M Downie, D Manihisti, T Collins, B McCrindle

Eng, Simon, Rheumatology
The biological basis of childhood arthritis. S Eng, Q Morris, RSM Yeung

Evans, Andrea, Core Paediatrics
The cost and impact on the Interim Federal Health Program cuts on child refugees at SickKids. A Evans, A Caudarella, S Ratnapalani, K Chan

Fuji, Hisaki, Haematology/Oncology
Establishment of humanized chronic graft-versus-host disease mice model. H Fuji, Z Luo, HJ Kim, X Wang, S Newbigging, A Keating, M Egeler
B Ngan, K Adeli, T Gonska, J Langer, R Schneider, J Fish, ME Lowe, VP Singh, I Loverdos, S Shekherdimian, M Swan, A Al-Rasheed,

Pancreatitis pannicultitis and polyarthritis (PPP) syndrome.

Loverdos, Ines, Gastroenterology/Hepatology/Nutrition

L Deepak, XY Ye, P McNamara, A Jain

in preterm neonates.

Predictors of failure of second course indomethacin

A Llyod-Kuzik, C Bear, T Gonska

production in cystic fibrosis (CF) airway epithelium via

The amino acid L-arginine rescues airway surface liquid

Li, Mingyuan, Gastroenterology/Hepatology/Nutrition

in the pediatric Emergency Department.

procedural sedation for the reduction of forearm fractures

J Fischer, M Bhatt

in children.

Nasal intermittent positive pressure ventilation (NIPPV) in

M Mukerji, Amlit, Neonatology

Changes in visceral blood flow velocities in neonates with

hypoxic ischemic encephalopathy during whole

body hypothermia and after rewarming. K More, P Sakhuja,

T Gonska

Nita, Dragos, Neurology

EEG patterns associated with anti-NMDA receptor encephalitis

K Patrick, W Lau, A Gassas, E McDougall, M Ali, S Courtney,

L Nurmohamed, Lalla, Paediatric Medicine

Emotional impact of the anogenital examination in child

sexual abuse: A systematic review of qualitative studies.

Omanari, Kazuo, Neurology

Characteristics of heart rate variability in children with

postictal generalized EEG suppression. K Okanari, H Otsubo,

E Kouzmitcheva, A Ochi, S Sakuma, M Nakajima, S Baba,

Y Sato, CY Go, DA Nita, EJ Donner

Omand, Jessica, Paediatric Medicine

Validation of vitamin D dietary intake screening questionnaire

in young children. J Omand, PB Darling, DL O’Connor,

PC Parkin, CS Birken, JG Lee, KE Thorpe, JL Maguire

Parsaud, Leon, Rheumatology

The role of CD40L and CD40 in the pathogenesis

of Kawasaki Disease. L Parsaud, RSM Yeung

Patrick, Katharine, Haematology/Oncology

Major ABO incompatible bone marrow transplantation in

children: Determining what residual volume of donor red

cells can safely be infused following red cell depletion.

K Patrick, W Lau, A Gassas, E McDougall, M Ali, S Courtney,

M Egeler, T Schechter Finklestein

Penner, Melanie, Developmental Paediatrics

Cost-effectiveness of adding pre-diagnosis Autism Spectrum

Disorder treatment to the Ontario status quo. M Penner,

L Hornberger, P Wyatt, C Laskin, ED Silverman

M Rayar, N Bashir, RSM Yeung

Disorder treatment to the Ontario status quo.

M Penner, Melanie, Developmental Paediatrics

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M Penner, Melanie, Developmental Paediatrics

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Disorder treatment to the Ontario status quo. M Penner,

L Hornberger, P Wyatt, C Laskin, ED Silverman

M Rayar, N Bashir, RSM Yeung

Disorder treatment to the Ontario status quo.
Shulman, Rayzel, Endocrinology
Physicians’ perceptions of the value of insulin pump therapy for pediatric type 1 diabetes. R Shulman, A Gutmann, D Daneman, F Miller

Siapno, Lia Abigail, Developmental Paediatrics
Transition awareness and planning among youth with complex autism spectrum disorder. LS Siapno, E Anagnostou, S Smile

Simone, Laura, Emergency Medicine
Sensitivity of pelvic radiographs in identifying high risk pelvic fractures in pediatric blunt trauma patients. L Simone, M Haasz, J Stimac, S Beno, U Narayanan, D Stephens, S Schuh

Sin-Chan, Patrick, Haematology/Oncology
Delineating transforming mechanisms and therapeutic targets of the C19MC OncolMIR cluster. P Sin-Chan, M Lu, C Kleinman, T Spence, KC Ho, J Chan, C Hawkins, J Miejevski, N Jabado, P Dimitrakopulos, A Huang

Smith, Ryan, Core Paediatrics
Factors predicting car seat test (CST) failure in late preterm infants (LPI): A retrospective chart review. R Smith, A Mohamed, J Young, A Jeffries, V Shah

Stevenson, Rebeka, Rheumatology
A case of severe endobronchial stenosis in a patient with vasculitis. R Stevenson, R Yeung, S Tse

Tanoshima, Reo, Clinical Pharmacology and Toxicology
Nrf2-Keap1 pathway does not have an important role in cisplatin resistance in neuroblastoma. R Tanoshima, M Yang, P Dalvi, AML Wu, K, Matsuda, L Zhang, H Fujii, S Baruchel, PA Harper, S Itô

Tashkandi, Mariam, Neurology
The frequency of electroencephalographic abnormalities in relatives of patients with epilepsy: A systematic review and meta-analysis. M Tashkandi, D Ba-Arnah, B Minassian

Tibussek, Daniel, Neurology
Late-onset group B streptococcal associated cerebrovascular disease in infancy. D Tibussek, I You, R Askalan

Tole, Soumitra, Core Paediatrics
Neonatal paracoeuritis centrale nervous system infections. S Tole, S Richardson, H Whyte, L Ly, S Blaser, A Bitmum

Tran, Thai Hoa, Haematology/Oncology
Second bacteremia during antibiotic treatment in children with acute myeloid leukemia: A report from the Canadian infections in AML research group. TH Tran, L Sung et al.

Vandermorris, Ashley, Adolescent Medicine
Addressing substance use in kids (ASickKids 2): An extended study of drug-related emergencies at Sickkids over 1 year. A Vandermorris, C Korenblum, K Leslie

Villani, Anita, Haematology/Oncology
Investigating PIN2 as a genetic modifier in Li-Fraumeni syndrome. A Villani, A Novokmet, D Malk

Walsh, Catharine, Gastroenterology/Hepatology/Nutrition

Weerenburg, Kristin, Emergency Medicine
Parental knowledge of concussion. K Weerenburg, S Schneeweiss, E Koo, K Boutis

Weidman, Danielle, Core Paediatrics
Two cases and a review of Streptococcus pyogenes endocarditis in children. D Weidman, H Al-Hashami, S Morris

Weingarten, Laura, Emergency Medicine

Wiley, Joseph, Core Paediatrics
The implementation of a night float system into a large Canadian Paediatric training program: Impact on resident education. J Wiley, M Khoury, A Atkinson, S Talarico, Z Bismilla

Wu, Alex, Clinical Pharmacology and Toxicology

Zubairi, Mohammad, Developmental Paediatrics
Building a simulation: a new way to learn. M Zubairi, S Lindsay, K Parker, A Kawamura

Zhukova, Nataliya, Haematology/Oncology
Paediatric
House Staff
2013-2014

CHIEF RESIDENTS-PGY4s
Dr. Michael Khoury
Dr. Joseph Wiley

ASSOCIATE CHIEF RESIDENTS-PGY4s
Dr. Joan Abouwawere
Dr. Kate Amiel
Dr. Justine Cohen-Silver
Dr. Anne Fuller
Dr. Lauren Kinney
Dr. Sonia Menard
Dr. Alexandra Pennal
Dr. Katie Runide

THIRD YEAR RESIDENTS – PGY3
Dr. Mohammad AlSalamah
Dr. Natalie Chan
Dr. Nicole Coles
Dr. Jennifer Das
Dr. Jenna Doig
Dr. Andrea Evans
Dr. Jennifer Galie
Dr. Jessica Gantz
Dr. Claudia Garcia-Gelvez
Dr. Michael Hill
Dr. Andrea Human
Dr. Joanna Humphreys
Dr. Rebecca Levy
Dr. Sarah Lord
Dr. Anya McLaren
Dr. Rachel Markin
Dr. Kevan Mehta
Dr. Luis Murgua
Dr. Melanie Ostreicher
Dr. Jonathan Rayment
Dr. Daniel Rosenfield
Dr. Julia Sharp
Dr. Jennifer Smith
Dr. Margaret Wolfe-Wylie
Dr. Elizabeth Yeboah
Dr. Stephen Zborovski
Dr. Kim Zhou

SECOND YEAR RESIDENTS – PGY2
Dr. Erica Burry
Dr. Joivan Collins
Dr. Mallory Downie
Dr. Madeline Drake
Dr. Liane Heale
Dr. Andrew Helmers
Dr. Samantha Irwin (Neuro)
Dr. Elizabeth Kouzmitcheva (Neuro)
Dr. Bryan Li
Dr. Lillian Lim
Dr. Ursula Madej
Dr. Amber Makino
Dr. Jessica Malach
Dr. Kavmini Raghuram
Dr. Fathima Razik
Dr. Holden Sheffield
Dr. Ryan Smith
Dr. Shazeen Suleman
Dr. Jennifer Tam
Dr. Soumitra Tole
Dr. Daniella Weidman
Dr. Stacy Zahanova

FIRST YEAR RESIDENTS – PGY1
Dr. Leah Abirbul
Dr. Mohammed AlOsaimi
Dr. Mohammad Assim
Dr. Rebecca Barmherzig (Neuro)
Dr. Bradley DeSouza
Dr. Carolyn Freedman
Dr. Sindu Govindapillai
Dr. Laura Kinlin
Dr. Piyi Lahiry
Dr. Carol Lam
Dr. Joey Latino
Dr. Elliot Lavi
Dr. Thomas McLaughlin
Dr. Reena Pabari
Dr. Rebecca Rockman
Dr. Ishita Siddiq (Neuro)
Dr. Devin Singh
Dr. Julia Sorbara
Dr. Melanie Steele
Dr. Janaki Vallipuram
Dr. Luke Zheng
Dr. Brie Yama
Grand Rounds

Grand Rounds, weekly sessions dedicated to presenting state-of-the-art knowledge in topics relevant to child health from multiple perspectives, is the flagship academic activity for the Department of Paediatrics.

The Grand Rounds Committee for the academic year 2013-2014 was chaired by Ron Laxer and included Eyal Cohen, Elizabeth Donner, Marvin Gans, Michael Khoury, Rayfel Schneider, Lillian Sung, Neil Sweezey and Joseph Wiley.

The summer Grand Rounds series, coordinated by the chief residents, allows senior trainees and subspecialty fellows to provide updates within specific specialties and sub-specialties. The sessions entitled “Daneman and Friends” continue to be a highlight of the program. For these Rounds, our Department Chair invites several staff to address a specific theme. As in past years, the Chief Resident’s Rounds, entitled “Cases from the Ward” remain extremely popular where two to three senior paediatric residents present unique cases that they have come across.

Professors’ Rounds are delivered by individuals who have been promoted to full professor in the Department of Paediatrics in the previous year. This past year Professors’ Rounds were covered by Drs. Isaac Odame, Anne Dipchand, Berge Minassian and Luc Mertens. Named lectureships continue to be an important component of the Grand Rounds program. This past year, Dr. Stephen Lye, Executive Director, Fraser Mustard Institute for Human Development OISE, University of Toronto, delivered the Harry Bain Lecture. The Robert H. A. Haslam Lecture was given by Dr. Josep Dalmau, University of Barcelona, Adjunct Professor Neurology, University of Pennsylvania, and Dr. Ajay Vora from the University of Sheffield, UK gave the Daniel Burton Leukemia Lecture. The Andrew Sass-Kortsak Award Lecture awards a senior trainee in the Research institute. This year’s winner, Dr. Kyoung Han Kim, discussed his work around uncovering the roles of Irx genes from heart disease to obesity. Dr. Marilyn Manco-Johnson, Director, Hemophilia and Thrombosis Centre from the University of Colorado gave the Laski Lecture describing her work on pediatric thrombosis. The Jacob’s Ladder Lecturer was Dr. Cornelis Jakobs of VU Medical Center, Amsterdam. Dr. Doug Diekema, of the Treuman Katz Center for Pediatric Bioethics at Seattle Children’s Research Institute presented the Christine Harrison Lecture on Bioethics. Dr. Richard Auten from Duke University gave the Barry Smith Lecture discussing air pollution during pregnancy.

Dr. Brian Hodges from University of Toronto gave Grand Rounds as part of this year’s Medical Education Day discussing teaching medicine in a globalized world.

We were fortunate to be able to host many visitors to Grand Rounds including (in addition to those above) our new President and CEO Michael Apkon, Deborah Christie from University College Hospital-UK, Scott Snapper from Boston Children’s Hospital, Neil Shear from Sunnybrook, Susan Sawyer from the University of Melbourne, Alexei Grom from Cincinnati Children’s Hospital, Terry Klassen from the Manitoba Institute of Child Health, Joseph Neu from the University of Florida and Sarah Lawrence of the Children’s Hospital of Eastern Ontario.

Once again, the Department of Paediatrics Grand Rounds Committee acknowledges the tremendous help and support of a number of individuals who do the vast majority of the behind-the-scenes work. In particular we want to thank Amoye Henry for her excellent project coordination support, and Frank Ferrari and Sam Mendolia for their audio-visual expertise.
ANNUAL REPORT 2013/2014
**Medical Education Training and Scholarships Overview**

This report serves to recognize the excellence and dedication of our faculty teachers, educators and education leaders and the many ways they support the development and training of aspiring physicians and paediatricians. It celebrates their achievements and outlines promising new directions for research, innovation, teaching and development in medical education.

This year we highlight two important summer programs offered by our Undergraduate Education program.

As part of an overarching strategy to provide integrated learning opportunities for trainees at all levels, our undergraduate program, through the generous sponsorship of our Chair, Dr. Denis Daneman, has created two summer scholarships, focused on highlighting the importance of the field of social paediatrics (SPRESS) and the importance of basic and clinical research in paediatric medicine (PERCS). In both programs, faculty receive a grant or matched funding to support the salary of a medical student for 8-12 weeks.

The programs offer medical students an immersion in academic paediatrics. Our evaluations from the past three years the programs have been offered document that students develop research skills and an appreciation of a scientific area relevant to child health, as well as an understanding of how research findings relate to clinical practice more broadly through clinical shadowing experiences. This year’s funded projects are detailed in our grants section. Below we provide a summary of the SPRESS and PERCS experiences.

**Social Pediatrics Research Summer Studentship (SPRESS)**

Faculty Lead – Dr. Susanna Talarico

The SPRESS program was created three years ago to introduce undergraduate medical students to the broad field of social pediatrics. Students attend a seminar series, are provided with the opportunity to work on a research project and to be observers in clinical settings. The goal of the program is to emphasize the importance of the social determinants of health in the evaluation and management of children and to encourage the role of child health advocacy in medical students. Every summer 8-10 bright, motivated students are selected through a competitive process to take part in SPRESS. This year, 10 medical students contributed significantly to faculty research projects across the city, including Holland Bloorview and St Michael’s Hospital. Students had the opportunity to work on projects in a variety of arenas including child health policy, school-based health, and resource availability and utilization for children with Down Syndrome and Autism Spectrum Disorder. Feedback from supervisors and students has been overwhelmingly positive. A scholarly evaluation of the program showed evidence of transformative learning as students articulated feelings of empathy, empowerment, and a developing identity as advocates.

Students are selected through a competitive process to take part in SPRESS. This year, 10 medical students are selected through a competitive process to take part in SPRESS. This year, 10 medical students were selected to participate in the program.

**Therapeutic modalities that can be used**

**Adolescent Psychology, University College London**

**Abe Shore lecture: “Macrophage Activation Syndrome in Rheumatology Pathophysiologic Overlap with Hemophagocytic Lymphohistiocytosis”**

**Canadian Paediatrics Society Meeting – No Rounds**

**Biology Hospital for Sick Children Program in Developmental & Stem Cell Biology**

**Prozac Baby: 25 Years of Motherisk Research**

**European Paediatric Research Collaboration (PERCS)**

**Faculty Lead – Dr. Susanna Talarico**

The PERCS program, is a new initiative designed to support the development of faculty members in the field of social pediatrics. The program is designed to support the development of faculty members in the field of social pediatrics. The program is designed to support the development of faculty members in the field of social pediatrics. The program is designed to support the development of faculty members in the field of social pediatrics. The program is designed to support the development of faculty members in the field of social pediatrics. The program is designed to support the development of faculty members in the field of social pediatrics.
Paediatric Research and Clinical Summer Program (PeRCS)
Faculty Lead – Dr. Seetha Radhakrishnan and Dr. Binita Kamath

The objectives of this unique program, introduced in 2012, are to provide opportunities for medical students to pursue research in paediatrics, while gaining early undergraduate exposure to clinical pediatrics and to facilitate mentorship for these students in academic pediatrics. The program offers an 8-12 week summer experience at SickKids. Students are provided joint remuneration by both supervisors and the Department of Pediatrics. First and second year University of Toronto students are eligible for the program and are chosen through a competitive selection process. 8-10 students are selected and paired with supervisors from the Department of Pediatrics who provide students with mentorship in participating in an innovative research project. To date research opportunities have included basic science and clinical projects in various fields including Cardiology, Neurology, Nephrology, Gastroenterology, Rheumatology, Endocrinology, Neonatal Intensive Care and Haematology. Students also have the opportunity to participate as clinical observers one day per week alongside clinical supervisors and to attend a lecture series from clinician scientists, investigators and educators who introduce students to careers in various aspects of pediatric academic medicine. At the end of the program students are given the opportunity to present their work to peers, supervisors, and invited guests.

Preliminary evaluation of the PeRCS program reveals that program objectives are being met successfully, with a high satisfaction rate from supervisors and students. 100% of supervisors and 90% of students agreed/strongly agreed that they intended to continue their mentorship outside of the program and that they were satisfied with their overall PeRCS experience. In August 2013, supervisors from the 2012 cohort were polled with regards to the progress of the 12 students in the 2012 cohort: 2 published manuscripts, 4 were currently preparing manuscripts, 4 abstracts were accepted at regional, national and international conferences and 2 have received trainee awards towards oral presentations of their work at international conferences. We are currently gathering follow up data on our 2013 cohort. In the future we also hope to evaluate the impact of the program in terms of the number of PeRCS students who went on to pursue careers in Pediatric academic medicine. However, to date it appears that the unique integration of research and clinical pediatrics is beneficial to learning and leads to successful mentoring relationships.

We believe that excellent education underpins excellent clinical practice. As you read through our report you will note that SPRESS and PeRCS are just a sample of the many initiatives underway in our department that aim at improving the way we think about education, the way we train, the way we learn and the way we prepare for the challenges of paediatric care.

Rayfel Schneider
Professor of Paediatrics
Associate Chair, Medical Education

Education Organization
The Medical Education enterprise includes the Undergraduate, Postgraduate and Continuing Education portfolios and the offices of Faculty Development and Medical Education Scholarship. Educational activities in the Department of Paediatrics are led by Dr. Rayfel Schneider, the Associate Chair (Education) and the Medical Education Advisory Committee (MEAC) (see org. chart below). The MEAC works to enhance excellence in teaching and education and increase the recognition of the educational achievement of trainees and faculty. It also serves 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.

The Department supports faculty in a number of ways to enhance their career development as teachers and clinician educators. Details of all the activities of all the education portfolios and the educational accomplishments of faculty and trainees are provided in the body of the report.

After 9 stellar years at the helm of the Continuing Education portfolio, Dr. Suzan Schneeweiss, stepped down from this position to assume the role of Academic Director for Continuing Education and Professional Development in the Faculty of Medicine at the University of Toronto. Dr. Mark Feldman, an Associate Professor of Paediatrics was appointed as Director of Continuing Education in July, 2013. Mark is a highly respected teacher and educator in the Department of Paediatrics who has won numerous teaching awards. He also continues to hold a number of key departmental leadership positions, including Director of Integrated Education and Director of the Section of Community Paediatrics (in the Division of Paediatric Medicine). He was able to hit the ground running and, supported by Michelle Wan and the Continuing Education Committee, launched a highly successful Paediatric Update 2014 Conference. Mark’s energy and innovative ideas will no doubt have a major impact on advancing continuing education in the department.
**Training and Leadership**

**Undergraduate Education**

**Director:** Dr. Angela Punnett  
**Educational Administrative Staff:** Mary Antonopoulos, Joanna Barnes, Margarita Komarova  
**Members of the Undergraduate Education Committee:** Drs. Hosanna Au, Nirit Bernhard, Zia Bismilla, Mark Feldman, Emer Finan, Claire Hutchinson, Sheila Jacobson, Miriam Kaufman, Angela Punnett, Seetha Radhakrishnan, Sarah Schwartz, Shawna Silver, Susanna Talarico, Jennifer Young, Dror Koltin (THP-CVH), Kate Gwiazda (THP-MH), Gagan Saund, Anna Selliah (WOHC), Shawna Silver, Clare Hutchinson (NYGH), Janet Saunders (TEGH), Sohail Cheema (SMH), Sharon Naymark (SJHC), Raymond Shu (SGH-Birchmount), Peter Azopardi (SGH-General), Jeff Weisbrot (YCH), Joseph Porepa (HRRH), Yuda Mozes (RVCH)

The office continues to host the annual meeting for Paediatric Undergraduate Program Directors of Canada (PUPDOC) at SickKids and has adopted the national paediatrics curriculum (see www.pupdoc.ca). Congratulations goes to Joanna Barnes, the Pre-Clerkship coordinator, on the birth of her son Malcolm, and a warm welcome to Margarita Komarova who has joined the team in Joanna's absence. Clerkship continues under the able stewardship of Mary A Antonopoulos, a guide and mentor to the team. Paediatricians continue to take on major leadership positions at the University with Ely Berger as Co-Director of the Elective Program, and of course, Stacey Bernstein continuing as Clerkship Director for the entire undergraduate program and spearheading the development of the Longitudinal Integrated Curriculum (LInC) pilot starting this fall. The scholarly contributions at national and international education meetings continue to grow. Head counts for this past year include 259 students per year in the four year undergraduate program with Paediatric teaching faculty numbering over 250 at present. Congratulations to the teaching award winners this year:

Nirit Bernhard – R.H.A. Haslam Preclerkship Teaching Award  
Dror Koltin – Lionel Weinstein Clerkship Award  
Alan Berzen – Community Paediatrics Clerkship Award

**Preclerkship**

The first year students have the opportunity to join the Paediatric Longitudinal Experience (PedLE), spending four half days with faculty to get a feel for Paediatrics. With the help of two enthusiastic resident leaders, Melanie Ostreicher and Danielle Weideman, the PedLE-R program has been expanded this past year. Thirty-five students were placed with one of the residents for a longitudinal clinical and mentoring experience. In second year, the Arts and Science of Clinical Medicine (ASCM 2) course, managed by Sheila Jacobson, continues to be one of the most highly rated clinical courses in preclerkship. Thank you for responding to the ongoing calls for tutors! The general paediatrics training falls primarily during 3 weeks of the 2nd year MMMD course at U of T, managed by Hosanna Au. Many contribute to lectures and seminars during this course and during the various subspecialty weeks that follow. Our office continues to host the summer research and clinical programs downtown-PeRCS (6 students) and SPReSS (10 students). There were some incredible presentations of the various projects this summer. Thank you to Binita Kamath and Seetha Radhakrishnan for coordinating PeRCS and to Susanna Talarico for coordinating SPReSS.

Education Organizational Chart

**Department of Paediatrics, University of Toronto**

- **CHAIR**  
  Denis Daneman

- **ASSOCIATE CHAIR EDUCATION**  
  Rayfel Schneider

- **MEAC**

- **UNDERGRADUATE EDUCATION**  
  Angela Punnett

- **POSTGRADUATE EDUCATION**  
  Adelle Atkinson

- **SUBSPECIALTY EDUCATION**  
  Program Directors

- **CONTINUING EDUCATION**  
  Mark Feldman

- **FACULTY DEVELOPMENT**  
  Shelly Weiss

- **SCHOLARSHIP/RESEARCH**  
  Tina Martimianakis

**Highlights from 2013-2014**

This past year has been busy and productive with expansion of programming in preclerkship, curriculum renewal in clerkship, and hosting of the first Council on Medical Student Education in Pediatrics (COMSEP) annual meeting held in Canada in March in Ottawa. (This year there were even Texans doing the morning jog in -15C weather!) The office continues to host the annual meeting for Paediatric Undergraduate Program Directors of Canada (PUPDOC) at SickKids and has adopted the national paediatrics curriculum (see www.pupdoc.ca). Congratulations goes to Joanna Barnes, the Pre-Clerkship coordinator, on the birth of her son Malcolm, and a warm welcome to Margarita Komarova who has joined the team in Joanna’s absence. Clerkship continues under the able stewardship of Mary A Antonopoulos, a guide and mentor to the team. Paediatricians continue to take on major leadership positions at the University with Ely Berger as Co-Director of the Portfolio Course (and Susanna Talarico covering for an interim);
Clerkship

The 6-week clerkship program involves an incredible number of teachers and is overseen by a dedicated undergraduate committee. A successful new hands-on seminar series was introduced as part of orientation for clerkship rotations this past year with thanks to Zia Bismalla, Nitt Bernhard, Jennifer Young, Hosanna Au, and Seetha Radhakrishnan for their leadership with this endeavor. The Paeds on the Go Handbook is updated annually under Shama Silver’s direction and with a dedicated group of undergraduate editors. The Mississauga campus officially and ably took on students for core clerkship this past year under the direction of Dr. Koltin at CVH and Kate Gwiazda at MH. Colleagues at St Mike’s Hospital with Ra Han and Sohail Cheema have been busy preparing the Longitudinal Integrated Curriculum (LiC) students to join shortly. This exciting initiative will have 7 students placed in longitudinal learning experiences in place of block rotations at the Fitzpatrick Academy based at St Mike’s Hospital. The Clerkship OSCEs continued in March and August and the office appreciates your time and contribution as innovators to this important evaluative component of the curriculum. Paediatrics continues to offer a wide and ever increasing selection of electives and selectives (TTR placements) that are uniformly well received by the students. The faculty and residents/fellows played a major role in the Clerkship Portfolio course as senior and junior scholars for this longitudinal curriculum. Returning to Convocation Hall is always fun and Mary and Angela enjoy celebrating with the students as they move on to the next part of their careers. Congratulations to the following winners for their Awards in Paediatrics:

Suparna Sharma (Dr. Roy Simpson Scholarship in Paediatrics)
Janet McMullen (Dr. Yumin Li Access to Excellence in Paediatrics Award)
Dilan Dissanayake (Dr. Yumin Li Access to Excellence in Paediatrics Research Award)
Caroline Diorio (Dr. Carl Witus Prize in Paediatrics)

The final word goes to the teachers-you are the heart of this education program and your commitment to education is an inspiration to our students and our community. Thank you for all that you do.

Postgraduate Education

Director: Dr. Adelle Atkinson
Educational Administrative Staff: Sandra Layno, Jennifer Bowden

Members of the Postgraduate Education Committee:
Dr. Adelle Atkinson, Ann Jefferies, Eudice Goldberg, Eddy Lau, Lillian Sung, Michelle Shoulidce, Melinda Solomon, Elizabeth Jimenez, Hilary Whyte, Jeff Kobayashi, Melanie Colpitts, Moshie Ipp, Sawthiri Ratnapalan, Steven Moss, Tony Barozzino, Dr. Koltin, Clare Hutchinsion, Silvio Gonzalez, Ra Han, Shawa Silver, Michael Khoury, Joseph Wiley, Erica Burry, Danielie Weidman, Jennifer Smith, Kim Zhou, Kate Amiel, Julia Sharp, Anja McLaren, Brie Yama, Carol Lam

Total Number of Core Paediatric Residents 2013-2014

<table>
<thead>
<tr>
<th>PGY1</th>
<th>PGY2</th>
<th>PGY3</th>
<th>PGY4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>22</td>
<td>27</td>
<td>10</td>
<td>82</td>
</tr>
</tbody>
</table>

Highlights from 2013-2014

Postgraduate teaching in Paediatrics is decentralized with more than 10 sites involved in delivering our curriculum. The Core Residency Program as well as the subspecialty programs train not only individuals in the Royal College stream, but also Visa trainees (sponsored trainees from the Gulf Region), and other international trainees who take their skills and expertise around the world after they complete their training here.

The core program continues to be the largest training program in Canada with unparalleled resources both in depth and breadth of patient experiences as well as an outstanding teaching and research faculty. It has full approval as an accredited Royal College training program and attracts the most sought after candidates in the country. Applicant numbers continue to increase yearly (despite no change in medical school graduate numbers), including international medical graduates (Canadians who studied outside North America). The program is rich with diversity of educational and experiential backgrounds.

The success of the core training program is largely due to faculty engagement in the process and a robust program assessment strategy. A very active Residency Program Committee oversees the administration and running of the training program, and various subcommittees exist to ensure that each part of the program (resident selection, international resident selection, academic curriculum, evaluation, research, mentoring, wellness, advocacy etc.) are delivered in an evidence-informed 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, best practices in teaching and assessment and the changing landscape of our community. This year we continue to enjoy a significant amount of Distributed Medical Education which the residents have embraced.

Resident scholarship continues to be of a high standard. All residents are currently engaged in scholarly activities on topics related to clinical research, education, patient safety, quality assurance and patient advocacy. Our Resident Scholarship Committee is in its infancy, and growing rapidly. Under the leadership of Dr. Hans Hitzler and Dr. Binita Kamath, this committee provides leadership, guidance and oversight of scholarship in Residency.

Some of our projects are initiated and led by our trainees and others by our teachers and educators. Some of the scholarly activities explore aspects of our programming and aim to improve our curriculum and teaching. Some exciting initiatives include: looking at how residents think about assessment, and perceptions of wellness and work-life balance.

A primary focus for the program continues to be enhancing the teaching and evaluation of 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. Over the last two years, real time feedback during the OSCE was introduced with tremendous success. The program is starting to think forward to the new CanMEDS 2015 guidelines as well as Competency Based assessment and the development of milestones and entrusted professional activities.

Advocacy continues to be a focus of the program. There are currently a number of major advocacy projects underway under the leadership of the resident group. In addition to the Gosford Park Public School, our residents are very involved with the Rosedale Heights Secondary School. Both schools have at risk children and youth, and have found this collaboration beneficial. Other advocacy projects include clothing drives, a paediatric consultation clinic for the uninsured and newsletters for inpatients as examples. Residents have been involved at the ground level in implementing these projects in a scholarly way.

The postgraduate program will soon be gearing up for another round of PGY-1 CaRMS, again expecting an increase in applicants. The MD/PhD program stream through CaRMS strives to attract candidates who are interested in a research career and will involve intensive research support throughout the training program. This past year the program successfully matched four MD/PhD candidates to the first year class.
**Subspecialty Education**

Chair: Dr. Rayfel Schneider  
**Educational Administrative Staff:** Sue Jenkins  
Subspecialty Program Directors:

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>PROGRAM DIRECTOR</th>
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<tbody>
<tr>
<td>Adolescent Medicine*</td>
<td>Eudice Goldberg 1</td>
</tr>
<tr>
<td>Cardiology*</td>
<td>Jennifer Russell 1</td>
</tr>
<tr>
<td>Clinical Genetics*</td>
<td>Roberto Mendoza 1</td>
</tr>
<tr>
<td>Clinical Pharmacology*</td>
<td>Irena Nulman 1</td>
</tr>
<tr>
<td>Developmental Paediatrics*</td>
<td>Anne Kawamura 1</td>
</tr>
<tr>
<td>Emergency Medicine*</td>
<td>Suzanne Beno 1</td>
</tr>
<tr>
<td>Endocrinology*</td>
<td>Tania Principi 1</td>
</tr>
<tr>
<td>Gastroenterology/Hepatology/Nutrition*</td>
<td>Simon Ling 1</td>
</tr>
<tr>
<td>Haematology/Oncology*</td>
<td>Michaela Cada 1</td>
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<tr>
<td>Immunology/Allergy*</td>
<td>Angela Punnert 1</td>
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<tr>
<td>Infectious Diseases*</td>
<td>Anu Wadhwa 1</td>
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<tr>
<td>Nephrology*</td>
<td>Emer Finan 1</td>
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<tr>
<td>Neurology*</td>
<td>Rulan Parekh 1</td>
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<tr>
<td>Paediatric Medicine</td>
<td>Michelle Shouldice 1</td>
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<tr>
<td>Academic Paediatric Medicine</td>
<td>Michelle Shouldice</td>
</tr>
<tr>
<td>Paediatric Dermatology</td>
<td>Miriam Weinstein</td>
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<tr>
<td>Academic Child Abuse Paediatrics</td>
<td>Michelle Shouldice</td>
</tr>
<tr>
<td>Community Paediatrics</td>
<td>Mark Feldman</td>
</tr>
<tr>
<td>Paediatric Hospital/Inpatient Medicine</td>
<td>Michael Weinstein</td>
</tr>
<tr>
<td>Respiratory Medicine*</td>
<td>Melinda Solomon 1</td>
</tr>
<tr>
<td>Rheumatology*</td>
<td>Shirley Tse 1</td>
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*Member of Subspecialty Program Directors Committee  
* Royal College Programs

There are 16 Royal College accredited programs in the Department of Paediatrics and all have full approval status following the Royal College Accreditation Review at the University of Toronto in 2013. The Program Directors meet on a regular basis to discuss their programs and consider ways to better support fellowship training. There are also clinical fellowships in Academic Paediatric Medicine, Community Paediatrics, Suspected Child Abuse Network (SCAN) and Dermatology. Child Maltreatment has been approved by the Royal College as an Area of Focused Competence (AFC) Program.

This year, our Royal College-accredited programs participated in the national subspecialty paediatrics match, attracting candidates from across the country. In addition, the subspecialty programs continued to attract excellent applicants from around the world. A total of 23 trainees matched to our subspecialty programs, attracting residents from 8 university programs across Canada. In addition, 8 positions were allocated to highly competitive international applicants from 8 university programs across Canada.

**Continuing Education**

**Director:** Dr. Mark Feldman  
**Educational Administrative Staff:** Michelle Wan  
**Highlights from 2013-2014**

The overall goals of the Department of Paediatrics' Continuing Education are: to provide high quality continuing education courses and conferences locally, nationally and internationally; to promote and recognize excellence in continuing education; to enhance CE programs with the utilization of new technologies; to develop a collaborative network in CE to promote scholarship in CE and best practice in continuing education; to collaborate with the Royal College of Physicians and Surgeons of Canada to promote meaningful lifelong learning opportunities and strategies for the Maintenance of Certification; to collaborate with Quality Improvement experts to identify and address needed changes in both knowledge and practice; and to promote quality improvement in continuing education by providing ongoing feedback and evaluation of programs.

Our continuing education committee (CEC), led by Mark Feldman, is comprised of both academic and community-based health care professionals. The CEC develops and supports a breadth of programming. The committee adjudicates the Department of Paediatrics Continuing Education Award, which was won this past year by Dr. Shely Weiss for Excellence in long term contribution to the Department’s CE activity. The CEC also advocates for recognition, to the Faculty of Medicine, for excellence in teaching at the University level and this year the Colin Woolf Award, recognizing excellence in teaching at a CE forum, was won by Dr. Miriam Weinstein.

Faculty members of the Department of Paediatrics have been very active again in continuing education activities this past academic year. City Wide Paediatric rounds, supervised by Dr. Mark Feldman and organized by Drs. Umberto Cellupica and Michael Peer from the Division of Paediatric Medicine, continue to be a very popular event attracting 120 community-based paediatricians per quarter. The 2014 Annual Paediatric Update (course director: Dr. Mark Feldman) was held from April 30th to May 3rd, and is the largest general paediatric conference by a Department of Paediatrics in Canada, attracting a local, national and international audience and this past year exceeding our previous record attendance with 275 participants. There was outstanding faculty contribution with 48 members of our faculty presenting at this event with 18 guests. This year, an Adolescent Medicine Subspecialty Day, under the direction of Dr. Miriam Kaufman was presented.

Recognizing the importance of assessment and feedback in continuing education, an innovative, electronic, pre & post conference test was introduced at Paediatric Update 2014. The goal was to introduce self-assessment (pre-test), reflection (pre-conference) and peer assessment with feedback (post test). A minimum number (25) Category 3 credits is a very recent requirement of the RCPSC for our maintenance of competence. To the best of our knowledge, for the first time at a large paediatric conference in Canada, this ‘knowledge assessment’ component qualified for RCPSC category 3 (assessment) MOC credits.

Finally, many more of our divisions have been engaged in a variety of continuing education events as described in Table 1 below.

**Table 1: CE events July 1, 2013-June 30, 2014**

<table>
<thead>
<tr>
<th>COURSE DIRECTOR</th>
<th>EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Rayfel Schneider</td>
<td>Annual SickKids Paediatric Research Day</td>
</tr>
<tr>
<td>Dr. Meredith Irwin</td>
<td>March 28, 2014</td>
</tr>
<tr>
<td>Dr. Mark Feldman</td>
<td>2014 SickKids Annual Paediatric Update Conference April 20-May 3, 2014</td>
</tr>
<tr>
<td>Dr. Shely Weiss</td>
<td>Medical Education Day: March 5, 2014</td>
</tr>
</tbody>
</table>

**INFECTIONOUS DISEASES**

**COURSE DIRECTOR | EVENT**

<table>
<thead>
<tr>
<th>Dr. Valerie Waters</th>
<th>Infectious Disease Clinical &amp; Research Forum</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>A monthly series of clinical research related topics of interest to ID Fellows; Staff and other members of the ID community</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dr. Upton Allen</th>
<th>Congenital CMV Infection: Progress and Remaining Challenges: November 2013</th>
</tr>
</thead>
</table>

**Table 1: Total Number of Postgraduate Trainees**

| NUMBER OF SUBSPECIALTY RESIDENTS | 86 |
| NUMBER OF CLINICAL FELLOWS | 209 |
| NUMBER OF RESEARCH FELLOWS | 16 |
| NUMBER OF CORE PAEDIATRIC RESIDENTS | 82 |
| TOTAL | 393 |
PAEDIATRIC EMERGENCY MEDICINE

**COURSE DIRECTOR**

Dr. Susan Schneeweiss

**EVENT**

- Paediatric Emergency Ultrasound Course October 17, 2013 and October 22, 2014
- Paediatric Emergency Ultrasound Conference POCUS May 28-29, 2014

**CLINICAL PHARMACOLOGY**

**COURSE DIRECTOR**

Dr. Gideon Koren

**EVENT**

- Motherisk Update Conference May 21, 2013

**PAEDIATRIC MEDICINE**

**COURSE DIRECTOR**

Dr. Gideon Koren

**EVENT**

- City Wide Rounds held 4 times annually for community based Paediatricians Sept 17, 2013; Nov 19, 2013; Jan 21, 2014; May 7, 2014

**COURSE DIRECTOR**

Dr. Adam Rapaport

**EVENT**

- Pediatric Hospice Palliative Care (PHPC) 4 Day Workshop held at SickKids Hospital September 10th, September 24th, October 8th + October 15th 2013
- 5th Annual Paediatric Palliative Care Symposium: Controversial & Ethical Issues in Paediatric Palliative and End of Life Care, October 26, 2013
- Pediatric Hospice Palliative Care (PHPC) 4 Day Workshop - held externally in Barrie for CAC, May 12th, 13th, 26th + 27th 2014

**CARDIOLOGY**

**COURSE DIRECTOR**

Dr. Andrew Redington

**EVENT**

- Assessment of the fetal heart during routine ultrasound examination September 12, 2013
- 4th Canadian Cardiac Pathology & Imaging Course September 11-13, 2013
- SPR Hands-on Course November 5-7, 2013
- 9th Symposium on Advanced paediatric Cardiovascular Imaging November 8-10, 2013
- 3rd FY Symposium June 4, 2014
- 6th Toronto Cardiac Symposium June 6-8, 2014

**NEUROLOGY – CENTRE FOR BRAIN AND MENTAL HEALTH**

**COURSE DIRECTOR**

Dr. Steven Miller

**EVENT**

- 8th Annual Brain & Mental Health Day Neuroscience Research Symposium April 16, 2014

**DEVELOPMENTAL PAEDIATRICS**

**COURSE DIRECTOR**

Dr. Golda Milo Manson

**EVENT**

- Child Development Update Conference 2013 November 8-9, 2013

**RHEUMATOLOGY**

**COURSE DIRECTOR**

Drs. Rayfel Schneider and Ronald Laser

**EVENT**

- Auto-inflammatory Preceptorship Symposium November 21-22, 2013

**HAEMATOLOGY/ONCOLOGY**

**COURSE DIRECTOR**

Dr. Angela Punnnett, Denise Mills and Sue Zupancic

**EVENT**

- Childhood Cancer Therapy Update October 2, 2013

Faculty Development

**Director:** Dr. Shelly Weiss

**Educational Administrative Staff:** Clare Schlesinger

**Members of the Faculty Development Committee:**

Drs. Shelly Weiss, Nirit Bernhard, Catherine Birken, Doug Campbell, Anne Dipchand, Mark Friedberg, Dr. Melanie Friedman, Staylun, Suzan Schneeweiss, Rayfel Schneider, Dennis Scobnik

**Highlights from 2013-2014**

- On April 10, 2014, the Faculty Development Committee organized an extremely successful Paediatric Academic Career Day. All faculty within their first five years of appointment to the Department of Paediatrics were invited to participate and the curriculum included presentations by Drs. Denis Daneman, Rayfel Schneider, Meredith Irwin, Jeremy Friedman, Melvin Freedman, Shelly Weiss, Tina Martinianiks and Dr. Ben Vozzolo. Topics centered around such areas as promotion, research and education, mentorship and human resources/financial issues. There were 26 participants in this event, which will be repeated in 2016.

Medical Education Day was held on Wednesday, March 5, 2014. Dr. Brian Hodges, Vice-President of Education, University Health Network and Wilson Centre Scientist, was the guest speaker. The topic for Grand Rounds was “Teaching medicine in a globalized world: Culture, ethics and education”. Following Grand Rounds there was a 90-minute workshop led by Drs. Hodges and Tina Martinianiks on the topic of “Teaching medicine in a globalized world: Exploring the implications for educators”. The day concluded with a panel of education scholars who presented their research in the area of education in a globalized world.

The Department of Paediatrics’ mentorship program for junior faculty is ongoing. All faculty, upon their appointment to the Department, are invited to meet with Dr. Weiss, the Director of Faculty Development. In this meeting, many issues regarding orientation and academic career development as well as mentorship are discussed. Each junior faculty is given the opportunity to participate in the formal departmental mentorship program which involves an assigned mentor who is outside of his/her division with a similar job profile. At this meeting the junior faculty members are made aware of the resources and programs provided both by the Faculty Development Office as well as the Center for Faculty Development. U. of T. Another initiative to assist in the orientation of new faculty has been the ongoing informal lunch meetings arranged by the Office of Faculty Development and hosted by Dr. Denis Daneman, Paediatrician-in-Chief, The Hospital for Sick Children and Chair of Paediatrics, University of Toronto. Dr. Shelly Weiss, Director of Faculty Development. This past academic year, four lunches were held with 39 invited faculty members. These informal meetings were highly evaluated by the participants.

The Department of Paediatrics Faculty Mentorship Award was introduced in 2013 to recognize a faculty member for his or her outstanding approach to mentoring. Letters of nomination were submitted to the Faculty Development Committee and a subcommittee was appointed to review all candidates and adjudicate. Dr. Gideon Koren of Clinical Pharmacology and Toxicology, and Director of Mothenis Programs and was the second recipient of the award, which was presented as part of the Department of Paediatrics’ annual awards day in June 2014. Dr. Rayfel Schneider was the first runner-up for the award.
Scholarship/Research

Director: Dr. Tina Martimianakis
Educational Administrative Staff: Clare Schlesinger
Members of the Educational Scholarship Enhancement Committee: Drs. Tina Martimianakis (Chair), Anu Wadhwa, Maria Mylopoulos, Nikki Woods, Angela Punnett, Shelly Weiss

Highlights from 2013-2014

Administration and Coordination
The office of Medical Education Scholarship 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. It also oversees the Department’s education achievement and works to identify opportunities for future growth. In addition, the office oversees the adjudication of educational grant opportunities supported through the Paediatric Consultants Fund.

Funding
Educational research and educational development are supported through two separate grant competitions offered twice a year. The grants provide up to $5000 to support 1 year projects led by members of the Department (faculty and trainees) that contribute meaningfully to the educational mission of our programs. This past year, 3 applications were successful in the Innovation and Development stream and 3 Research Grants were approved for funding with feedback on submissions following the announcement of the competition results.

Programming
The Office of Medical Education Scholarship continued to deliver its two-part educational series to provide opportunities for dissemination, networking and sharing of ideas on ongoing projects:

Medical Education Scholarship Rounds
“Moving our ideas forward”
The rounds provide a forum for faculty and trainees to share their educational research and scholarship and an opportunity to think about methodological issues. The rounds are intended to have practical application to educational work. Resources are also shared at each session to provide participants with the opportunity for future learning.

Educational Journal Club
“Integrating knowledge into practice”
At each session, participants are exposed to a selection of interesting articles published in the last couple of years on topics such as competency based teaching, assessment and evaluation, the hidden curriculum, professionalism, etc.

This past year, we had many invited speakers from other Departments and Universities, including two international speakers.

<table>
<thead>
<tr>
<th>MES ROUNDS 2013-2014</th>
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EDUCATIONAL JOURNAL CLUB 2013-2014

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| Dec 2                 | Mohammad Zubari, Wilson Centre |
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Highlights from 2013-2014

Administration and Coordination
The office of Medical Education Scholarship 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. It also oversees the Department’s education achievement and works to identify opportunities for future growth. In addition, the office oversees the adjudication of educational grant opportunities supported through the Paediatric Consultants Fund.

Funding
Educational research and educational development are supported through two separate grant competitions offered twice a year. The grants provide up to $5000 to support 1 year projects led by members of the Department (faculty and trainees) that contribute meaningfully to the educational mission of our programs. This past year, 3 applications were successful in the Innovation and Development stream and 3 Research Grants were approved for funding with feedback on submissions following the announcement of the competition results.

Programming
The Office of Medical Education Scholarship continued to deliver its two-part educational series to provide opportunities for dissemination, networking and sharing of ideas on ongoing projects:

Medical Education Scholarship Rounds
“Moving our ideas forward”
The rounds provide a forum for faculty and trainees to share their educational research and scholarship and an opportunity to think about methodological issues. The rounds are intended to have practical application to educational work. Resources are also shared at each session to provide participants with the opportunity for future learning.

Educational Journal Club
“Integrating knowledge into practice”
At each session, participants are exposed to a selection of interesting articles published in the last couple of years on topics such as competency based teaching, assessment and evaluation, the hidden curriculum, professionalism, etc.

This past year, we had many invited speakers from other Departments and Universities, including two international speakers.

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Trainees pursuing formal training in education 2013-2014:
Julie Johnstone (Masters in Education)
Catherine Walsh (PhD in Education)
Melanie Ostreicher (Stepping Stones)
Joanna Humphreys (Stepping Stones)
Miriam Burns (Stepping Stones)
Lauren Kitchey (Stepping Stones)
Faisal Kordy (Stepping Stones)

Faculty completed formal training in education 2013-2014:
Susanna Talarics (Masters in Education)
Lindsey Craw (Stepping Stones)
Dor Koltin (Stepping Stones)
Elizabeth Jimenez (Stepping Stones)
Gilda Milo-Manson (Stepping Stones)
Ra Han (Stepping Stones)
Jennifer Young (Stepping Stones)
Melissa Carter (Stepping Stones)
Yousef Etoom (Stepping Stones)

Trainees who completed formal training in education 2013-2014:
Charles Larson (Stepping Stones)
Leanne Shamrakov (Stepping Stones)
Rudaina Baniani (Stepping Stones)
Eva Fernandez Diaz (Stepping Stones)
Andrea Guerin (Stepping Stones)
Mohammad Zubari (Stepping Stones)

Publications
Our educational research and scholarship is disseminated regularly in leading clinical and educational journals. This past academic year our faculty and residents authored 32 peer reviewed publications.

Peer Reviewed Publications
In the past academic year, the grant capture of our faculty, residents and fellows included 51 awards totaling $675,504 CAD (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 (PC) Education Research Grants, HSC**

In the 2013-2014 academic year 6 Paediatric Consultants Education 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.

**PC: Education Research**


**Education Development Fund, UofT**
The EDF is a seed fund of the Faculty of Medicine designed to catalyze initiatives that immediately and directly impact University of Toronto Faculty of Medicine education and teaching programs through innovation and development. Proposals require matched funding that can come from a variety of sources such as grants, clinical departments and other. The EDF is a very competitive fund. This year our department received one award:


**PeRCS: The Pediatric Research and Clinical Summer (PeRCS) Program**


Assessment of the response to CFTR-modulating treatment in human intestinal tissue biopsies. Gonska T, Gross J. The Pediatric Research and Clinical Summer (PeRCS) Program. $3,300 CAD. June – August 2014


Characterization of Prepubertal Children with Differentiated Thyroid Carcinoma. Wasserman J, Hampson S. The Pediatric Research and Clinical Summer (PeRCS) Program. $3,300 CAD. June – August 2014

Interventions and outcomes in pediatric MS and demyelinating disorders. Yeh A, Gleberzon J. The Pediatric Research and Clinical Summer (PeRCS) Program. $3,300 CAD. June – August 2014

Unravelling pathomechanisms of atypical hemolytic uremic syndrome. Licht C, Balgobin S. The Pediatric Research and Clinical Summer (PeRCS) Program. $3,300 CAD. June – August 2014


The Developmental Passport: How to ensure our families are accessing the right care. Elizabeth Y, Bechard N. The Social Pediatrics Research Summer Studentship (SPReSS) Program. $3,300 CAD. June – August 2014

Canadian Pediatric History in Medical Education. Boutis K. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $1,200 CAD. 2013-2014


Canadian Pediatric Clinician Scientist Program. Jones NL. BC Research Institute for Children and Women’s Health. $150,000 CAD. April 1-2012-March 31-2015

D-PRIME: (Deliberate Practice of Image Interpretation in Medical Education). Boutis K, Pusic M. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $7,760 CAD. January 2013-December 2013


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 meritied with funding from a variety of sources including the Royal College, CIHR, PSI, Royal College, among others.


Bridging worlds by integrating perspectives and competencies-exploring the development of adaptive expertise. Kawamura A, Mylopoulos M. Bloorview Research Institute Catalysis Grant. $12,000 CAD. 2014-2015


Canadian Pediatric Clinician Scientist Program. Jones NL. BC Research Institute for Children and Women’s Health. $150,000 CAD. April 1-2012-March 31-2015

Canadian Pediatric Clinician Scientist Program. Jones NL. Manitoba Institute of Child Health. $50,000 CAD. April 1-2012-March 31-2015

Canadian Pediatric Clinician Scientist Program. Jones NL. The Hospital for Sick Children Foundation. $300,000 CAD. April 1-2012-March 31-2015

CIHR Canadian Child Health Clinician Scientist Training Program. Jones NL, Stevens B, Han VVM, Lee SK, Cherubini S. Canadian Institutes of Health Research. $325,000 CAD. April 1-2012-March 31-2015


CIHR Canadian Child Health Clinician Scientist Training Program. Jones NL, Stevens B, Han VVM, Lee SK, Cherubini S. Canadian Institutes of Health Research. $325,000 CAD. April 1-2012-March 31-2015

Climate simulation. Köllner L, Meuser J. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $15,000 CAD. April 1-2012-March 31-2015


Developing and Testing a Didactic Method for Teaching the Paediatric Emergency Physician How to Interpret Ultrasound Imagery. Kwan CW, Boutis K, Pusic M. Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $3500 CAD. 2013

Climbing the Learning Curve – Teaching the Paediatric Emergency Physician How to Interpret Point-of-Care Ultrasound Images. Kwan CW, Boutis K. Faculty Development Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children. $3500 CAD. 2013


Awards

POWER Teaching Awards
For outstanding contributions for Postgraduate Teaching

Dr. Patricia Parikh
Dr. Catherine Birken
Dr. Eddy Lau
Dr. Briseida Mema
Dr. Suzanne Talarico

Other Teaching/Education Awards

National
Ito, S: Winner of Distinguished Service and Education award Canadian Society of Pharmacology and Therapeutics, Winnipeg, Manitoba, June 2014
Jones, NL: Winner of the Education Excellence Award, Canadian Association of Gastroenterology, Toronto, Ontario, January 2014
Kawamura, A: Awarded Royal College Fellowship for Studies in Medical Education, Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, July 2013
Schneider, R: Winner of the Paediatric Academic Leadership, Clinical Educator Award, Paediatric chairs of Canada, Ottawa, Ontario, 2013

University
Atkinson, A: Winner of the Harry Bain Award, Department of Paediatrics, Faculty of Medicine, University of Toronto, Ontario, 2014
Bernhard, N: Winner of the R.H.A Haslam Preclerkship Teaching Award, Department of Paediatrics, Faculty of Medicine, University of Toronto, Ontario, 2014

Berzen, A: Winner of the Undergraduate Community Teaching Award, Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, Ontario, 2014
Birken, C, Hamilton J: Winners of the Outstanding Clinical Contribution Award: STOMP Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, Ontario, 2014
Cohen, E: Winner of the Junior Faculty Award, Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, Ontario, 2014
Etoom, Y: Winner of the Postgraduate Community Teaching Award, Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, Ontario, 2014

“Its not just about getting along”: Discourses of collaboration and team learning. Martimianakis MA, Mylopoulos M, Schneider R, Tse S. Royal College CanMEDS Education Grant. $23,910 CAD. 2014-2016


Through the eyes of the beholder: Understanding physicians’ conceptions of childhood obesity. Woods NN, Stenfors-Hayes T, Mylopoulos M. Continuing Education Research and Development Grant, Office of Continuing Education & Professional Development Faculty of Medicine, University of Toronto. $3,687.50 CAD. 2013-2014

Uncovering and sharing evidence for compassionate care. Baker L, Ng St, Gold K, Martimianakis MA. Associated Medical Services. $10,000 CAD. 2014-2015

Grant, R: Winner of the Richard Rowe Award for Clinical Excellence in Paediatric Medical Care, Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, Ontario, 2014
Kanani, R: Winner of the Lionel Weinstein Clerkship Teaching Award, Department of Paediatrics, University of Toronto, Toronto, Ontario, June 2014
Koltin, D: Winner of the Lionel Weinstein Clerkship Teaching Award, Department of Paediatrics, University of Toronto, Toronto, Ontario, 2014
Nofech-Mozes, Y: Winner of the Marvin Gerstein Award, Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, Ontario, 2014
McNamara, P: Winner of the Pediatric American Society Travel Award for Predictors of Post-Ligation Cardiac Syndrome in Neonates after Introduction of Targeted Milrinone Treatment, Pediatric Academic Societies Annual Meeting, Vancouver, British Colombia, 2014.

Morris, S: Winner of the PERLS Award (Paediatric Educational Resident Lecture Series Award), Department of Paediatrics, Faculty of Medicine, University of Toronto, Ontario, 2014

Martimianakis, MA: Helen R Batty Award for Excellence and Achievement in Faculty Development in the category of Innovation in Program Development and Design (for the Qualitative Research Atelier), Faculty of Medicine, University of Toronto, Toronto, Ontario, 2013

Mylopoulos, M: Helen R Batty Award for Excellence and Achievement in Faculty Development in the category of Innovation in Program Development and Design (for the Qualitative Research Atelier), Faculty of Medicine, University of Toronto, Toronto, Ontario, 2013

Schneider, R: Winner of the Charles Mickle Fellowship Award, University of Toronto, Faculty of Medicine, Toronto, Ontario, 2014

Wadhwa A: Winner of the Subspecialty Teaching Award, Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, Ontario, 2014

Divisional/Hospital: Faculty
Atkinson, A: Winner of The Harry Bain Award in 2014 for excellence in clinical teaching at the Hospital for Sick Children, Toronto, Ontario, June 2014


Avitzur, Y: Winner of the Teaching and Mentorship Award, Division of Gastroenterology, Hepatology and Nutrition, The Hospital for Sick Children, Toronto, Ontario, June 2014.

Bonifacio, J: Winner of the 2013 Marvin Gerstein Award for Excellence in clinical Teaching, Department of Paediatrics, The Hospital for Sick Children at the University of Toronto, Toronto, Ontario, June 2013

Bowdin, S: Winner of Margaret W. Thompson Award in recognition of teaching excellence, Division of Clinical and Metabolic Genetics, The Hospital for Sick Children, Toronto, Ontario, June 2014

Kempinska, A: Recognition for Excellence in Clinical Teaching, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, Ontario, June 2014

Koren, G: Winner of Faculty Mentorship Award, Department of Pediatrics, University of Toronto, The Hospital for Sick Children, Paediatric Medicine Celebration of Academic Excellence, Toronto, Ontario, 2014

Mendoza-Londoño, R: Winner of Margaret W. Thompson Award – Excellence in Teaching, Toronto, Ontario, July 2013

Punnett, A: Winner of the Professional Development Program Award in the category of Field Practicum Preceptor, Department of Family and Community Medicine, The Hospital for Sick Children, Toronto, Ontario, April 2014

Schneider, R: Runner-up for the Department of Paediatrics Faculty Mentorship Award, The Hospital for Sick Children, Toronto, Ontario, 2014

Smile, S: 2013 Winner, Division of Developmental Paediatrics Faculty Teaching Award, Developmental Paediatrics, Department of Pediatrics, Faculty of Medicine, Holland Bloorview Kids Rehabilitation Hospital, Toronto, Ontario, 2014


Weiss S: Winner of the Continuing Medical Education Award, Department of Paediatrics, The Hospital for Sick Children, Toronto, Ontario, 2014

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

Dr. Joanna Humphreys (PGY3)
Dr. Michael Khoury (PGY4)

CanMEDS Award – Subspecialty Trainee
Dr. Adrienne Davis

Clinical Award – the Saunders Prize
Dr. Nicole Coles
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. Karen Leslie, Director of the Centre for Faculty Development, University of Toronto and St. Michael’s Hospital

Dr. Dr. Jonathan Pirie, Co-Leads the procedural lab in the Department of Paediatrics

Dr. Dr. Norman Rosenblum, Associate Dean, Medical Education, University of Toronto

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

Dr. Dr. Susan Schneeveis, Continuing Professional Educator for the Royal College of Physicians and Surgeons of Canada

Dr. Stacey Bernstein, Clerkship Director, University of Toronto

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

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

Dr. Dr. Jonathan Kronick, Chief of Education of the SickKids Learning Institute, Chair of the Education Subcommittee and the Continuing Professional Development Committee of the Canadian Paediatric Society

Tina Martimianakis, AMS Project Management Committee, AMS Phoenix

AMS Lexicon Working Group (Co-Chair with Rachel Ellaway), AMS - Phoenix Project

AMS Planning Committee for the 2015 Phoenix Conference (Co-Chair with Susan Block)

Spotlight on Scholarship: Division of Paediatric Medicine

The Division of Pediatric Medicine is heavily engaged in core undergraduate, post-graduate and continuing education teaching, curriculum development, education scholarship and educational administration. Three pediatricians hold Masters of Medical Education (an additional one in progress), one has completed the Education Scholars Program, and one is in progress. More than 12 full and part-time Divisional faculty are involved in education scholarship/research projects. In addition to these faculty, those in the Section of Community Paediatrics make an invaluable contribution to teaching and other educational activities. The Division has a robust fellowship program, with an academic stream for those interested in graduate training in medical education. Over the last 12 years, the Division has graduated five fellows with Masters degrees in health professions education, and currently four academic fellows are pursuing a graduate degree in this area.

Scholarship has been identified within the Division as an emerging educational priority. To this end, a Paediatric Medicine education scholarship retreat was held on Feb 4, 2014. The objectives of the retreat were to articulate a vision and plan for education research/scholarship in the Division and to discuss opportunities for collaboration and optimization of available resources. All Divisional staff physicians and fellows were invited to participate in the retreat, and 13 attended, including representation from community pediatricians, undergraduate education, postgraduate education and continuing education. Dr. Tina Martimianakis, Director of Medical Education Scholarship, was invited to set the context and to participate in the discussion. The retreat agenda began with an overview of education scholarship and funding opportunities in the Department of Paediatrics by Dr. Martimianakis.

In preparation for the retreat, the Divisional education scholarship lead had identified 29 discrete ongoing education projects in the Division, with more than $250,000 in funding. It was identified during the group discussion that Division members participating in education projects were not necessarily aware of others’ academic activities and that these areas of focus often aligned with one another. A list of topics/ content areas was generated from the spreadsheet of education projects currently underway. Commonalities were identified and led to the development of a list of key themes, associated with theoretical underpinnings and methodologies, shown in the Table below.

### CURRENT EDUCATION SCHOLARSHIP ACTIVITIES IN PEDIATRIC MEDICINE

<table>
<thead>
<tr>
<th>TOPICS/CONTENT AREAS</th>
<th>THEMES</th>
<th>THEORETICAL APPROACH/ METHODOLOGY</th>
<th>PROJECT EXAMPLES</th>
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<tr>
<td>• Resident handoff</td>
<td>• Quality/Safety</td>
<td>• Health Systems/policy</td>
<td>• I-PASS Handoff Study</td>
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<td>• Disclosure/safety</td>
<td>• Manager Competencies</td>
<td>• Pediatric as Manager Study</td>
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<tr>
<td>• Paediatrician as advocate</td>
<td>• Health Equity/ Social Responsibility</td>
<td>• Teaching and Learning in Social Pediatrics</td>
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<tr>
<td>• Social paediatrics</td>
<td>• Advocate Competencies</td>
<td>• Global Health</td>
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<tr>
<td>• Medical education</td>
<td>• Global Health</td>
<td>• Global Health Medical Education - Theory Building</td>
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<tr>
<td>• and resource poor settings/ vulnerable populations</td>
<td>• Sociology of education</td>
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<tr>
<td>• E-modules</td>
<td>• Mechanisms of Learning</td>
<td>• Cognitive science</td>
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<tr>
<td>• Reflective reasoning</td>
<td>• Simulation</td>
<td>• Simulation</td>
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<td>• and diagnostic accuracy</td>
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<td>• Procedure skills</td>
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<td></td>
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<td>• Expertise building</td>
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Some ideas stemming from the retreat include increased collaboration between members of the division based on education themes, sharing of available resources and research personnel, and a revised organization of education within the Division.

The Division, given its significant educational mandate, had previously developed an organizational structure, appointing leads for education for each level of learner and each section of the Division. A lead for education scholarship was recently added to this group. It is hoped that the new lead for education scholarship, and the Pediatric Medicine education scholarship group: GEaRS: Group for Education Research and Scholarship, newly formed as an outcome of the retreat, will move the Division’s education scholarship agenda forward. This group will be embedded within the larger Pediatric Medicine Research Team.
Currently, there are limited opportunities and experiences for high school students from under-represented backgrounds and at-risk areas in the fields of healthcare and research. To address this disparity, a number of staff from the Research Institute have developed and successfully implemented a paid student research internship program at The Hospital for Sick Children (SickKids), under the outreach initiative, Standard Life Kids Science. This program was focused on recruiting students of Aboriginal or African heritage, as these minority groups currently lack the most opportunities in the fields of research and healthcare. Additionally, increasing the representation of both of these groups in medicine and research has recently emerged as a national imperative to create a more socially and culturally diverse health profession (Dhalla et al., 2002).

The inaugural year of the Student Advancement Research (StAR) program gave four high school students a chance to explore the research currently underway at SickKids over a 6 week period. By working in a wet bench lab or on a clinical research project at either the hospital or the Peter Gilgan Centre for Research and Learning, the students gained professional experience in a hospital environment under the guidance of graduate student mentors and principal investigators. The goal of this program is to provide students with a unique work experience during the summer.

At the end of the internship, the students share what they have learned by presenting their research project at the Research Showcase at SickKids. As participants of the StAR program, students also have access to other science career and research experiences through the Standard Life Kids Science program.

Under the leadership of Lisa Robinson, with coordinative support by Adrienne Wong, the first year of the StAR program was a complete success and Kid Science looks forward to future of this promising initiative.

Countries should place the well being of children at the top of their responses...not only is this a moral obligation but it is in the self-interest of societies.

– UNICEF, irc 12