At the end of June 2016, my ten year term as Chair of the Department of Paediatrics at the University of Toronto and Paediatrician-in-Chief at SickKids came to an end, ten years being the rule at these two great institutions. And completely appropriately too, since all institutions need periods of renewal and reflection in order to steam ahead. I have no doubt that Ronald Cohn who has assumed these roles is an outstanding choice and will move the department ever forwards.

I would personally wish to thank all members of the department, whether at SickKids or in other UofT-affiliated institutions, for their enormous contributions. It is because of all of you that our department ranks among the best in the world.

There are some very simple metrics that I have kept repeating; let me summarize them briefly here:

1. our education programs have never been in such good shape: thanks to the leaders of all the components of this portfolio;
2. our research funding has never been at the current level: we continue to recruit scientists and investigators who are leaders in their areas; and
3. clinical care is enriched by the patient safety and quality strategies; choosing wisely initiatives; greater accountability and more.

And now some direct thanks:

• to the members of the Paediatrics Executive for their unwavering support and effort: Rayfel Schneider (education), Meredith Irwin (research), Jeremy Friedman (clinical), Marilyn Monk (hospital operations) and Ben Vozzolo (departmental operations);
• to the division chiefs and their training program directors for keeping us heading forward;
• to the Dean, Vice-Deans, Associate Deans of the Medical School, so ably led by Dean Trevor Young; SickKids Senior Executive team, led first Mary Jo Haddad and now Mike Apkon.

In the past 10 years we recruited over 100 new faculty, promoted to Full or Associate Professor 154 members of the faculty. I believe our commitment to excellence has served us very well indeed and will continue to do so.

It has been a joy and a privilege to have been in these roles the past 10 years. There are no doubt bumps in the road ahead, especially with faculty and research funding. Nonetheless the department is well positioned to meet these challenges.

...the torch; be yours to hold it high!

John McCrae; In Flanders Field

Denis Daneman MBCh FRCPC DSc(Med)
Following an extensive international search, The Hospital for Sick Children (SickKids) Board of Trustees and The University of Toronto’s Governing Council are pleased to announce the appointment of Dr. Ronald Cohn to the position of Chief of Paediatrics, SickKids and Chair of Paediatrics at The University of Toronto. Dr. Cohn will assume his responsibilities on July 1, 2016 following Dr. Denis Daneman’s completion of his ten-year term.

Dr. Cohn is an outstanding clinician, scientist, and educator recruited to SickKids in 2012 to be the Chief of the Division of Clinical and Metabolic Genetics, Co-Director of the Centre for Genetic Medicine and Senior Scientist. He also became the Inaugural Women’s Auxiliary Chair in Clinical and Metabolic Genetics in April of 2013, and is an Associate Professor in the Departments of Paediatrics and Molecular Genetics at the University of Toronto (U of T).

“I am excited to have Dr. Cohn join the SickKids executive team as Chief of Paediatrics. I am certain that he will be an exceptional leader within the hospital and across the university’s paediatric community,” says Dr. Michael Apkon, SickKids President and CEO. “His excellent clinical, scientific and people leadership skills and strong commitment to innovation will continue to inspire our Department of Paediatrics in world-class care and integration with our research enterprise, resulting in greater health outcomes for our children and families.”

“I am excited to have Dr. Cohn join the SickKids executive team as Chief of Paediatrics. I am certain that he will be an exceptional leader within the hospital and across the university’s paediatric community,” says Dr. Michael Apkon, SickKids President and CEO.

Dr. Cohn has combined his clinical and research interests working to develop programs and influence policies that will bring the power of genomics to individualized approaches to care. In July of 2013, under his leadership, the Centre for Genetic Medicine launched the first paediatric focused Genome clinic at SickKids, which is devoted to discovering new diagnostic and treatment options for paediatric disease. Dr. Cohn is also an accomplished scientist, focusing on the genetics of muscular dystrophies. Most recently, his laboratory has started to investigate the application of a new genome editing technology, CRISPR/Cas9 that holds the promise of correcting genetic abnormalities that lead to disease.

“Dr. Cohn has helped establish Toronto as a centre in the emerging field of Genetic Medicine since joining the University of Toronto and SickKids in 2012. He is a talented physician and a sterling researcher. We look forward to the energy and vision he’ll bring to supporting children’s health in his new roles,” says Professor Trevor Young, U of T’s Dean of the Faculty of Medicine and Vice Provost, Relations with Health-Care Institutions.

Dr. Cohn holds a medical degree from the University of Essen, Germany, and did his postdoctoral fellowship at the Howard Hughes Medical Institute. Before joining SickKids he was at the McKusick-Nathans Institute of Genetic Medicine at Johns Hopkins where he became the Director of the world’s first multidisciplinary centre for Hypotonia. Dr. Cohn has received numerous awards including the David M. Kamsler Award for outstanding compassionate and expert care of paediatric patients, 2004; the First Annual Harvard-Partners Center for Genetics and Genomics Award in Medicine, 2006; and, the NIH Young Innovator Award, 2008.

Dr. Michael Apkon
President and CEO,
The Hospital for Sick Children

Trevor Young, MD, PhD, FRCPC, FCAMS
Dean, Faculty of Medicine and Vice Provost,
Relations with Health Care Institutions,
University of Toronto
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 Strategic Planning process; our work with CAPHC on transition guidelines; and the explosive growth of the Transgender Youth Clinic.

The Young Families’ Program continues to offer interprofessional education and experience to trainees from a variety of disciplines including medicine, nursing, social work and psychiatry with a particular focus on social paediatrics to its clinical, research and educational programs. Research and Quality Improvement projects include work in the areas of maternal and child outcomes, infant mental health, developmental screening and evidence-based health services for adolescent parents. The program continues its progress towards the development of evidence based adolescent parenting interventions, with a particular emphasis on maternal and infant mental health. Outreach to Community networks and affiliations remain an active focus.

The Substance Abuse Program provides a continuum of care from outpatient to day treatment, incorporating best practices in clinical care, while providing learning for a variety of health professional trainees. The program also provides outreach to schools, group homes and youth-serving agencies across the GTA. The program has introduced enhanced services for parents and is also one of the lead agencies involved in a pilot project aimed at enhancing program evaluation of youth addiction programs in Ontario. The program is also launching a new education resource for teens about the health risks of cannabis use entitled ‘Just Weed’.

Pilot Study: Benefits of a Transfer Clinic in Adolescent and Young Adult Kidney Transplant Patients.

The purpose of this study was to investigate whether a kidney transplant transfer clinic for adolescent and young adult kidney transplant recipients transitioning from pediatric to adult care improves adherence post-transfer. We found that attendance at a single transfer clinic was associated with improved adherence and renal function in the year following transfer to adult care. If these changes are sustained, they may improve long-term graft outcomes for adolescent kidney transplant recipients.
transitions to adult healthcare and continue our research in palliative care, inflammatory bowel disease, and transition-specific initiatives (i.e., Transfer Clinics).

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.

Our newest program, the Children’s Outpatient Program for Eating Disorders (COPE), provides care specifically designed for those under 12 years old who struggle with eating issues and co-morbid illnesses. Educating current and new providers on best practices in eating disorders care remains a core mission of the program. Current research is in the areas of transition to adult care, bone health, and the treatment of young children with eating disorders. We continue to participate in the Ontario Community Outreach Program for Eating Disorders which strengthens and promotes access to care for people with eating disorders throughout the province.

SickKids Interprofessional Team for Youth continues to provide adolescent health care for young people with chronic illness or disability through regular attendance in subspecialty clinics (solid organ transplant, rheumatology, haematology, STOMP, sleep and spina bifida) and through our weekly SITY clinics. The Transgender Youth Clinic (TYC), operated jointly by Adolescent Medicine and Endocrinology, has seen over 200 patients in the Youth Clinic (TYC), operated jointly by Adolescent Medicine and Endocrinology, has seen over 200 patients in the

PUBLICATIONS


GRANTS AND FUNDING


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


Improving Outcomes for Youth with Type 1 Diabetes in Transition to Adult Care Through Strengthening integration with Primary Care: An Exploratory, Cross-Provincial Study. Chaf R, Gatto A, Guttmann A, Aubrey-Bassier, F. Bridger K, Tracey L; Knight J; Newhook, Leigh Anne; Shah, Baiju R; Shulman R; Toulany A. Canadian Institutes of Health Research: SPOR Network in Primary & Integrated Health Care Innovations - Quick Strikes. $75,000. 2015 – 2016.

Team to Address Bariatric Care in Canadian Children (Team ABC3). Ball, Birken, Hamilton, Holt, Masse, Morrison, Anderson, Buchholz, Carsley, Chanoine, Cordeiro, Dettmer, Forhan, Hadiyannakis, Haines, Ho, Legault, Luca, Maguire, Maximova, McPherson, Parkin, Perez, Sprague, Toulany, Tremblay, Tu. Canadian Institutes of Health Research: Team Grant in Bariatric Care. $1,480,881. 2014-1019

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, 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 with over $3 million in new research funding acquired in the past year and very high productivity. The Heart Centre is a long-standing member of the Paediatric Heart Network (an NIH funded network of centres of excellence), is the lead for a Canada-wide pediatric transplant research network, houses the Congenital Heart Surgeons Society database, and is an international leader in clinical epidemiology and outcomes research in congenital heart disease. The Heart Centre has made major investments in translational and basic research including acquiring the latest cardiac imaging technologies, advances in fetal interventions, continued growth of the Biobank which is one of the largest in the world, and cutting-edge genomics and stem cell research. The Heart Centre recently launched the Cardiac Precision Medicine program as part of SickKids leadership in the newly formed Ted Rogers Centre for Heart Research that is paving the way for genomics-driven medicine. This is now used clinically for echocardiography, fetal echocardiography, diagnostic coding, and outpatient clinic including an electronic medication reconciliation system. We look forward to expanding the system to the heart station, cardiac imaging, interventional cardiology, and heart function and transplantation over the coming months. In summary, the Division, working in close collaboration with colleagues from surgery, anesthesia, intensive care, and the many specialties involved in the care of children with heart disease, goes from strength to strength in the clinical, educational, and research domains.

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 with over $3 million in new research funding acquired in the past year and very high productivity.
**HONORS AND AWARDS**

Friedberg, MK: The American Society of Echocardiography.
Designated Fellow, Toronto, Ontario, Canada 2016

Hamilton, R: The Paul C. Gillette Pediatric and Congenital
Electrophysiology Society (PACES) Research Grant to
trainee Tamara Koopmann. $10,000 US. 2015 – 2017

Kirsh, JA: Elected President of College of Physicians and
Surgeons of Ontario, Toronto, Ontario, Canada June 2015

Kirsh, JA: Master’s in Healthcare Management,
Harvard University, Boston, MA, USA. May 2015.

Mital, S: (Supervisor) AK Manickaraj (Postdoctoral fellow)
Heart and Stroke Foundation of Canada Research Fellowship,
Exome sequencing for RV remodeling after tetralogy of Fallot repair. $83,000

Mital, S: (Supervisor) George Manase. Global
Cardio- oncology Meeting. Outstanding abstract 2015

Mital, S: (Supervisor) Allison Ouellette.
IMS SURP Joint-Funding Award 2015

Mital, S: (Supervisor) SickKids Summer Research Program Poster Presentation Award,
University of Toronto, Allison Ouellette 2015

Mital, S: Appointed Vice-Chair, American Heart Association Council on Cardiovascular Disease in the Young 2015

Mital, S: Appointed Scientific Co-Lead, Cardiac Precision Medicine Program, Ted Rogers Centre for Heart Research 2015

**PUBLICATIONS**


Seed, M: Senior Author. Society of Cardiovascular Magnetic Resonance. Best oral presentation 2015


Seed, M: Supervisor - Ted Rogers Centre for Heart Research. Education Award ($2500) 2015


Nielsen, EA, Sun, M., Honjo, O., Hjortdal, VE. Redington, AN, Friedberg, MK. Dual Endothelin receptor blockade abolishes right ventricular remodeling and biventricular fibrosis in isolated elevated right ventricular afterload. PLOS1 2016: 11 (1): pp e0146767.


Thakur V, Jaeggi ET, Nield LE. A unique fetal case of left ventricular non-compaction associated with arrhythmia, structural cardiac anomalies and agenesis of the ductus arteriosus. Cardiology in the Young 2015: 26 (2): pp 368 – 370.


**BOOK CHAPTERS**


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


Septal insertion injury mediates adverse ventricular-ventricular interaction in right ventricular pressure and volume loading. Friedberg MK, Hunter K, Hinek A, Macgowan C, Gross-Wortman L, Connelly K. Grant-in-Aid Heart & Stroke Foundation of Canada. $246,082.00 CAD. Jul 1-2016-June 30-2019


Septal insertion injury mediates adverse ventricular-ventricular interaction in right ventricular pressure and volume loading. Friedberg MK, Hunter K, Hinek A, Macgowan C, Gross-Wortman L, Connelly K. Grant-in-Aid Heart & Stroke Foundation of Canada. $246,082.00 CAD. Jul 1-2016-June 30-2019


Whole exome sequencing to identify gene-elusive, severe, hereditary dilated cardiomyopathy. The Rare Disease Foundation. Hamilton RM. $3,500 CAD. Jan 1-2016-December 31-2016
**Interim Division Head**
Dr. Jennifer Russell  
(Interim November 2014 – Present)

**Full-Time**
Dr. Lee Benson  
Dr. Rajiv Chaturvedi  
Dr. Anne Dipchand  
Dr. Andreea Dragulescu  
Dr. Mark Friedberg  
Dr. Fraser Golding  
Dr. Gil Gross  
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Dr. Andreea Dragulescu  
Dr. Mark Friedberg  
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Dr. Steven Schwartz  
Dr. Sharmila Udupa  
Dr. Rachel Wald  
Dr. Roxanne Walker  
Dr. Eva Welisch  
Dr. Shi-Joon Yoo

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Dr. Fred Keeley  
Dr. Andrew Redington

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Shelley Kahn  
Diana Kuzmanovski  
Michelle Leusenko  
Jacqueline Moonsammy  
Sue Morton
2015-16 has been an exciting year for genomic medicine at SickKids and the Division of Clinical and Metabolic Genetics continued to focus efforts on our understanding of disease mechanisms including diagnosis and enhancement of individualized clinical therapeutics. Specifically, the Division in partnership with DPLM and the Centre for Genetic Medicine commenced a two-year pilot project to offer exome sequencing. This pilot was targeted to leverage the required infrastructure and continued development of technical clinical expertise and disease management to influence genomic medicine outcomes. Divisional leadership through Drs. Bowdin, Meyn and Cohn resulted in the creation of genomic clinical champions across multiple medical specialties that has resulted in a primary diagnosis for 16% of the exomes completed in DPLM’s Genome Diagnostics laboratory with a yield rate of 0.23.

While precision medicine initiatives is in its infancy, the Division of Clinical and Metabolic Genetics has been very active in planning efforts with a lens to evaluate the diagnostic utility and health implications of Whole Genome Sequencing (WGS) in paediatric care. Genome Sequencing (WGS) in paediatric care. In January 2016, npj Genomic Medicine published the Genome Clinic’s research findings demonstrating WGS to expand diagnostic utility and improve clinical management. The Division is participating in ongoing Genome Clinic research activity to help assess and determine the impact of our findings on medical management aiming to publish additional findings in fiscal 2016-17. Clinical outcomes identified and shared by the Division of Clinical and Metabolic Genetics have influenced the clinical planning and design study in preparation to launch a complimentary Cardiac Genome Research Clinic funded by the Ted Rogers Centre for Heart Research initiative which will commence in the summer of 2016.

To address the education needs identified through a hospital wide Needs Assessment, the Division participated with the Centre for Genetic Medicine and led a number of educational initiatives including a 7-part lecture series, “Conversations with Genetics: Your day to day practice”, with over 1400 participants. Additionally, Divisional leadership and planning included a fall Genetics symposium, “Individualized Medicine through Genetic Testing – Today, Tomorrow and Beyond”, with over 300 delegates in attendance. With a goal to advance genomic literacy to improve access, awareness and responsiveness to evidence-based genomic information across the hospital for both care givers and families, the Division has also led content development for a number of online education tools that were also successfully launched in 2015.

Specifically, Nasim Monfared, a genetic counsellor and Adel Gilbert, a genetic counsellor and education advisor, working within the Centre for Genetic Medicine have developed educational resources to help patients and families make informed decisions about whole exome

Divisional leadership through Drs. Bowdin, Meyn and Cohn resulted in the creation of genomic clinical champions across multiple medical specialties that has resulted in a primary diagnosis for 16% of the exomes completed in DPLM’s Genome Diagnostics laboratory with a yield rate of 0.23.
Division Chief, Dr. Ronald Cohn was promoted to Professor and was also awarded the Dr. George Karpati Award in fundraising, public relations, services and/ or advocacy work, and neuromuscular research. Staff Physician, Dr. Saadet Mahmutoglu was promoted to Associate Professor and was also the winner of 10th ILAE Epilepsia Prize for The Best Clinical Research published in Epilepsia in 2015. Dr. Andreas Schulze was the Student’s Choice Award Winner of Arts & Science Co-op Programs - Sciences category, University of Toronto Scarborough, And Dr. David Chitayat was the winner of the Margaret W. Thompson Award for excellence in teaching by the Division of Clinical and Metabolic Genetics, The Hospital for Sick Children.

Three genetic counsellors, Stacy Hewson, Nada Quercia and Erisayk Liston, organized the 3rd annual evening event for families and health care professionals in recognition of International Rare Disease Day 2016 on February 29th. Notably, Mayor John Tory declared the day as “Rare Disease Day” in the city of Toronto. This was a very successful function and included several talks from SickKids staff and from parents as well as opportunities for networking. A rare disease is defined as a condition affecting fewer than 1 in 2000 people. With more than 7000 diagnosed rare diseases, there are nearly three million, or 1/12, Canadians affected with a rare disease. Each month, the genetic counsellors organize evening information and support meetings for families with the goal of fostering empowerment and networking.

Families and staff from the SickKids 22q11 Deletion Syndrome (22q11 DS) Clinic gathered at the Toronto Zoo to celebrate International 22q11 DS Awareness Day on Sunday, June 7. Also in attendance were staff and patients from UHN’s Dalglish Family Hearts & Minds Clinic for adults with the syndrome. There were 147 people in attendance, and for some, this was their first opportunity to connect with other families affected by the syndrome. This is an annual event hosted by SickKids to increase awareness about 22q11 DS and provide much needed support to patients and their families. 22q11 DS is a genetic condition that involves missing genetic information on chromosome number 22, and can lead to both medical and developmental problems including congenital heart malformation, immune deficiency, cleft palate, and communication and learning challenges.

The 22q11 DS Clinic continues to offer its transition to adult care program, with 19 patients having participated and seamlessly transferred to the Dalglish Family 22q Clinic for Adults at the UHN. The Sick Kids 22q Clinic team will be in Sirmione Italy this July at an International 22q Conference, to present their data on their transition program. The Clinic has also continued its collaboration with a parent-led committee to offer a Fall Educational Conference for families and professionals, to be held Nov 12 and 13 at SickKids.

An international team led by Genetics researcher, Rosanna Weksberg and including genetic counsellor Cheryl Cytrynbaum, has identified a specific DNA methylation signature associated with pathogenic mutations in the NSD1 gene (associated with Sotos syndrome). This signature can be used to help classify NSD1 gene variants of unknown significance as pathogenic or benign. This research was published in Nature Communications this past December. Future steps towards utilizing DNA methylation signatures as a diagnostic tool for patient care will be undertaken by the Genome Diagnosis Lab in DPLM.

HONOURS AND AWARDS

Chitayat, D: Winner of the Margaret W. Thompson Award [excellence in teaching], Division of Clinical and Metabolic Genetics, The Hospital for Sick Children, Toronto, ON, Canada. May 2015.

Cohn, RD: Winner of the Dr. George Karpati Award, Muscular Dystrophy Canada, 2015.


Schulze, A: Winner of Arts & Science Co-op Programs STUDENT CHOICE AWARD - Sciences category, University of Toronto Scarborough, Toronto, Canada. June 2015.


Autism Spectrum Disorders: Genomes to Outcomes. Scherer SW, Szatmari P, Genome Canada/Canadian Institutes of Health Research (CIHR)/ Ontario Ministry of Economic Development and Innovation. $10,000,000 CAD. January 1-2013 – December 31-2017


Canadian Rare Diseases: Models & Mechanism. Cohn, R D. CIHR. $230,000 CAD over four years. October 1-2014 – April 30-2018

Cellular and molecular mechanisms of skeletal muscle homeostasis during hibernation. Cohn, R D. NSERC. $53,000 CAD over five years. 04/03/14-04/04/2019


CRISPR-mediated Therapies for Duchenne Muscular Dystrophy. Cohn, R D. Duchenne Children’s Trust. $150,000 USD over two years. July 1-2015 – June 30-2018

Delivery mechanisms of CRISPR-mediated Therapies for Duchenne Muscular Dystrophy. Cohn, R D. SOLID-GT. $540,000 USD over three years. August 1-2015 – July 31-2018


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


Pre-clinical gene editing for Arginase-1 deficiency. Funk C. Schulze, A. Urea Cycle Disorder Consortium. $50,000 USD. 2015 – 2016


Quantitative in vivo magnetic resonance (MR) spectroscopy of the brain in children as standard of care at SickKids. Schulze, A. Starbucks Clinical Genetics Research Studentship Award 2015. $4,880 CAD. 2015 - 2016

Rare Diseases Clinical Research Consortia (RDCRC) for the RDCR Network. - Urea Cycle Disorder Consortium Batshaw ML., Schulze, A. National Institute of Child Health and Human Development and National Centre for Advancing Translational Sciences. $8,000,000 USD. 2014 - 2019

Regulation of erythropoiesis by the miR-144/451 microRNA locus. Weiss, M., Schulze, A. National Institutes of Health (NIH). $250,000 USD. Dec 2012-Aug 2015

Rewriting the genome: Exploration of CRISPR/Cas9 technology in MDC1A. Cohn, R D. Cure-CMD. $52,600.00 DKK over two years. September 1-2015 – September 1-2017


Transdisciplinary Research Center for Preterm Birth. Driscoll, D., Schulze, A. March of Dimes. $2,000,000 USD/ annual direct costs. October 2014 – October 2018

Whole Exome Sequencing in the NICU: Developing a rapid, specific and sensitive pipeline for the diagnosis of genetic disease in the newborn. Cohn R., Bowdin S., Moore A. McLaughlin Centre, University of Toronto. $20,000 CAD. May 1-2016 – April 30-2017

Whole Genome Sequencing for Pediatric Patients. Cohn, RD., Scherer S. Complete Genomics. $200,000 USD over three years. September 1-2013 – August 31-2016
The Division of Clinical Pharmacology & Toxicology was established in 1979. Since then, it has been leading research, education, and various new clinical initiatives of the discipline at national and international levels. Our two major clinical programs, the Ontario/Manitoba Poison Information Centre and the Motherisk reproductive toxicology program, provide information and advice to professionals, patients, and caregivers on poisonings and drug safety during pregnancy and lactation. In 2015, each of the programs received about 65,000 and 30,000 initial inquiries, respectively. These and other clinical programs of the division continue to be the training platforms for the subspecialty residents for the Royal College certification, clinical fellows, and trainees from other disciplines.

Our trainees are actively involved in research, enriching the quality of the learning environment. Ongoing research projects include knowledge syntheses on drug safety in pregnancy, mechanisms of drug transfer into breast milk, discovery of susceptible genes of adverse drug reactions, and long-term outcomes of intense drug therapy for childhood leukemia. As part of the key components of the discipline’s practice scope, pharmacogenomics-based personalized medicine approach will soon be tested in a clinical environment, which will provide a powerful tool for patient safety and quality improvement.

HONORS AND AWARDS

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

PUBLICATIONS


The discipline of Clinical Pharmacology & Toxicology has played an important role in discovering and developing the field of pharmacogenetics, which signifies an approach of genotype-based drug therapy to achieve the best therapeutic outcome while minimizing the risk of severe adverse drug reactions. Moreover, as genomic sequencing emerges as a powerful diagnostic tool for paediatric diseases, the pre-emptive pharmacogenetics assessment to inform future drug therapy becomes increasingly important. The pharmacogenetics approach in clinical and research settings to improve patient outcomes is one of the priorities of the division for the next few years.

Pharmacogenetics-based patient care allows us to select the best medications for the patient while avoiding severe drug reactions. Iris Cohn is driving this exciting new field forward.

Impact of peri-childbirth depression on individuals with MS. Ito, S. National Multiple Sclerosis Society. $77,663 USD. 2016 – 2019


Our trainees are actively involved in research, enriching the quality of the learning environment. Ongoing research projects include knowledge syntheses on drug safety in pregnancy, mechanisms of drug transfer into breast milk, discovery of susceptible genes of adverse drug reactions, and long-term outcomes of intense drug therapy for childhood leukemia.

### STAFF LISTING

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<th>Division Head</th>
<th>Cross-Appointees</th>
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<td>Dr. Shinya Ito</td>
<td>Dr. Sylvain Baruchel</td>
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<td>Dr. Irena Nulman</td>
<td>Dr. Eran Barzilay</td>
<td>Niki Balamatisis</td>
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<td>Dr. Margaret Thompson</td>
<td>Dr. Nirmala Chandrasekaran</td>
<td>Sarah Bondy</td>
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<td>Dr. Ian Ball</td>
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<td>Iris Cohn, RPh</td>
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<td>Dr. Eran Barzilay</td>
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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. The main clinical focus of the division is on childhood neuro-developmental and neuro-rehabilitation disorders. Comprehensive assessment and treatment programs are run for children and youth with conditions such as cerebral palsy, acquired brain injury, neuromuscular disorders and spina bifida. Inpatient services are provided for children with medical conditions requiring complex continuing care. Specialized assessment clinics provide diagnostic assessments for children and youth with autism spectrum 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.

The division members lead research teams in applied childhood disability studies, in association with the Bloorview Research Institute led by Professor Tom Chau. Highlights include leadership of two Ontario-based translational neuroscience 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.

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 divisions’ 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 Department of Paediatrics.

Division members hold national/international leadership positions with Dr. Darcy Fehlings as the Past President of the American Academy for Cerebral Palsy and Developmental Medicine (AACPDM), Dr. Golda Milo-Manson as the chair of the Royal College of Physicians and Surgeons subspecialty committee in Developmental Paediatrics and Dr. Anne Kawamura as the incoming President of the Developmental Paediatric Section of the Canadian Paediatric Society.

HONOURS AND AWARDS

Church, P: Received, Emerging Leader in Neonatology Award, Canadian Paediatric Society, Charlottetown, PEI, Canada, June, 2016

Kawamura, A: Received, Division of Developmental Pediatrics Faculty Teaching Award, Toronto, Canada, June 2015

Kawamura, A: Received, Teaching and Learning Recognition Award for Excellence in Clinical Education, Holland Bloorview Kids Rehabilitation Hospital, Toronto, Canada, June 2015

Developmental Paediatrics at University of Toronto leads Translational Neuroscience Research Networks in Neurodevelopmental Disorders and Cerebral Palsy.


Parental perspectives on advance care planning for individuals with cerebral palsy. Hoffman A. Centre for Leadership in Child Development: Holland Bloorview Kids Rehabilitation Hospital. $18,000 CAD. 2016-2017

Prevention of osteoporosis - Clinical practice guideline use within the inpatient program at Holland Bloorview Kids Rehabilitation Hospital. Hoffman A. The Hospital for Sick Children AFP Innovation Fund. $66,800 CAD. 2015-2017

Profiles of Vision Impairment in Pediatric Acquired Brain Injury. Hung R. Holland Bloorview Kids Rehabilitation Hospital Center for Leadership for ABI Seed Funding. $2400 CAD. 2015


The Canadian Neuromuscular Disease Registry. Korngut L, McAdam L. ALS Canada, Jesse’s Journey, Families of SMA Canada. $10,000 CAD. 2011-2016

Understanding the transition needs and perspectives of youth and young adults with Duchenne muscular dystrophy as they transition to adult health care. McAdam L, Lindsay S, Milo-Manson G. Centre for Leadership in Child Development, Holland Bloorview Kids Rehabilitation Hospital. $5,000 CAD. Apr 2015- Apr 2016

Use of the Lokomat® robotic gait trainer in the early stage rehabilitation of children and youth following acquired brain injury (ABI): A feasibility study. Hung R, Wright V. Holland Bloorview Kids Rehabilitation Hospital Center for Leadership for ABI Seed Funding. $19,960.88 CAD. 2016


Division Head
Dr. Darcy Fehlings

Full-Time
Dr. Evdokia Anagnostou
Dr. Andrea Hoffman
Dr. Jolene Huber
Dr. Ryan Hung
Dr. Elizabeth Jimenez
Dr. Anne Kawamura
Dr. Alvin Loh
Dr. Laura McAdam
Dr. Golda Milo-Manson
Dr. Angela Orsino
Dr. Melanie Penner
Dr. Wendy Roberts
Dr. Jay Rosenfield
Dr. Peter Rumnrey
Dr. Sharon Smile

Part-Time and/or Community Physicians
Dr. Ghassan Abu-Kuwaik
Dr. Douglas Biggar
Dr. Jackie Chiang
Dr. Paige Church
Dr. Janine Flanagan
Dr. Dana Frisch
Dr. Cynthia Goldfarb
Dr. Mark Handley-Derry
Dr. Carolyn Hunt
Dr. Anita Jethwa
Dr. Nicola Jones-Stokreef
Dr. Peggy Kirkpatrick
Dr. Zina Levichek
Dr. Deepali Mankad
Dr. Anne Richards
Dr. Lilly Roinica
Dr. Clive Schwartz
Dr. David Shawn
Dr. Diann Superina-Bell
Dr. Elizabeth Young

Cross-Appointees
Dr. Jessica Brian

Subspeciality Residents
Dr. Jennifer Das
Dr. Jenna Doig
Dr. Cecilia Lee
Dr. Amber Makino

Administrative Staff
Romana Karvetova
Merienee Chin
Joannen Jenah
Sharon Dujellet
Barbara Zinnowodzki

STAFF LISTING
The 2015-2016 academic year showed us once again why the Division of Paediatric Emergency Medicine (PEM) is a world-leader in the care of ill and injured children. Now with nearly 70,000 patient visits annually and increasing patient complexity, our PEM team remains steadfast in its commitment to ensure that the highest standard of care is reliably delivered to each and every child.

That commitment was tested this winter season when a record number of patients visited the Emergency Department (ED). A late viral surge brought 25 percent more patients to the ED in the first three months of 2016 than in the same period in 2015. Teamwork, preparedness and shared purpose allowed our ED team to thrive despite the unprecedented demand for care.

Clinical excellence drives academic excellence. This year our PEM faculty was again recognized for outstanding academic accomplishments in leadership, education, quality practice and research. Dr. Suzanne Schneeweiss was appointed the Associate Dean of Continuing Professional Development for the University of Toronto, Faculty of Medicine. Dr. Yaron Finkelstein was inducted as a Fellow by the American College of Medical Toxicology in recognition of his expertise and leadership in medical toxicology. Drs. Charisse Kwan and Mark Tessaro made multiple media appearances across the country to share their pioneering work in point-of-care ultrasound. Drs. Tania Principi, Suzanne Schuh and Kathy Boutis received international acclaim for research challenging the established management of bronchiolitis and dehydration.

Our clinical and academic efforts continue in 2016-17 with exciting work already started on patient safety, led by our quality practice team of Drs. Tania Principi, Olivia Ostrow and Deborah Schonfeld. Competency-based training, led by our medical simulation team of Drs. Jonathan Pirie and Laura Simone, and physician wellness, led by Dr. Anna Kempinska.

HONORS AND AWARDS

Boutis, K: Winner of Canadian Paediatric Society PEM Research Award, Canadian Paediatric Society Annual Meeting, Toronto, ON, Canada. June, 2015

Boutis, K: Nominated for Academic Paediatric Association Research Award. April, 2015

Boutis, K: Awarded Detweiler Travelling Fellowship Scholarship. March, 2016

Now with nearly 70,000 patient visits annually and increasing patient complexity, our PEM team remains steadfast in its commitment to ensure that the highest standard of care is reliably delivered to each and every child.

Finkelstein, Y: Awarded Fellowship in the American College of Medical Toxicology (FACMT), ACMT Annual Scientific Meeting, Clearwater Beach, FL, U.S.A. March, 2015


Fischer, J: Winner of Continuing Education Teaching Award, Course Coordination, Continuing Education, Department of Paediatrics, Faculty of Medicine, University of Toronto, Toronto, ON, Canada. June, 2015

Fischer, J: Recognition Award for Clinical Teaching, Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, ON, Canada. June, 2015

Kempinski, A: Winner of Subspecialty Teaching Award for Excellence in Clinical Teaching, Department of Paediatrics, The Hospital for Sick Children, Toronto, ON, Canada. June, 2015

Kempskina, A: Recognition for Clinical Bedside Teaching Award, (“Physician Wellness”), Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, ON, Canada. June, 2015

Mehta, S: Runner-Up of James C. Fallis Teaching Award for Emergency Medicine Staff Physician Presentation (“Shock”). Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto, ON, Canada. June, 2015

Mehta, S: Nominated for Presidents’ Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children. Toronto, ON, Canada. December, 2015

Mehta, S: Recognition of SMILES Award, Division of Paediatric Emergency Medicine, The Hospital for Sick Children. Toronto, ON, Canada. February, 2016

Schneeweiss, S: Winner of Royal College Accredited CPD Providers Award for Continuing Education Leadership Program, Ottawa, ON, Canada, September, 2015

PUBLICATIONS


BOOK CHAPTERS


GRANTS AND FUNDING


Action Research on Organizational change for Improving Emergency Care for Children. Ratnapalan S, Dopson S, Darwent M. Oxford University Hospitals, National Health System. £5430.00 GBP.


Improving Resuscitations in Children. Ratnapalan S. Oxford University Hospitals Charitable Fund. £2280.00 GBP 2014-2016.


The Deliberate 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 2014-2015.


### Division Head
- Dr. Stephen C. Porter

### Interim Division Head
- Dr. Jason Fischer – Sept. 2015

### Full-Time
- Dr. Krishna Anchala
- Dr. Iwona Baran
- Dr. Kathy Boutis
- Dr. Adrienne Davis
- Dr. Vicky Fera
- Dr. Yaron Finkelstein
- Dr. Anna Kempinska
- Dr. Luba Komar
- Dr. Charisse Kwan
- Dr. Trent Mizzi
- Dr. Olivia Ostrow
- Dr. Jonathan Pirie
- Dr. Tania Principe
- Dr. Savithiri Ratnapalan
- Dr. Vanessa Razack
- Dr. Suzanne Schneeweiss
- Dr. Deborah Schonfeld
- Dr. Suzanne Schuh
- Dr. Dennis Scolnik
- Dr. Mark Tessaro
- Dr. Kirstin Weerdenburg

### Half-Time
- Dr. Yousef Etoom
- Dr. Claudio Fregonas
- Dr. Sanjay Mehta
- Dr. Susanna Talarico
- Dr. Talya Wise

### Part-Time
- Dr. Brenda Alves
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- Dr. Alexander Barron
- Dr. Andreanne Benidir
- Dr. Susanna Benseler
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- Dr. Jack Brezninski
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- Dr. Malini Dave
- Dr. Anh Do
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- Dr. Beth Gamulka
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- Dr. Shauna Jain
- Dr. Karim Jassa
- Dr. Mikael Lavigne
- Dr. Kelly Keogh
- Dr. Celine Kim
- Dr. Lauren Kitney
- Dr. Dina Kulik
- Dr. Sarah Kwok
- Dr. Amina Laiani
- Dr. Eddy Lau
- Dr. Ilana Magder
- Dr. Karen Mandel
- Dr. Sonia Menard
- Dr. Hasan Merali
- Dr. Steven Moss
- Dr. William Mounstephen
- Dr. Pat Neelands
- Dr. Melanie Ostreicher
- Dr. Melissa Parker
- Dr. Michelle Porepa
- Dr. James Edward Pugh
- Dr. Evelyn Rosenblyum
- Dr. Natasha Saunders
- Dr. Gordon Soon
- Dr. Heshy Sturm
- Dr. Alene Toulany
- Dr. Jeff Weisbrot
- Dr. Joseph Wiley
- Dr. Brent Williams
- Dr. Kim Zhou

### Cross Appointees
- Dr. Hartmut Grasemann

### Clinical Fellows 2014-2015
- Dr. Abdullah Akkam
- Dr. Shubha Alip
- Dr. Macarena Castro
- Dr. Roser Martinez Mas
- Dr. Gal Neuman
- Dr. James Thorburn

### Clinical Fellows 2015-2016
- Dr. Saeed Alzahrani
- Dr. Vigil James
- Dr. Daniel Magnus
- Dr. Adaugo Owubu
- Dr. Tsai Sao Pedro

### Academic Fellows 2014-2015
- Dr. Faisal Al-Sani
- Dr. Max Ben-Yakov
- Dr. Adrienne Davis
- Dr. Jessica Gantz
- Dr. Greg Harvey
- Dr. Lianne McLean
- Dr. Hassan Merali
- Dr. Daniel Rosenfeld
- Dr. Laura Simone
- Dr. Laura Weingarten

### Academic Fellows 2015-2016
- Dr. Faisal Al-Sani
- Dr. Max Ben-Yakov
- Dr. Jessica Gantz
- Dr. Magali Gauthney
- Dr. Greg Harvey
- Dr. Elana Hochstadter
- Dr. Michelle Lee
- Dr. Sashia Litwin
- Dr. Fathima Razik
- Dr. Daniel Rosenfeld

### Ultrasound Fellows 2014-2015
- Dr. Mara Hosang
- Dr. Sara Jones

### Ultrasound Fellows 2015-2016
- Dr. Lianne McLean
- Dr. Jade Seguin

### SIM Fellow 2014-2015
- Dr. Sandra Cardenas

### SIM Fellow 2015-2016
- Dr. Laura Simone

### Trauma Fellow 2014-2015
- Dr. Ahmad Al Thekair

### Trauma Fellow 2015-2016
- Dr. Genevieve Ernst

### Research Fellow 2014-2015
- Dr. Adrienne Davis

### Administrative Staff
- Syed Azmat
- Casilda Dewar
- Angie Frisk
- Kathleen Gilmore
- Ritsa Iriotakis
- Julie Lee
- Laurie McQuarrie
- Henna Mian
- Sandra Miller
- David Nissan
- Nicole Rivera
- Majda Savaglio
- Pauline Smith
- Kelly Sobie
- Annabel Sousa
- Maggie Stevanovic
- Deborah Taylor

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- Kelly Sobie
- Annabel Sousa
- Maggie Stevanovic
- Deborah Taylor
Providing comprehensive care and advancing excellence in research and education

From left to right: Drs. Rayzel Shulman and Jennifer Harrington

ENDOCRINOLOGY

DIVISION OF ENDOCRINOLOGY

2015-2016 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) 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 endocrine disorders; (iii) abnormalities of calcium metabolism and bone health; (iv) endocrine cancers, including thyroid cancer, adrenal cortical carcinoma, and pheochromocytoma; and (v) gender dysphoria.

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, adolescent medicine, 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 Gynaecology provides care to pre-teen and adolescent girls with gynecology disorders and to pregnant adolescents. The Trans Youth Clinic (TYC) has been developed in collaboration with colleagues in the Division of Adolescent Medicine and has provided care to over 200 youth since it opened in 2013.

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 seven trainees in our subspecialty training program: six from Canada and one from Israel.

The Division also maintained a substantial focus on research, supported by 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; (iv) prevention and treatment of the medical complications of diabetes, including a leading role within the multinational AidIT study group, (v) use of iPhone-based technology to assist youth with diabetes self-management, and (vi) examination of how social determinants of health and health policies affect diabetes outcomes. Our Juvenile Diabetes Research Foundation (JDRF)-sponsored Canadian
Clinical Trial Network (CCTN) site is also very active. Other research areas include investigation of the factors that regulate the timing of puberty, effects of sex steroid on brain development, etiology and management of thyroid disorders and endocrine cancers, and management of calcium and bone abnormalities.

**HONOURS AND AWARDS**

Aggarwal, A: Toronto General Hospital, John H. Fowler Excellence in Teaching Award, Toronto, Ontario, Canada 2015

Daneman, D: Canadian Association of Paediatric Health Centres, Contribution to Child Health Award, Ottawa, Ontario, Canada 2015

Daneman, D: Diabetes Research Center, Washington University in St. Louis. Julio Santiago Memorial Lecture, St. Louis, Missouri, USA 2015

**BOOK CHAPTERS**


Harrington J, Palmert MR. Definition, etiology and evaluation of precocious puberty. In: UpToDate (Snyder PJ, Crowley WF, Geffner M, eds). UpToDate, Boston MA 2015.

Harrington J, Palmert MR. Treatment of precocious puberty. In: UpToDate (Snyder PJ, Crowley WF, Geffner M, eds). UpToDate, Boston MA 2015.


**JOURNAL ARTICLES**


Adolescent type 1 diabetes cardio-renal intervention trial (AdDIT). Daneman D, Mahmud FH, Sochett EB, Curtis J.
British Heart Foundation. £60,800 GBP. (extended from March 26, 2013 to no defined dollar amount).
January 1-2008-January 1-2017

Adolescent type 1 diabetes cardio-renal intervention trial (AdDIT). Daneman D, Mahmud FH Sochett EB, Curtis J.
Cambridge, London, United Kingdom
Curtis J. Cambridge, London, United Kingdom

Adolescent type 1 diabetes cardio-renal intervention trial (AdDIT). Sochett EB.
Canadian Coordinating Trials Network- Juvenile Diabetes Research Foundation. $234,196 CAD. March 1-2011-January 1-2016


Canadians Seeking Solutions and Innovations to Overcome Chronic Kidney Disease (Can-SOLVE CKD). Sochett EB. Canadian Institutes of Health Research. $779,590 CAD. October 1-2012-September 30-2017

Epigenetic changes in DNA infants exposed to gestational diabetes in utero. Hamilton JK, Palmet MR. Canadian Diabetes Association. $272,967 CAD. July 1-2012-June 30-2015


Genetic Characterization of Pediatric Papillary Thyroid Carcinoma. Wasserman JD. CI2 Research Network. $150,000 CAD. July 1-2014-June 30-2016


CONTACT-conditional nuclei tagging in specific cell types to study the epigenetics of early brain development and disease. Palmet MR, Wilson M. Lefebvre, Matthews J, Scott I. Centre for Brain and Mental Health: Chase-an-idea in Early Brain Development Grant. $49,995 CAD. January 1-2015-January 1-2016


Genetic Variants in Congenital Hypothyroidism. Wasserman JD. American Thyroid Association. $50,000 USD. September 1-2015-August 31-2017


Growth hormone therapy and bone quality in paediatric osteoporosis. Sochett EB. Eli Lilly. $125,000 CAD. November 1-2007-December 31-2017

Idiopathic juvenile osteoporosis - the next generation of sequencing data. Sochett EB. McLaughlin Centre (Accelerator Grant in Genomic Medicine, University of Toronto) with matching funds from The Department of Paediatrics, The Hospital for Sick Children. $40,000 CAD. July 1-2014-January 1-2017


Preadiatric Thyroid Nodule Score (PTNS) Derivation and Validation of a Predictive Score for Thyroid Nodules. Wasserman JD. Rare Disease Foundation. $3,500 CAD. March 1-2015-March 1-2016

Prospective, multicenter, single-arm study to evaluate efficacy, safety, and pharmacokinetics of Denosumab in children with osteogenesis imperfect. Sochett EB. Amgen Inc. $427,570 CAD. June 5-2015-June 4-2018

Quick Strikes Improving Outcomes for Youth with Type 1 Diabetes in Transition to Adult Care Through Strengthening Integration with Primary Care: An Exploratory, Cross-Provincial Study. Shulman R. SPOR PIHCI Network. $75,000 CAD. January 1-2016-January 1-2017


The GH monitor registry and EasyPod connect study. Hamilton JK. Serono Canada Inc. $20,200 CAD. May 1-2005-April 30-2015

Type 1 Diabetes TrialNet Toronto Clinical Centre. Wherrett, DK. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. $1,751,736 USD. July 20-2015-April 30-2019

Division Head
Dr. Mark Palmert

Full-Time
Dr. Denis Daneman
Dr. Jill Hamilton
Dr. Jennifer Harrington
Dr. Farid Mahmud
Dr. Rayzel Shulman
Dr. Etienne Sochett
Dr. Jonathan Wasserman
Dr. Diane Wherrett

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

Honorary
Dr. Robert Ehrlich
Dr. Kusiel Perlman

Clinical Fellows
Dr. Sanjukta Basak
Dr. Erica Burry
Dr. Lyne Chiniara
Dr. Nicole Coles
Dr. Andrea Ens
Dr. Shai Fuchs
Dr. Jennifer Galle
Dr. Mark Inman
Dr. Isaac Levy
Dr. Danielle van der Kaay
Dr. Margaret Wolfe-Wylie
Dr. Stephen Zborovski

Administrative Staff
Suzanne Dionisio
Angela Edoo
Judy Grundy
Megan Imbrasas
Lindsay Paterson
Becky Simpson
Zarine Tilak

Section of Gynaecology
Section Head
Dr. Lisa Allen

Part-Time
Dr. Anjali Aggarwal
Dr. Nicolette Caccia
Dr. Sari Kives
Dr. Alexandra Nevin Lam
Dr. Rachel Spitzer

Clinical Fellows
Dr. Ian Comeau
Dr. Noor Zwayne
The Division of Gastroenterology, Hepatology and Nutrition (GHN) has continued to provide significant contributions in clinical care, research, and education across a breadth of subspecialist areas.

Highlights of the Division’s research programs this year include the publication of a method to differentiate functional bile duct cells (cholangiocytes) from human pluripotent stem cells, in which Dr. Binita Kamath and her collaborators also demonstrated the initial application of these cells to explore disease mechanisms and therapies in cystic fibrosis (published in Nature Biotechnology). A new disease causing severe protein-losing enteropathy was reported by Dr. Aleixo Muise, in collaboration with other Division and SickKids investigators, who demonstrated that PLVAP mutations cause disruption of endothelial fenestrated diaphragms and thus added a new category of vascular abnormalities to the list of causes of life-threatening congenital enteropathies. Dr. Tanja Gonska collaborated with her colleagues in the Cystic Fibrosis Centre to present an international study of the outcomes of newborn infants with positive screening tests but inconclusive diagnosis for cystic fibrosis. Continued monitoring of these children is necessary as 1 in 10 will develop evidence of CF by 3 years of age. Looking forward, research in the Division is strongly placed following success in this year’s funding competitions achieved by many members of the Division in the current highly competitive funding environment.

Clinical care commitments continue to grow, with ambulatory patient visits and endoscopic procedures increasing; more than 1200 patients underwent endoscopic procedures in the last year. We strive for the provision of high quality clinical care and have undertaken a number of quality improvement initiatives this year, including the introduction of bowel preparation at home for selected children undergoing colonoscopy, and the development of an AboutKidsHealth landing page as an easily-navigable home for information about GHN disorders for affected patients and families. Our nutrition faculty (Drs. Mouzaki and Bandsma) have contributed to the development of new standard parenteral nutrition solutions, which will provide safe and appropriate nutrition with reduced risk of prescription errors and reduced work load for preparation.

Through excellent research supporting improvements in clinical care, disseminated through our work in education the Training Program in Paediatric Gastroenterology passed its scheduled internal review by the University this year, thanks to the leadership and preparation of the Director, Dr. Yaron Avitzur and the Education Administrative

Dr. Aleixo Muise identified a new monogenic cause of Very Early Onset Inflammatory Bowel Disease (VEOIBD). Muise investigated the cause of a severe congenital gastrointestinal disease causing massive loss of protein into the gut lumen. His studies identified a mutation in PLVAP gene that leaves blood vessels without a protein-catching sieve over the microscopic windows in their endothelial cell lining. The Muise laboratory is providing better understanding of VEOIBD mechanisms and seeking novel therapies to transform the lives of these children.
Walsh, C: Winner of the NASPGHAN Endoscopy Prize from the North American Society Pediatric for Gastroenterology, Hepatology and Nutrition Annual Meeting, Washington, DC, USA. October 2015

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Recommendations for the assessment
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James Snyder
Marina Bakay
Dimitri Monos
Hongzhe Li

A comparative study of the antiviral efficacy and safety of entecavir (ETV) versus placebo in pediatric subjects with chronic hepatitis B virus (HBV) infection who are HBeAg positive Protocol AI463-189. Ling S. Bristol-Myers Squibb (Patient-based stipend), $26,000 CAD per patient.
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Vong L, Pinnell L, Maattanan P, Yeung C, Lurz E, Sherman P. Selective enrichment of commensal gut bacteria protects against IBAD. Croitoru K, Griffiths A. Crohn’s and Colitis Foundation of Canada ($5,600,000, 2007-2013; Renewed with funding from Helmsley Foundation and CFCF $9,000,000 2013-2018).

A multidisciplinary approach to target chronic inflammation of the gut, liver and joint.


A smartphone application designed for teaching children 9-11 emergency safety skills. Huber Young E, Campbell D, Mihalidis A. Paediatric Consultants Educational Scholarship Grant, The Hospital for Sick Children. $5000 CAD. May 2015-May 2016

A structured simulation-based training curriculum to improve the non-technical performance of endoscopy trainees: A randomized control trial. Walsh C, Grover SC.


BOOK CHAPTERS


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A multi-disciplinary study on the genetic, environmental and microbial interactions that cause IBD. Croitoru K, Griffiths A. Crohn’s and Colitis Foundation of Canada ($5,600,000, 2007-2013; Renewed with funding from Helmsley Foundation and CFCF $9,000,000 2013-2018).

A multidisciplinary approach to target chronic inflammation of the gut, liver and joint.


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A structured simulation-based training curriculum to improve the non-technical performance of endoscopy trainees: A randomized control trial. Walsh C, Grover SC.

Canadian Association of Gastroenterology Education Research. $7,500 CAD. Feb 2016-Feb 2017

Adapting theatre practice to enhance role-playing and communication skills of Occupational Therapy trainees. Stier J, Walsh C, Laura Jayne Nelles LJ, Carnahan H. Education Development Fund, University of Toronto. $7502 CAD. Jul 2014-Feb 2016

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Canadian Pediatric Clinician Scientist Program.
Jones NL. Manitoba Institute of Child Health. $50,000 CAD pa 2012-2015, renewed 2015-2020

Canadian Pediatric Clinician Scientist Program.
Jones NL. The Hospital for Sick Children Foundation. $300,000 CAD pa 2012-2015, renewal 2015-2017

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Celiac disease and gluten-free diet teaching: Is online education effective? Walsh C, Marcon M, Vresk L. Paediatric Consultants Educational Scholarship Grant, The Hospital for Sick Children. $29,000 CAD. 2015-2016

Celiac disease and gluten-free diet teaching: Is online education effective? Walsh C, Vresk L, Marcon M. Paediatric Consultant’s Educational Development & Innovation, The Hospital for Sick Children. $5,000 CAD. Dec 2014-1-Dec 2015

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NADPH oxidase function in the pathogenesis of pediatric
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McDonald-Blumer H, Walsh C. CanMEDS Research and
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Risk stratification in newly diagnosed children with
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Grant D. Transplant and Regenerative Medicine
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Sick Children. $50,000 CAD. 2015-2016

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<th>Division Head</th>
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The Division of Hematology/Oncology (“the Division”) 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 375 new cancer cases registered in the pediatric oncology program this past year. The Division is the designated centre for haematopoietic stem cell transplantation for patients up to 18 years of age in Ontario and the Atlantic provinces; the majority of the approximate 90 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 Division’s clinical volumes include approximately 14,500 in-patient days, 22,000 ambulatory care visits, and 11,800 day hospital visits.

The Division is organized into five 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 Section (Section Head, Dr. Eric Bouffet); the Blood and Marrow Transplantation Section (interim Section Head, Dr. Jim Whitlock); the Hematology Section (Section Head, Dr. Yigal Dror); the AfterCare (long-term follow-up) 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, 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 almost 6000 annual visits to satellite centres. 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: (1) the successful launch of our MIBG program, with 9 patients treated to date, including referrals from Newfoundland to British Columbia; and (2) a successful transition to full section-based care led by Clinical Director Dr. Sarah Alexander, with inpatient services now arranged in alignment with the each of the five aforementioned sections as a means of further improving the quality and safety of our patient care.

The Division now provides access to innovative clinical services such as MIBG and precision medicine clinical trials for children from across Canada. With financial support provided by the Garron family as a part of their transformative $30M gift to the Cancer Centre, 18 tons of lead shielding were engineered into the 8th floor of the hospital to create a state-of-the-art MIBG facility, which in its first year of operation treated 10 Canadian children from Newfoundland to British Columbia suffering from recurrent or progressive neuroblastoma. To date, 12 patients from Newfoundland to British Columbia have been enrolled at SickKids in a first-in-children precision medicine study of dabrafenib for recurrent or progressive cancers bearing a mutation in the BRAF gene.
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 includes a large number of international collaborations and offers sub-specialty training opportunities in areas such as the pediatric leukemias/lymphomas, neuro-oncology, phase I drug development, blood and marrow transplantation, bone marrow failure and pediatric thrombosis and hemostasis.

Research in the Division spans basic science to clinical care with a particular focus on translational research. Approximately one-half of the Division’s 32 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 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), as well as an active participant in activities of other clinical trials consortia including the Histioocyte Society, New Approaches to Neuroblastoma Therapy (NANT), the Pediatric Blood and Marrow Transplant Consortium (PBMT-C), the C17 Developmental Therapeutics Network and the Therapeutic Advances in Childhood Leukemia (TACL) consortium. Over 300 oncology clinical trials enrollments occurred this year, an increase of approximately 10% over the prior year. The Division is committed to facilitating knowledge exchange through collaborative international partnerships with a particular focus on low- and middle-income countries lacking the health care resources available in high-income settings such as Canada. Two such initiatives are currently underway in collaboration with the SickKids Centre for Global Health (C-GCH): (1) the Global Sickle Cell Disease Network (GSCDN) led by Dr. Isaac Odame; and (2) the SickKids-Caribbean Initiative (SCI), led by Dr. Victor Blanchette.

Notable research highlights include an international study led by Dr. Annie Huang and published in Lancet Oncology, which describes the use of molecular subtyping of atypical teratoid rhabdoid tumors (ATRT) of the brain to improve therapy for this rare, and highly malignant disease, and a study published in Nature Genetics and led by Dr. Uri Tabori, which uncovered the molecular cause of biallelic mismatch repair deficiency (bMMRD) syndrome.

Notable events in the past year included the first full year of clinical activities for our MIBG program. With financial support provided by the Garron family as a part of their transformative $3OM gift to the Cancer Centre, 18 tons of lead shielding were engineered into the 8th floor of the hospital to create a state-of-the-art MIBG facility, which in its first year of operation treated 10 Canadian children from Newfoundland to British Columbia suffering from recurrent or progressive neuroblastoma. As a member of the NANT consortium, SickKids can now offer NANT MIBG clinical trials to Canadian children. With support provided by Karen Fung, MSW, the Patient Navigator for our NAIT program, patients from across Canada are also coming to SickKids to participate in several first-in-children precision medicine clinical studies at SickKids which are not available elsewhere in Canada.

Also of note, Dr. Annie Huang received the Mid-Career Physician Researcher Award for Scientific Accomplishment from the Department of Pediatrics at The Hospital for Sick Children, Dr. Uri Tabori was announced in November from the Department of Pediatrics at The Hospital for Sick Children, Dr. Uri Tabori was elected as the next President of the International Society of Paediatric Oncology (SIOP). Classification of treatment-related mortality in children with cancer: a systematic assessment. Lancet Oncol 2015: 16(16):e604-10.


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Clinical relevance of supratentorial ependymoma subgroups. Bouffet E, Hawkins C, Ramaswamy V. B.r.a.i.n.child. $24,824 CAD. 2015-2016

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Defining the epigenome of malignant glial and primitive neural brain tumours. Huang A, Noshehmr A, DeCarvalho D. University of Toronto and University of Sao Paulo Joint. $40,000 CAD. 2014-2015


Epigenetic analysis of pineoblastomas. Huang A. *BRAIN*child. $25,000 CAD. 2015-2016.


Evaluation of educational and infrastructural interventions targeted at barriers to antibiotic delivery in febrile neutropenia. Principi T, Gupta S, Burry E. *Division of Pediatric Emergency Medicine, SickKids Hospital Research Grant*. $5,000 CAD. 2014-2015.


Hemoglobinopathy transition navigator vital toco. Williams S. *Toronto Foundation Grant*. $30,000 CAD. 2015.


Immunogeny, efficacy and safety of treatment with human-cl rhFVIII in previously untreated paediatric patients with severe haemophilia A. Carcao M. *Octapharma* $8,025/qt CAD + $8,700 CAD. 2013-2018.


Investigating the role of the Cpg island methylator phenotype (CIMP) to EZH2 remodeling and its cancer epigenetic therapy. DeCarvalho D, Huang A. *Canadian Cancer Society Research Institute*. $200,000 CAD. 2014-2016.


Mapping the functional genome of CNS-PNETs. Huang A, DeCarvalho D. SickKids Garron Family Cancer Centre. $50,000 CAD. 2014-2015.


Molecular determinants of Li-Fraumeni Syndrome-associated cancers. Malkin D. Canadian Institutes for Health Research. $750,150 CAD. Sep 30-2010–Sep 29-2015.

Molecular determinants of the Li-Fraumeni Syndrome. Malkin D. Canadian Institutes of Health Research $3,444,000 CAD. Sep 2014–Sep 2021.


Open-label safety and tolerability of dabigatran etexilate mesilate given for 3 days at the end of standard anticogulant therapy. Multi-centre, multinational, non-randomized, uncontrolled single arm trial to investigate tolerability and safety of dabigatran etexilate solution in children 1 to <12 years of age. Brandao L. Boehniger Ingelheim. $46,915.50 CAD. 2012-2016.

Operating Grant. Ramsaywany V, Taylor M. Alex’s Lemonade Stand Young Investigator Award. $100,000 USD. 2014-2016.


Translating the discovery of novel neuroblastoma genes. Irwin MS, Shlien AS, Malkin D, Meyn S, Somers G. McLaughlin Center, University of Toronto. $100,000 CAD. Jan 2015-Dec 2016.

Updated guidelines for the management of fever and neutropenia in children with cancer and/or undergoing hematopoietic stem cell transplantation. Sung L. Canadian Institutes of Health Research. $10,000 CAD. 2016-2017


Utilizing response- and biology-based risk factors to guide therapy in patients with non-high-risk neuroblastoma on COG ANBL1232. Irwin MS, Attiyeh EF, Gasieler-Foster J, Park JR. BIQSFP (Biomarkers, Imaging, Quality of Life Studies Funding Program), National Cancer Institute/NIH National Clinical Trials Network. $1,244,961 USD. Jan 2014-Dec 2019.


White matter integrity and neurocognition in sickle cell patients. Odame I. Canadian Hematology Society. $10,000 CAD. May 7-2013-May 6-2015.
### Division Head
Dr. James Whitlock

### Full-Time
Dr. Oussama Abla  
Dr. Sarah Alexander  
Dr. Muhammad Ali  
Dr. Ute Bartels  
Dr. Sylvain Baruchel  
Dr. Eric Bouffet  
Dr. Leonardo Brandão  
Dr. Michaela Cada  
Dr. Manel Carcao  
Dr. Helen Chan  
Dr. Yigel Dor  
Dr. Maarten Egeler  
Dr. Adam Gassas  
Dr. Ron Grant  
Dr. Abha Gupta  
Dr. Sumit Gupta  
Dr. Johann Hitzler  
Dr. Meredith Irwin  
Dr. Walter Kahr  
Dr. Melanie Kirby-Allen  
Dr. Joerg Krueger  
Dr. David Malkin  
Dr. Ahmed Naqvi  
Dr. Paul Nathan  
Dr. Isaac Odamne  
Dr. Angela Purnett  
Dr. Tal Schechter-Finkelstein  
Dr. Furqan Shaikh  
Dr. Lillian Sung  
Dr. Uri Tabori  
Dr. Suzan Williams

### Part-Time
Dr. Victor Blanchette  
Dr. Mark Greenberg  
Dr. David Hodgson  
Dr. Normand Lapeniere  
Dr. Aubrey Maze  
Dr. Sheila Weitzman

### Research Fellows & Associates
Dr. Saima Alvi  
Dr. Laura Avila  
Dr. Rae Braeger  
Dr. Avi Denburg  
Dr. Mina Fujii  
Dr. Moira Garraus  
Dr. Joerg Krueger  
Dr. Amy Lee-Chong  
Dr. Stephan Leucht  
Dr. Meera Rayar  
Dr. Laura Rodriguez  
Dr. Thai Hoa Tran  
Dr. Anita Villani  
Dr. Nicolas Waespe  
Dr. Marta Wieleto  
Dr. Nataliya Zhukova

### Clinical Fellows
Dr. Leslieigh Abbott  
Dr. Natasha Alexander  
Dr. Ehsan Al-Faraj  
Dr. Abdulqader Al-Hebshi  
Dr. Salah Ali  
Dr. Sami Alhoubalti  
Dr. Julie Bennett  
Dr. Tahani Bin Ali  
Dr. Jack Brzezinski  
Dr. Deepak Chellapandian  
Dr. Sylvia Cheng  
Dr. Sarah Curry  
Dr. Adriana Fonseca  
Dr. Eric Fu  
Dr. Ibrahim Ghamlas  
Dr. Ana Guerreiro Stucklin  
Dr. Fyeza Hasan  
Dr. Sakara Hutspardol  
Dr. Arnold Jacob  
Dr. David Lysecki  
Dr. Sharon McLean  
Dr. Shahabz Memon  
Dr. Marie-Claude Pellan-Marcotte  
Dr. Jennifer Seelisch  
Dr. Mahmoud Shbair  
Dr. David Stammers  
Dr. Eman Taryam  
Dr. Gabriele Zampenini  
Dr. Antonella Zanette

### Subspecialty Fellows
Dr. Jennifer Adamski  
Dr. Amal Al Sabahi  
Dr. Ali Amid  
Dr. Francesco Ceppi  
Dr. Mohammed Essa  
Dr. Samantha Gouw  
Dr. Stephanie Heidemann  
Dr. Rahul Krishnaty  
Dr. Denis Ku  
Dr. Alvaro Lassaletta  
Dr. Veronica Leoni  
Dr. Daniel Morgenstern  
Dr. Rungrote Natesrinikul  
Dr. Sapna Oberoi  
Dr. Katherine Patrick  
Dr. Mohammed Ramzan  
Dr. Mattia Rizzi  
Dr. John Roy

### Clinical Fellows
Dr. Jennifer Adamski  
Dr. Amal Al Sabahi  
Dr. Ali Amid  
Dr. Francesco Ceppi  
Dr. Mohammed Essa  
Dr. Samantha Gouw  
Dr. Stephanie Heidemann  
Dr. Rahul Krishnaty  
Dr. Denis Ku  
Dr. Alvaro Lassaletta  
Dr. Veronica Leoni  
Dr. Daniel Morgenstern  
Dr. Rungrote Natesrinikul  
Dr. Sapna Oberoi  
Dr. Katherine Patrick  
Dr. Mohammed Ramzan  
Dr. Mattia Rizzi  
Dr. John Roy

### Administrative Staff
Ingrid Arigropoulos  
Hanadi Attar-Elbard  
Ashley Baiao  
Charmaine Borja  
Enda Brennan  
Meagan Cameira  
Sandra Carbone-Walker  
Ciara Cheng  
Denise Ferreira  
Michelle Gouveia  
Connie Grillo  
Tiffany Jiminez  
Natasha Laj  
Emma Li  
Catherine Lim Shue  
Fatemeh Montazemouod  
Eleanor Paulino  
Irene Polyzogopoulos  
Samantha Ramlackhan  
Marta Vila  
Arlene Zaldivar  
Irene Zuniga
Significant expansion in the division of immunology and allergy

From Left to right: Dr. Thomas Eiwegger, Kai Yu Garry and Xiaojun Yin

This year has been characterized by significant expansion of the clinical, educational and research activities of the Division of Immunology and Allergy. The implementation of Ontario newborn screening for severe combined immune deficiency has led to a marked increase in the number of infants referred for immune assessment by the divisions’ experts. Additionally, our allergy team has been evaluating increasing numbers of children with suspected food or drug allergies in an attempt to “de-label” them or identify appropriate alternatives. To help bolster our clinical and research capabilities in allergy, particularly food allergy, we recruited Dr. Thomas Eiwegger. Dr. Eiwegger, a Clinician-Scientist, has already established a clinic dedicated to advancing the care and research of children with complex food allergies. Dr. Eiwegger will be investigating the mechanisms that lead to allergic responses with a focus on food allergy. We also recruited a dietician to our allergy clinic that will help with the education and research of children and families affected by food allergies. These recruitments are part of our Food Allergy and Anaphylaxis Programs’ vision of curing food allergy within a decade, and establishing SickKids as one of the leading centers of food allergy research and training in Canada and the world. Our Paediatric Clinical Immunology and Allergy training program continues to attract the best Canadian and international trainees, who have been highly productive. Many of them subsequently secured academic appointments in Canadian centers, such as the Janeway and Alberta Children’s Hospital, or international institutes (Soroka and Schneider Children’s Medical Center, Israel). Research continues to be a major focus of our division, with extensive local, national and international collaborations leading to publications in leading immunology and allergy journals (Biol Blood Marrow Transplant, Cell Mol Gastroenterol Hepatol, Gastroenterology, Pediatr Cardiol, Allergy, JCI Insight, Nat Immunol, etc).

Dr. Adelle Atkinson is in her 11th year as the Director of Post Graduate Medical Education in the Department of Paediatrics. The core paediatric training program currently has 80 outstanding residents, the largest program in Canada. Graduates from the program have a long track record of matching to competitive subspecialty programs, academic generalist programs and graduate programs. Dr. Atkinson continues to excel as an outstanding medical educator. Dr. Atkinson presented at many international conferences in the area of postgraduate medical education and faculty development including topics such as residency selection, professionalism, clinical teaching and feedback. Dr. Atkinson also contributed to objective assessment of teaching effectiveness (J Surg Educ). Dr. Atkinson also holds national and international leadership roles at the Royal College of Physicians and Surgeons of Canada. She currently co-chairs the International Conference on Residency Education and the International Resident Leadership Summit as well as vice-chairing the Specialty Committee for Paediatrics. Dr. Atkinson is also the co-chair of the leading centers of food allergy research and training in Canada and the world. Our Paediatric Clinical Immunology and Allergy training program continues to attract the best Canadian and international trainees, who have been highly productive. Many of them subsequently secured academic appointments in Canadian centers, such as the Janeway and Alberta Children’s Hospital, or international institutes (Soroka and Schneider Children’s Medical Center, Israel). Research continues to be a major focus of our division, with extensive local, national and international collaborations leading to publications in leading immunology and allergy journals (Biol Blood Marrow Transplant, Cell Mol Gastroenterol Hepatol, Gastroenterology, Pediatr Cardiol, Allergy, JCI Insight, Nat Immunol, etc).

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The Division of Immunology and Allergy is providing cutting edge care to children suffering from diverse inherited immune abnormalities as well as life threatening allergic reactions.

This year, after decades of investigations, Dr. Chaim Roifman and a multidisciplinary group of researchers at SickKids uncovered the genetic cause of Roifman syndrome, a rare congenital disorder described by Dr. Roifman 20 years ago.
of the newly formed Program Director Advisory Committee (PD-NAC) through the RCPSC, a national advisory committee that addresses issues for Program Directors across the country. In addition to the new role of serving on the Education Committee for the Royal College, a role given to her based on her educational experience, Dr. Atkinson also sits on the Paediatrics Examination Board and the OSCE examination creation committee. Dr. Atkinson is also a member of the FMED project (Future of Medical Education in Canada). At the University of Toronto, Dr. Atkinson participates in admissions for the Undergraduate Program and chairs the POWER Steering Committee. In terms of education and outreach/public health, Dr. Atkinson is regularly invited to provide continuing education in paediatric allergic diseases, and has a special interest in the prevention of atopy, a topic about which she has often spoken at various national conferences. As director of the Allergy Clinic, Dr. Atkinson continues to work on “de-labeling” patients, a concept formed recognizing that some patients have been labeled inaccurately or may have outgrown their food allergy. Given the burden of illness labels to food allergies, Dr. Atkinson has led the initiative to ensure that the correct patients are labeled accurately with the food allergies they truly have. She also provides education to patients and their families, and has done media outreach locally and nationally to raise awareness about allergic diseases in children as well as provide accurate information to the public about the current state of clinical care and research in paediatric allergic diseases, Dr. Thomas Eiwegger earned his doctoral degree at the Medical University of Vienna, Austria. He authored 44 publications in peer-reviewed journals and 5 book chapters. He has been very successful in supervising and mentoring young scientists and has many years of experience in lecturing under-graduate and post-graduate students. Dr. Eiwegger will further enhance SickKids existing network of outstanding allergy research and will help establish collaborations to bring cure to the many children affected by food allergy. Dr. Eiwegger aims to develop new treatment approaches for food allergy by delineating the sequence of biological events that take place in children who are allergic to food in comparison to healthy, non-allergic children. This involves the search for novel subsets of immune cells that play a significant role in food allergy. Moreover, he will establish new methodologies that will help understand how the immune system recognizes a food allergen in food allergic children. This will open the door for the development of new treatment approaches and create better diagnostic markers for food allergy (J Allergy Clin Immunol).

Dr. Eyal Grunebaum continues to lead the expansion and diversification of the Immunology and Allergy Division, while also serving as the director of the Pediatric Clinical Immunology and Allergy Training Program. Dr. Grunebaum continues to advance care for patients with complex and severe immune abnormalities, including innovative allogeneic hematopoietic stem cell transplantsations (J Allergy Clin Immunol) and investigative gene therapy. Dr. Grunebaum’s lab focuses on the management of inherited purine defects, and explores novel protein and cell therapies using induced pluripotent stem cells and relevant animal models (Am J Respir Crit Care Med).

Dr. Grunebaum has also expanded his research into allergy and immune dysregulation. As the SickKids principal investigator in a national study led by Dr. Mazer from McGill, Dr. Grunebaum is investigating the ability of oral immunotherapy to ameliorate milk allergy, and is exploring the role of regulatory T cells in primary immune defects and food allergies. Dr. Grunebaum is also working closely with SickKids Foundation to enhance the impact of the Food Allergy and Anaphylaxis Program locally and nationally. This includes close partnership with parents of children with food allergies, media outreach (such as Metro Toronto) and recruitment of industry partners (i.e. Kraft Peanut Butter).

Dr. Rolfin continues to contribute his extensive experience and knowledge to the development of the clinical, educational and research activities of the Division, while serving as the Chair and Scientific Director of Immunodeficiency Canada and the editor-in-chief of LymphoSign Journal. This year, Dr. Rolfin identified the genetic basis of Rolffman Syndrome (Nat Communication), and described the functional impact of a novel gene, REIB, involvement in primary immunodeficiency (J Autoimmunity). As the director of the Clinical Fellowship Training Program, Dr. Rolfin has increased the divisional research output to an average of 2 papers per year per fellow. Furthermore, with the success of the SCID newborn screening program that Dr. Rolfin pioneered in 2013, he continues to promote the implementation of this program in Alberta and Quebec. Dr. Rolfin secured multiple grants, including a seed grant to investigate novel genetic determinants of primary immunodeficiency using cutting edge bioinformatic tools.

Dr. Julia Upton continues to have a very active role in our divisions’ clinical, educational and research activities. This year, Dr. Upton expanded her efforts to improve the diagnosis of food allergic individuals. She completed her study evaluating the utility of baked milk testing in milk allergic children that was presented at the American Academy of Allergy, Asthma and Immunology national conference. Dr. Upton is also the principle investigator of a study evaluating the role of Platelet Activating Factor (PAF) in Pediatric Anaphylaxis among children presenting to SickKids Emergency Department. This study aims to better define and predict severity of allergic reactions in children. Dr. Upton also continues her efforts to promote the recognition of immunodeficiency by publishing 2 reports about unusual presentations of immune deficiencies and appearing in a video about the 10 warning signs of primary immunodeficiency for Immunodeficiency Canada. Dr. Upton is also involved in multiple educational initiatives involving undergraduates, residents and fellows, and became a Member of the Executive Committee of the sub-Specialty Examination Committee for Clinical Immunology and Allergy for the Royal College of Physicians and Surgeons of Canada in which she is responsible for writing oral and written questions, administering and marking the exam. Dr. Upton accepted an enrollment scholarship to a Masters programme in Epidemiology at the Harvard T.H. Chan School of Public Health.

Brenda Reid, Clinical Nurse Specialist, has been instrumental in providing leadership to nurses across the country in the management of PID. Brenda leads a national network of nurses developing PID nursing protocols in conjunction with Immunodeficiency Canada. She is responsible for coordinating the gammaglobulin replacement program for patients with hypogammaglobulinemia. She is responsible for coordinating the care of complex immunodeficient patients and participates in clinical research within the Division. She continues to provide leadership to Newborn Screening Ontario on developing education materials and protocols for babies suspected or identified with severe immune deficiency by newborn screening.


Upton J, Eiweger T. How low should we go? International Archives of Allergy and Immunology, 2015;168(3):147-9.


BOOK CHAPTERS
Dalal I, Roifman CM: Transient hypogammaglobulinemia of infancy. In: UpToDate, Stiehm ER (Ed), UpToDate, Waltham, MA. (Accessed on March 03, 2016.)

Dalal I, Roifman CM: Immunity of the newborn. In: UpToDate, Stiehm ER (Ed), UpToDate, Waltham, MA. (Accessed on March 03, 2016.)

Roifman CM: Chronic mucocutaneous candidiasis. In: UpToDate, Stiehm ER (Ed), UpToDate, Waltham, MA. (Accessed on March 03, 2016.)

Roifman CM: ZAP-70 deficiency. In: UpToDate, Stiehm ER (Ed), UpToDate, Waltham, MA. (Accessed on March 03, 2016.)


GRANTS AND FUNDING
Campbell Research in Immunology. Grunebaum E. SickKids Foundation. $400,000 CAD. Nov 2013–Oct 2018


Correlation of genotype to outcome and the role of The Hospital for Sick Children in combined immunodeficiency. Roifman CM, de la Morena M. Immunodeficiency Canada. $20,000 CAD. 2014–2016, Jeffrey Modell Foundation. $50,000 CAD. 2014–2016

Distinguished Professorship (Role of Zap-70 in T cell development). Roifman CM. Immunodeficiency Canada. $150,000 CAD. 2013-2018

Food Allergy Research. Grunebaum E. SickKids Foundation. $500,000 CAD. Sep 2014–Aug 2019

Food Allergy Research: Amy Kaiser and Ken Rotman Food Allergy Initiative. Grunebaum E. SickKids Foundation. $1,000,000 CAD. Sep 2013–Aug 2018


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

Outcome of patients with combined immunodeficiency. Roifman CM, Ehl S. Immunodeficiency Canada. $50,000 CAD. 2015–2017, Canadian Centre for Primary Immunodeficiency. $30,000 CAD. 2015-2017

PNP deficiency - a multicenter study. Grunebaum E. Jeffrey Modell Foundation $60,000 CAD. 2012–2015

Presentation and outcome of Zap 70 deficiency. Roifman CM. Jeffrey Modell Foundation. $50,000 CAD. 2013-2018

SCID newborn screening at the Canadian Centre for Primary Immunodeficiency. Roifman CM. CI Society. $125,000 CAD. 2013-2018
The Division of Infectious Diseases at The Hospital for Sick Children has had a very productive year in all domains relating to clinical care, research, education, leadership and outreach regionally, nationally and internationally. Founded in 1979, the Division continues to evolve and is regarded as one of the premier pediatric infectious diseases Divisions internationally.

The clinical consult teams provide service to patients in the ambulatory as well as in-patient settings. There are two in-patient consult services that focus on infections in immunologically normal and abnormal hosts, respectively. We continue to see increasing complexity among patients and we are often requested to provide advice on patients throughout Canada and internationally. In addition to the two traditional clinical consult services, we now have an active antimicrobial stewardship team. In 2015, this team led a major national conference on antimicrobial stewardship. The Division continues to be actively involved in the organization and staffing of a travel medicine clinic at SickKids.

The Division is integrally involved in the Infection Prevention and Control (IPAC) programme at SickKids. We are involved in the development of strategies to handle the threat of emerging infectious diseases, including but not limited to Ebola, Zika virus, and multi-drug resistant bacterial and mycobacterial infections.

In handling the above challenges, the Division collaborates closely with key partners, including the Department of Pharmacy, the Division of Microbiology, the Transplant and Regenerative Medicine Centre, and the Pediatric Medicine, Surgical, IPAC and Critical Care teams.

Representatives from the Division continue to play key roles in activities of the Royal College of Physicians and Surgeons of Canada, and in many areas of undergraduate, graduate, postgraduate and continuing medical education activities. Our training programme continues to attract the best trainees from Canada and around the globe. We have a diverse spectrum of rich clinical material which serves to provide trainees with the experience they need to manage infectious diseases.

Faculty members continue to hold editorships and visiting professorships. Faculty members are actively involved in major professional societies nationally and internationally. These societies include but are not limited to the Canadian Pediatric Society, the Canadian Pediatric AIDS Research Group, the Royal College of Physicians and Surgeons of Canada, the Infectious Diseases Society of America and the International Pediatric Transplant Association.

We have a diverse spectrum of rich clinical material which serves to provide trainees with the experience they need to manage infectious diseases.
The past academic year has seen major activity in global health research relating to infectious diseases. In addition, our research initiatives include HIV-related studies that focus on the goal to achieve a functional cure for pediatric HIV. We conduct research on new anti-retrovirals, vaccinology and research into the mechanisms of host susceptibility to viral infections and related conditions. These conditions include EBV-related post-transplant lymphoproliferative disorder (PTLD), influenza illness, infections in patients with cystic fibrosis, and encephalitis. Multi-centered trials relating to the diagnosis and prevention of infections in transplant patients are ongoing.

**HONOURS AND AWARDS**

**Alabi, A:** Winner of Travel grant, Joint 20th Annual Conference of The Union North America Region and the National TB Controllers Association, Denver, Colorado, USA. February 2016

**L’Huillier, A:** Winner of Gertrude Von Meissner Innovation Award, Ottawa, Ontario. September 2015

**Tam, J:** SickKids Research Day - Core Paediatrics Poster Winner. The Hospital for Sick Children Department of Paediatrics, Toronto, ON, Canada. May 2015

**Wadhwa, A:** Winner of RCPSC Accredited CPD Provider Innovation Award, Ottawa, Ontario. September 2015

**L’Huillier, A:** Winner of Geneva University Hospitals Research and Development Project Grant, Geneva, Switzerland. August 2015

**L’Huillier, A:** Winner of Ernst and Lucie Schmidheiny Foundation Grant, Switzerland, Grant, Switzerland. November 2015

**L’Huillier, A:** Winner of Eugenio Litta Foundation Grant, Geneva, Switzerland. March 2016

**Morris, S:** International Society of Travel Medicine Research Award, International Society of Travel Medicine Annual Meeting, Quebec City, Quebec, Canada. May 2015

**Wong, J:** Winner of IDWeek Trainee Travel Grant, Infectious Diseases Society of America for IDWeek, San Diego, CA, USA. October 2015

**Wong, J:** Winner of CACIMD Student Oral Presentation Award Canadian Association for Clinical Microbiology and Infectious Diseases for MMII Meeting, Vancouver, BC, Canada. April 2016

**PUBLICATIONS**


Effect of prenatal vitamin D supplementation on acute respiratory infections in infants in Bangladesh. Morris SK, Roth D, Bill and Melinda Gates Foundation. $1,240,842 USD. 2014-2016


Infant feeding in HIV: Knowledge, experiences, and research priorities for women living with HIV. Khan S, Bitnun A, Loufty M, MacGillivray SJ, Yudin M. St. Michael’s Hospital Medical Services Association innovation Fund. $40,000.00 CAD. 2015-2017

International pediatric travelers: Risk perception, incidence of disease and adherence with recommendations at a tertiary care centre based travel clinic. Morris SK. International Society for Travel Medicine. $10,000 USD. 2015-2016

LCI to monitor treatment response for pulmonary exacerbations. Ratjen F, Waters V. Cystic Fibrosis Canada. $309,956 CAD. 2016-2019


Maternal, newborn, and child health (MNCH) coalition knowledge, management initiative. Morris SK. Care Canada, Plan Canada, Save the Children. $1,982,500 CAD. 2013-2018

Planning research for infant feeding in HIV study (IFIHS). Khan S, Read SE, Loufty M, Yudin M, Bitnun A. Canadian Institutes of Health Research. $12,500 CAD. 2015-2016

Parathyroid-vitamin D axis dysregulation in early-onset infant stunting in resource poor settings. Roth D, Morris S, Bill and Melinda Gates Foundation. $1,999,993 USD. 2012-Present


Assessing the pulmonary microbiota as a predictor of treatment response. Coburn B, Waters V. Cystic Fibrosis Canada. $166,977 CAD. 2016-2018

Prevalence and determinants of early childhood under vaccination in Toronto primary care practices. Tran, D. The Hospital for Sick Children, Paediatric Consultants Creative Partnership Grant. $9,913 CAD. 2014-2016


Creativity and innovation in global health. Morris SK. Creative Partnership Grant. $5000 CAD. 2014 – Present


Canadian Pediatric Surveillance Program: Vaccine hesitancy survey. Tran D. Public Health Agency of Canada (PHAC). $3,000 CAD. 2015-2016


Canadian Institutes of Health Research. $14.2 million CAD. 2013-2018

$25,000 USD. Jan 2013-2016

$40,000.00 CAD.

$9,913 CAD.

$28,920 CAD.
Prospective surveillance of tuberculosis in Canadian children. Morris SK, Kitai I. The Hospital for Sick Children Department of Pediatrics Grant for Creative Professional Activity. $10,000 CAD. 2014-2016

Randomized controlled trial of prednisone in CF pulmonary exacerbations (PIPE Study) Waters V. Cystic Fibrosis Canada. $356,419 CAD. 2016-2019

RSV Immunoprophylaxis. Allen U. Abbvie Canada $163,000 USD. 2015-2016


Severe influenza in infants, children and youths: Role of clinical and epidemiologic risk factors Tran D. Canadian Institutes of Health Research. $776,835 CAD. 2012-2018


Special immunization clinic network to investigate vaccine safety issues: optimizing the clinical management of patients with contraindication to vaccination and those with adverse events following immunization (AEFI) as a platform for observational research. De Serres G, Top K, Halperin S, Tran D. Canadian Institutes of Health Research, PHAC/CIHR Influenza Research Network. $24,656 CAD (SickKids subcontract) 2012-2016

The CF lung microbiome and persistent versus eradicated Pseudomonas aeruginosa Waters V. Ontario Thoracic Society. $10,000 CAD. 2014-2016

The CF lung microbiome and persistent versus eradicated Pseudomonas aeruginosa Waters V. US CF Foundation. $83,000 CAD 2014-2019

The role of Staphylococcus aureus on establishment and maintenance of Pseudomonas aeruginosa biofilm infections in cystic fibrosis. Waters V. Cystic Fibrosis Canada Research Fellowship (Dr. Trevor Beaudoin). $70,000 CAD. 2016-2018


Vitamin D and related biomarkers as predictors of severe influenza in children. Tran D. Canadian Institutes of Health Research. $135,210. 2015-2017

Neonatal kit project in Rahim Yar Khan. Department of Pediatrics and Child Health, Aga Khan University, Pakistan. $50,000 USD. Morris S. 2016


| STAFF LISTING |
| Division Head |
| Dr. Upton Allen |
| Full-Time |
| Dr. Ari Bitnun |
| Dr. Shaun Morris |
| Dr. Michelle Science |
| Dr. Dat Tran |
| Dr. Anu Wadhwa |
| Dr. Valerie Waters |
| Part-Time |
| Dr. Ian Kitai |
| Dr. Stan Read |
| Clinical Fellows |
| Dr. Ajibola Alabi |
| Dr. Marta Garcia |
| Dr. Arnaud L’Huilier |
| Subspecialty Residents |
| Dr. Ana Blanchard |
| Dr. Nancy Nashid |
| Dr. Jennifer Tam |
| Dr. Jacqueline Wong |
| Research Fellows |
| Dr. Nadia Alattas |
| Dr. Sarah Khan |
| Dr. Faisal Kordy |
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| Jenna Craig |
| Linda Martin |
| Mona Pedlar |
| Barbara Zimnowodzki |
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| Debra Louch |
| Georgina MacDougall |
| Administrative Staff |
| Savannah Clancey |
| Jenna Craig |
| Linda Martin |
| Mona Pedlar |
| Barbara Zimnowodzki |
The Division of Neonatology welcomed Dr. Regan Giesinger who joined the Division on July 1, 2015 as a staff neonatologist and Assistant Professor, Department of Paediatrics, University of Toronto. Regan completed her medical degree at Queen’s University, Kingston; her paediatric residency at the University of Western Ontario, London; and her neonatal-perinatal medicine fellowship in Toronto. Her research focus is haemodynamic instability in critically ill neonates. Dr. Omar Elkhateeb was appointed to a staff position in Riyadh, Saudi Arabia, after two years as a transport fellow; and one year as a staff neonatologist at SickKids.

The Division’s three clinical services—transport, NICU and follow-up—continue to provide outstanding care despite the usual, never ending ebbs and flows that are characteristic of neonatal-perinatal medicine. The scope the Acute Care Transport Service continues to expand as the team transports an increasing number of children who are no longer neonates or infants. Research projects within the transport domain include quality of care during transport, implementation of best practices, and improvements for safe transport. One of the highlights of the year was the inaugural multidisciplinary T4 Conference—Triage, Transport, Treatment and Transition—held in October 2015.

The NICU continues to provide outstanding care for critically ill neonates with hypoxaemic respiratory failure, hypoxic-ischaemic encephalopathy, and multiorgan failure as a consequence of infection and other serious conditions. Approximately 40% of the NICU’s patients are surgical neonates—atresiae of the gastrointestinal tract and anterior abdominal wall defects—are the dominant congenital anomalies amongst this population in our NICU. Many neonates are admitted for surgical management of the complications of prematurity, especially necrotising enterocolitis. A care bundle has been implemented to reduce the incidence of this devastating condition and there has been an increased emphasis on newer approaches for its surgical management. Antibiotic and nitric oxide stewardship programs have yielded new insights about the use of these agents, facilitated the development of evidence-informed guidelines, and improved clinical practice. The research foci of Divisional faculty include chronic neonatal lung injury and pulmonary hypertension; developmental gastrointestinal physiology; the clinical efficacy of cardiovascular agents especially those used in the perioperative management of the haemodynamically significant patent ductus arteriosus; whole genome

Quality Improvement Initiative – NICU Central Line Associated Blood Stream Infections. Please see attached chart which shows the NICU's decreasing CLABSI rates.

The NICU’s decreasing CLABSI rates.
sequencing studies in newborns with congenital anomalies; and lung simulation for mechanical ventilation training. The highlight of the year was the transition from our Clinical Information Management System to KidCare on September 29, 2015. Computerised order entry was the most important of several new features that were implemented with this transition. The successful transition was the culmination of three years’ effort by many multidisciplinary teams within the Neonatology Program and beyond.

The scope of the Neonatal Developmental Follow-Up Clinic is expanding because of the increased interest in the developmental outcomes of neonates with congenital cardiovascular malformations. In collaboration with the Labatt Heart Centre, these children are being referred to the Clinic. Neonatologists and neurologists are collaborating on multiple studies documenting outcomes for neonates with acquired brain injury, congenital cardiovascular malformations and the impact of being born preterm on the developing brain. The expansion of the Clinic is expected to continue as a direct consequence of an increasing number of referrals and the desire to follow these children until they have reached school age.

HONORS AND AWARDS

Giesinger, R: University of Toronto. Neonatal-Perinatal Medicine Trainee of the Year Award, Toronto, Ontario, Canada 2015

McNamara, P: SickKids Fellows End of Year Celebration. Research Mentorship Award, Toronto, Ontario, Canada 2015

Moodie, R: Canadian Paediatric Society. Award of Merit, Ottawa, Ontario, Canada 2015

Moodie, R: Ontario Medical Association. Presidential Award, Toronto, Ontario, Canada 2015

PUBLICATIONS


BOOK CHAPTERS


GRANTS AND FUNDING


Milrinone in neonatal PPHN trial (MINT). El-Khuffash AF, McNamara PJ. Irish Health Board Trials Network Grant. $255,000 CAD (180,000 Euro). September 1, 2015-August 31, 2020


Neonatal protein and energy metabolism. Pencharz P, Tomlinson C, Ball RO. Canadian Institutes of Health Research. MOP 12928. $739,355 CAD. April 1, 2012-March 31, 2017


Ontario congenital anomalies surveillance enhancement initiative. Moore AM, Fell D. Public Health Agency of Canada. $80,000 CAD. April 1, 2014-March 31, 2018

Preclinical assessment of nitrile as therapy for chronic neonatal lung injury and pulmonary hypertension. Jankov RP. Physicians’ Services Incorporated (PSI) Foundation. $169,500 CAD. February 1, 2016-January 31, 2018


Simulation-based team-leadership training for neonatal resuscitation: Is learning by observation as effective as learning by participation? Kalaniti K, Louca E, Whyte HE, Finan E, Campbell DM. Canadian Paediatric Society, NRP Emerging Investigator Award. $5,000 CAD. December 1, 2014-December 1, 2015

Validation of echocardiographic indices of right ventricular dimensions and function in preterm neonates with chronic pulmonary hypertension: A comparison with cardiac MRI. Jain A, Jankov RP, Seed M, McNamara PJ. Ikaria Investigator Competition. $15,000 CAD. October 1, 2015-September 30, 2017


Non Peer-Reviewed

Neonatal echocardiography simulator equipment grant. McNamara PJ, Mallinckrodt Pharmaceuticals. $25,000 CAD. January 1, 2015-December 31, 2015

Neonatal hemodynamics club. Kluckow M, McNamara PJ. Mallinckrodt Pharmaceuticals, Educational Grant. $95,000 CAD. January 1, 2015-December 31, 2017


TNE App Phase II – PPHN and PDA. McNamara PJ, El-Khuffash AF. Ikaria Incorporated, Educational Grant. $18,000 CAD. January 1, 2013-December 31, 2015
DIVISION HEAD
Dr. Andrew James (Interim, The Hospital for Sick Children, July 2014 to Present; Interim, University of Toronto, February 2016 to Present)
Dr. Robert Jankov (Interim, University of Toronto, January 2014 to February 2016)

FULL-TIME
Dr. Jaques Belik
Dr. Regan Giesinger
Dr. Andrew James
Dr. Robert Jankov
Dr. Kyong-Soon Lee
Dr. Lihh Ly
Dr. Patrick McNamara
Dr. Aideen Moore
Dr. Martin Offringa
Dr. Christopher Tомнinson
Dr. Hilary Whyte

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CROSS-APPOINTEES
The Hospital for Sick Children
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Mount Sinai Hospital
Dr. Olufunmi Akindele
Dr. Yenge Diambomba
Dr. Emer Finan
Dr. Amish Jain
Dr. Ann Jefferies
Dr. Edmond Kelly
Dr. Sandra Leibel
Dr. Adel Mohamed
Dr. Karel O’Brien
Dr. Prakash Shah
Dr. Vibudhi Shah
Dr. Sharon Unger
Dr. Jennifer Young
Dr. Kim Fan Young Tai

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Dr. Dilip Mehta

ST. MICHAEL'S HOSPITAL
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Dr. Douglas Campbell
Dr. Michael Sigro

SUNNYBROOK HEALTH SCIENCES CENTRE
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Dr. Paige Church
Dr. Michael Dunn
Dr. Eugene Ng
Dr. Martin Skidmore
Dr. Dany Weisz

TORONTO EAST GENERAL HOSPITAL
Dr. Jelena Popovic

CLINICAL FELLOWS
Dr. Sally Abdelsalam
Dr. Amir Addi-Atawna
Dr. Mohamed Shalabi Ahmed
Dr. Salima Al-Aisari
Dr. Ahmad Al-Zoani
Dr. Eric Ang
Dr. Mariam Ayed
Dr. Michael Castaldo
Dr. Marina Castro
Dr. Amy Chan
Dr. Mong Tieng Ee
Dr. Sara Elias
Dr. Omar Elkhateeb
Dr. Amr El-Shahed
Dr. Frank Fuchs
Dr. Macarena Castro Gomez
Dr. Kate Hodgson
Dr. Daniel Ibara Rios
Dr. Abu Mohamed Imsail
Dr. Hiroko Iwami
Dr. Siyuan Jiang
Dr. Kaarthigeyan Kalaniti
Dr. Phoebe Kigozi
Dr. Srinath Krishnapa
Dr. Ranjith Kulappura
Dr. Lara Leijser
Dr. Johannes Letshwiti

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Dr. Carolina Sanguos Lopez
Dr. Eyonne Low
Dr. Wegdan Mawlana
Dr. Elaine Neary
Dr. Inez Oliveira
Dr. Jyothsna Purna
Dr. Judy Seesahai
Dr. Andrea Togo
Dr. Ranjit Torgalkar
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Dr. Laura Weigarten
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Dr. Jian-Guo Zhou

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Dr. Paul Swyer

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Clarisce Cacho
Karlee Cross
Sonia Dos Santos
Katie Fox
Judy Grundy
Allison Piercey
Diana Soares
HEMODIAFILTRATION (HDF) HAS ARRIVED: The paediatric HDF program at SickKids is the first of its kind in North America

From left to right: Rose Nemec, Dr. Christoph Licht and Katherine Karkut

2015-16 was another highly productive year for the Division of Nephrology. The number of children treated by the Nephrology team in the ambulatory, in-patient, and intensive care settings continued to climb. Under the leadership of Dr. Rulan Parekh, the Nephrology educational training program continued to attract top candidates from across Canada and around the world, offering opportunities to combine state-of-the-art clinical and research training. In 2015, Dr. Damien Noone took over the supervision of PGY2 residents and oversees their education in Nephrology, and he assumed the role of Associate Program Director. The period 2015-2016 further established the Division’s reputation as one of the top Nephrology research divisions internationally, due to the high number of successful grant applications from national and international granting agencies, the number of publications in top scientific journals, and the number of invitations to speak at leading conferences.

In 2015, Dr. Norman Rosenblum received the Physician Researcher Award for Career Excellence from the Department of Paediatrics, University of Toronto.

Under the leadership of Christoph Licht, in 2015 the SickKids Dialysis/Apheresis Program underwent significant innovations. Most importantly, in 9/2015 hemodiafiltration (HDF) replaced conventional hemodialysis (HD) as treatment standard. HDF provides a combination of hemodialysis and hemofiltration thus optimizing dialysis during each individual treatment, and as a result - significantly improving the long-term outcomes of patients, particularly with respect to vascular and bone health, growth, and anemia. This is the first such program established for children in Canada. Successful implementation of the paediatric HDF program was celebrated during World Kidney Day in March 2016.

PUBLICATIONS


*Featured in “In This Issue”


**BOOK CHAPTERS**


**GRANTS AND FUNDING**

3H-Hemofiltration. Shoff R, Harvey E, Noone D. Great Ormond Street Hospital. $3150 CAD. 2016 – 2018

aHUS Registry. Licht C. Alexion Pharmaceuticals, Inc. $10,000 USD. 2013 – 2016

An open-label, multi-center controlled clinical trial of Eculizumab in adolescent patients with plasma therapy sensitive atypical hemolytic-uremic syndrome (aHUS) (C08-003B). Licht C. Alexion Pharmaceuticals, Inc. $20,872 USD. 2009 – 2016

Biomarkers for Diagnosis of Thrombotic Microangiopathies: A Pilot Study. Pavenksi K, Licht C. Alexandra Yeo Chair Grant in Benign Hematology, University of Toronto. $5000 CAD. 2014 – 2016

Canada Research Chair in Developmental Nephrology (Tier I). Rosenblum, N. Canada Research Chairs Program. $200,000 CAD. 2012 - 2019

Canadian National Transplant Research Program: Increasing Donation and Improving Transplantation Outcomes. West LJ, Mital S, Parekh R. CIHR. $1,370,000 CAD. 2013 – 2018

CAN-SOLVE CKD SPOR. Rosenblum, N. Chronic Disease Network. $1,245,000 CAD. 2016 - 2021

Control of cerebellum cell specification, migration and organization by SUFU. Rosenblum, N. Canadian Institutes of Health Research. $146,824 CAD. 2011 - 2016

Discovery of Novel Targets and Development of Treatments for Complement-Mediated Disease, Licht C. McLaughlin Centre. $3000 CAD. 2014 – 2018

Functions of Hedgehog GLI-dependent signaling in stromal cells during normal and malformed mammalian kidney development. Rosenblum, N. Canadian Institutes of Health Research. $180,000 CAD. 2013 - 2018


Multi-center Controlled Clinical Trials in Aipor Syndrome – A Feasibility Study (1 R21 DK91480-01A1). Kashtan C, Licht C. NIH Exploratory/Developmental Research Grant Award. $47,898 USD. 2012 - 2016

Open-Label Uncontrolled Study to Evaluate the Safety and Pharmacokinetics of 4 x 375 mg/m2 Intravenous Rituximab in Pediatric Patients with Severe Granulomatosis with Polyangitis (Wegener’s) or Microscopic Polyangitis. Yeung R, Hebert D, Noone D. Roche Pharmaceuticals. $59,530 CAD. 2015 – Present


Primary Outcomes in Glomerulonephritis Study (PROGRESS). Holzman L, Parekh R. NIH/NIDDK. $200,000 CAD. 2013 – 2018

Regulation of Leukocyte-Endothelial Interactions. Robinson L. Natural Sciences and Engineering Research Council of Canada. $170,000 CAD. June 2012 – June 2017

RI Scientific Support. Licht C. The Hospital for Sick Children, Department of Paediatrics, University of Toronto. $75,000 CAD. 2015 – 2018

RNSseq in patient-derived ex vivo models: genetic diagnostics beyond whole exomes. Dowling J, Lemaire M, Brudno M. Genome Canada. $250,000 CAD. 2016 – 2018

Sleep Studies for Hemodialfiltration (HDF) Patients. Licht C, Harvey E, Noone D. Fresenius Medical Care Canada. $10,000 CAD. 2016 – 2018


Using Slit2 and Normothermic Ex Vivo Perfusion to Optimize Kidney Transplantation. Robinson L. The Hospital for Sick Children, Transplant & Regenerative Medicine Centre (TRMC). $150,000 CAD. April 2014 – September 2015

### STAFF LISTING

**Division Head**  
Dr. Lisa Robinson

**Part-Time**  
Dr. Lindsay Teskey  
Dr. Mina Matsuda-Abedini  
Dr. Rachel Pearl  
Dr. Seetha Radhakrishnan

**Clinical Fellows**  
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Dr. Hassan Faqeehi  
Dr. Jaap Mulder  
Dr. Murali Bhagavatula  
Dr. Sally Kellett  
Dr. Simon Carter

**Adjunct**  
Dr. Leo Levin

**Administrative Staff**  
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Anna Corpuz  
Bernard Singh  
Victoria Snell  
Burnett Wint  
Dana Debernyj  
Ram Mohabir
The Division of Neurology has a Royal College accredited training program in Child Neurology as well as postdoctoral training programs in epilepsy, stroke, neonatal neurology, neuromuscular neurology, neurometabolic disease and neuroinflammatory diseases. In addition, there are a number of graduate students and postdoctoral fellows in clinical neurophysiology, neurogenetics, molecular and cellular neurobiology.

The highlight of our academic year is the division’s annual Prichard Day. In memory of Dr. John Stobo Prichard, former division head, the day highlights our trainees’ research endeavours. Dr. Prichard was very involved in education and in his honour, our trainees present their research work on this day, ending with a keynote lecture by a world-renowned expert. This year we were honoured to host Dr. Steven Back. Dr. Back is a Professor of Pediatrics, Neurology and Anesthesiology-Critical Care Medicine at Oregon Health & Science University (OHSU), Portland Oregon. He is the Director of the Division of Pediatric Neuroscience at OHSU-Doernbecher Children’s Hospital and holds the Clyde and Elda Munson Professorship in Pediatric Research. Dr. Back’s laboratory at OHSU-Doernbecher Children’s Hospital focuses on studies of the causes of brain injury in premature infants. We thank the Prichard Family for their continued support of our trainees and this very special day.

The Division is active in the many integrative activities of the SickKids Centre for Brain and Mental Health (http://www.sickkids.ca/Brain-Mental-Health/index.html). Division members also look forward to active engagement with the recently funded CHILD-BRIGHT (Child Health Innovations Limiting Disability—Brain Research Improving Growth and Healthy Trajectories) SPOR (Strategy for Patient-Oriented Research) Network.

HONOURS AND AWARDS


Dowling, JJ: George Karpati Lecture, Congenital myopathies: from structure to therapy, Montréal Neurological Institute, Montréal, QC. May 26, 2015

Clinical, translational and basic research advances in epilepsy and neurophysiology, stroke, cognitive neuroscience, brain health outcomes, myopathies, neuroinflammatory diseases, fatty acid oxidation disorders, molecular and cellular neurobiology, and neonatal neurology.

Minassian, B: Winner of the Muscular Dystrophy Canada, George Karpati Award, Toronto, Ontario Canada. Sept 2015

Moharir, M: Winner of International Collaborative Award for Research for the Neonatal CSVT RCT Planning Grant. Recognition for the award at the Pediatric Academic Societies Conference. San Diego, CA. USA. April 2015

Moharir, M: Runner-up, Faculty Teaching Award, Division of Neurology, Dept. of Pediatrics. The Hospital for Sick Children, Toronto, ON. CANADA. June 2015.


Tein, I: Professorship, Advanced Pediatrics Centre, Postgraduate Institute of Medical Education and Research, Chandigarh, India. Jan. 15-18, 2016

Tein, I: Member, The World Brain Alliance (one of six core members). May, 2014-2018


**PUBLICATIONS**


BOOK CHAPTERS


GRANTS AND FUNDING

A qualitative investigation of faculty well-being at The Hospital for Sick Children. Weiss SK, Son Hing L, Granakumaran V, SickKids (Dr. D. Daneman) Pediatric Chair Fund. $8,000 CAD. Jan 2015-Mar 2016

A study to assess the safety, tolerability and pharmacokinetics of multiple doses of ISIS 396443 delivered intrathecally to patients with infantile onset spinal muscular atrophy (SMA). Vajsar J. ISIS Pharmaceuticals. $545,118 USD. Jul 2013-Jan 2018

Abnormalities of Fatty Acid Oxidation as Candidate Biomarker for SMA. Tein I, Kava M, Kyniakopolou L. University of Western Australia. $5,000 CAD. Jul 2014-Jul 2016

Biomarkers in sudden unexpected death in epilepsy, Donner E, Ontario Brain Institute. $250,000 CAD, 2013-2018

Brain Canada Multi-Investigator Research Initiative Using MR-guided Focused Ultrasound (MRgFUS), Drake J, Tam E. Canadian Institutes of Health Research. $1,500,000 CAD. Jan 2013-Jun 2016


Canadian Pediatric Stroke Imaging Platform: Harnessing in international focus, Diaminn N, deVeber G, Brain Canada. $1,200,000 CAD. Jan 2016–Jan 2019


Centre for Developmental Brain Plasticity & Repair (CDBPR), Miller SP plus10 members, Canadian Foundation for Innovation. $6,328,890 CAD. 2015-2020


Childhood cerebral palsy integrated discovery network (CP-NET), Ontario Brain Institute. $7,500,000 CAD. 2013-2018

Childhood cerebellar palsy integrated discovery network (CP-NET), Ontario Brain Institute. $7,500,000 CAD. Aug 2013–Jul 2018


Clinical Research Fellow in Epilepsy, Andrade D, Berlot F. UCB Pharma. $50,000 CAD. Jul 2014–Jun 2015

Closed-loop feedback stimulation to stop seizures in patients, Ontario Brain Institute/Epilepsy Integrated Discovery Program. $75,000 CAD. 2015-2017

Cognition and pediatric epilepsy. Sub project in EPLINK/Integrated Discovery System for Epilepsy (New Approaches to Intractable Seizures), Smith ML, Ontario Brain Institute. $250,000 CAD. 2013-2018

Cognitive dysfunction in MS: Using altered brain oscillations to link molecular mechanisms with clinical outcomes, Mabbott D, Prescott, Yeh EA, Lefebvre A, SickKids Centre for Brain and Mental Health Chace an Idea Grant. $50,000 CAD. 2016


Comparing the language network with scalp and subdural EEG in patients with epilepsy, Pang EW, Valiente TA, Donner EJ, Ontario Brain Institute, EPLink. $250,000 CAD. 2013-2018


Creating a zebrafish model of NFAT5-related arrhythmogenic right ventricular cardiomyopathy, Canadian Institutes of Health Research. $25,000 CAD. 2015-2016

Critical Care EEG Monitoring Consortium – Research Infrastructure Award, Hahn CD, Abend NS, Hirsch L, Husain AM, LaRoche SM, Lee J, American Epilepsy Society and Epilepsy Foundation. $50,000 CAD. 2014-2019

Determining the incidence and genotype-phenotype relationships of nemaline myopathy to facilitate trial readiness, health service provision and diagnosis, Dowling J A Foundation Building Strength. $300,000 USD. 2015-2018

Drug discovery and validation in RYR-1 related myopathies. Dowling J. **RYR-1 Foundation. $40,000 USD. 2016**

Drug discovery for RYR1-related myopathies. Dowling J. **Muscular Dystrophy Association. $300,000 USD. 2016-2019**

Early childhood behavior: Relations to early brain structure/function and maternal mood. Oberlander T, Brant RF, Chau V, Grunau RE, Lim KL, Miller SP, Missi S, Burak DW, Wiebe SA. **Canadian Institutes of Health Research. $1,139,616 CAD.**

Late on set IUGR. Mike S, Kingdom J, Miller SP, Blaser D, Brant RF, Chau V, Grunau RE, Lim KL, Miller SP, Misri S, Rurak DW, Wiebe SA. **Canadian Institutes of Health Research. $3,000 CAD.**


Canadian Pediatric Stroke Imaging Platform: Harnessing in International Focus. deVeber G. **Brain Canada. $1,550,000 CAD. Jan 2016-Jan 2019**

Genetics of reading disabilities. Barr CL, Kerr EN, Knight J, Lovett MW. **Canadian Institutes for Health Research. $1,293,293 CAD. Apr 2014-Mar 2019**


Genomics of pharmaco-resistant epilepsies. Cossette P, Minassian B, Michaud J, Rouleau G. **Canadian Institutes of Health Research. $1,550,000 CAD. 2011-2016**

Knock-in based mouse model of RYR-1 myopathy. Dowling J. **RYR-1 Foundation. $30,000 USD. 2016**


Longitudinal natural history study of myotubular myopathy. Dowling J. **Valerion Therapeutics. $98,321 USD. 2014-2016**

Identification of genes involved in epilepsy and epilepsy pharmacoresistance. Minassian B. **University of Toronto, McLaughlin Centre. $75,000 CAD. 2014-2015**

Identifying genetic bases of intractable epilepsy. Minassian B. **University of Toronto, McLaughlin Centre. $75,000 CAD. 2015-2016**


Infantile spasms in Down syndrome: Correction of the epileptic phenotype. Sneed OC, Cortez MA, Eubanks J, Salter M. **Canadian Institutes of Health Research. $755,000 CAD. 2011-2016**

Music Therapy to Enhance Sleep in Sick Infants in ICU. Ochi A, Tam E. **SickKids Brain & Behaviour Chase an Idea Grant. $50,000 CAD. Jul 2015-Jun 2016**

Neural correlates of movement disorders resulting from childhood stroke. Cheyne D, Diamini N, deVeber G. **Canadian Institutes of Health Research. $309,000 CAD. 2014-2017**


Neurodevelopmental Outcome after Prematurity. Tam E, Ferrer-Do. **Gerber Foundation. $131,009 CAD. Jan 2012-Jun 2016**

Neurodevelopmental outcomes of pre- and peri-natal exposure to antiretroviral treatment in HIV-uninfected children. Read S, Bitnun, Smith ML. **CANFAR. $160,000 CAD. 2012-2016**

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


Personalized medicine for the treatment of epilepsy. Minassian B, Cossette P, Michaud J. Genome Canada. $11,000 CAD. 2013–2017

Phase 3, randomized, double-blind, Sham-procedure controlled study to assess the clinical efficacy and safety of ISIS 396443 administered intrathecally in patients with infantile-onset spinal muscular atrophy. Vajzar J, Dowling J, Chau V. ISIS Pharmaceuticals. $186,000 USD. Jan 2014–Dec 2016

Phase 1 - add-on high-cannabidiol low-THC whole cannabis plant extract for children with treatment-resistant epilepsy. McCoy B, Snead, OC, Weiss S, Zak M, Lewis E, Sinopoli K, McDonald K, Wang, Tilray. $80,000 CAD. Oct 2015–Sep 2018


Post-Marketing Retrospective and Observational Study: Utilization and Effectiveness Analysis of Gamunex in Guillain-Barre Syndrome (GBS). Vajzar J. Grifols Inc. $11,000 CAD. Mar 2014–Mar 2016

Progressive degeneration from onset in pediatric Multiple Sclerosis: Evaluation of clinical and health related quality of life, early loss of brain integrity, and accelerated immunological senescence. Yeh EA. MS Foundation. $3,400,000 CAD. 2015-2018

Regulators of PI3P metabolism in skeletal muscle development and as modifiers of myotubular myopathy. Dowling J. Canadian Institutes of Health Research. $161,000 per annum. 2014-2017

Rehabilitation in pediatric MS, mentor-based post-doctoral fellowship. Yeh EA. National Multiple Sclerosis Society. $352,950 USD. 2015-2020

Respiratory dysfunction and sleep disordered breathing in children with myasthenia gravis. Naranj I, Katzberg H, Vajzar J. The Hospital for Sick Children Foundation. $18,920 CAD. 2015-2016


Stroke Imaging Laboratory for Children (SilC), deVeber G. Heart and Stroke Foundation and SickKids Foundation. $2.2 million CAD. Sep 2013-Apr 2019

Structural and functional brain connectivity in typical and atypical development. Doesburg SM, Duerrden E, Miller SP, Pang EW. Canadian Institutes of Health Research. $702,933 CAD. Oct 2014-Sep 2017

Physical activity studies on pediatric MS (supervisor of postdoctoral fellow - Samantha Stevens), Yeh A. Restracomp, Research Institute, The Hospital for Sick Children. $120,000 CAD. 2016-2018


Therapeutic hypothermia after pediatric cardiac arrest (THAPCA). Moler F, Hutchinson JS, Gruegerian A-M, Hahn C. National Institutes of Health. $21,000,000 CAD. 2010-2016

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


University of Toronto Michael Bathan Chair in Epilepsy Research Endowment. Minassian B. University of Toronto Advancement Office. $425,000 CAD. 2012-2016


Validation of monitoring changes in brain synchrony to anticipate seizures and implement feedback stimulation to stop seizure occurrence. Perez-Velazquez JL.


## STAFF LISTING

### Division Head
Dr. Steven Miller

### Full-Time

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- Dr. Nomazulu Dlamini
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- Dr. Cecil Hahn
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- Dr. Blathnaid McCoy
- Dr. Maureen Lovett
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- Dr. Margot Taylor
- Dr. Jose Luis Perez Velazquez

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- Dr. Peter Rumney
- Dr. Teesta Soman

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- Dr. Flavio Coccanei
- Dr. Katarina Haka-Ikse
- Dr. Diann Superina-Bell

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- Dr. Rebecca Barmherzig
- Dr. Oded Hochberg
- Dr. Samantha Irwin
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- Dr. Thiyya Selvanathan
- Dr. Lauren Sham

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- Jayne Thorn
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- Barbara Zimnowodzki

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- Dr. Yasushi Imura
- Dr. Kagawa Kota
- Dr. Giulia Longoni
- Dr. Mido Nakajima
- Dr. Dragos Nita

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- Dr. Michael Alber
- Dr. Aqeela Alhashim
- Dr. Sameer Al-Mehmadi
- Dr. Amr Al-Shahed
- Dr. Mariam Ayed
- Dr. Torin Glass
- Dr. Hernan Gonorazky
- Dr. Lara Lejser
- Dr. Osama Muthaffar
- Dr. Julianne Schneider
- Dr. Jaspal Singh
- Dr. Robyn Whitney

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- Dr. Darcy Fehlings

### Part-Time
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- Dr. Gabrielle deVeber
- Dr. Jonathan Gladstone
- Dr. Hans Katsberg
- Dr. Wayne Langburt
- Dr. Christine Lay
- Dr. Evan Lewis
- Dr. William Logan
- Dr. Daune MacGregor
- Dr. Gilbert Miller
- Dr. Peter Rummey
- Dr. Teesta Soman

### University of Toronto Michael Bahen Chair in Epilepsy Research Endowment.

- Dr. Berge Minassian
- Dr. Mahendranath Moharir
- Dr. O. Carter Snead
- Dr. Emily Tam
- Dr. Ingrid Tein
- Dr. Jiri Vajsar
- Dr. Shelly Weiss
- Dr. Ann Yeh

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- Dr. Joelene Huber
- Dr. Saadat Mahmutoglu
- Dr. Golda Milo-Manso
- Dr. Robyn Westmacott
- Dr. Elsya Wilja
- Dr. Grace Yoon

### University of Toronto Michael Bahen Chair in Epilepsy Research Endowment.

- Minassian B.
- University of Toronto Advancement Office.
- $425,000 CAD.
- 2012-2016

### University of Toronto Michael Bahen Chair in Epilepsy Research Endowment.

- Minassian B.
- University of Toronto Advancement Office.
- $425,000 CAD.
- 2012-2016
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. The Division’s diverse and active Sections include: General Paediatric Hospital Medicine (Inpatient, 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 hold key leadership roles in national and international professional organizations. Key areas of focus throughout the Division include optimizing outcomes for patients with general and complex pediatric conditions, preventive health and social pediatrics.

Dr. Carolyn Beck continues to provide exceptional leadership for the busy inpatient hospital medicine section. The inpatient physician staffing model has been successfully consolidated with a stable, dedicated group of hospitalists who are either full time Division members, or attend on site at least half-time (with the remainder of their clinical work as pediatric hospitalists in one of the GTA hospitals). The inpatient general pediatric units have continued to experience sustained growth patient volumes and high acuity and complexity, requiring increased attention to optimizing systems and processes, while maintaining a focus on quality and safety. Carolyn Beck, Sarah Schwartz and Trey Coffey have been at the helm of initiatives in this area, in partnership with Kate Langrish, Nadia Tavernes and the outstanding management team. Extensive planning has been underway for a pilot beginning in July, 2016, for the highest acuity group of general pediatric inpatients requiring intensive nursing support to be cohorted on an Intermediate Care Unit on 7C. The Streamlined Care Unit (SCU) continues to offer efficiencies through cohorting of patients with predictable clinical trajectories. The expansion of the Alternative Care Environment (ACE) model to Pediatric Consultation Clinic continues to develop, focused on providing semi-urgent, coordinated, multidisciplinary patient assessments in the outpatient setting for patients who do not require overnight nursing care. Continuity is a key theme in quality of care and a nursing case manager model for long stay patients was successfully piloted this year. The Division’s work on I-PASS, 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/transfers of clinical care not only within the Division, but also more widely throughout the Department. This year will see a pilot of a streamlined process for general pediatric inpatient admissions, with urgent, coordinated, multidisciplinary patient assessments in the outpatient setting for patients who do not require overnight nursing care. Continuity is a key theme in quality of care and a nursing case manager model for long stay patients was successfully piloted this year. The Division’s work on I-PASS, 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/transfers of clinical care not only within the Division, but also more widely throughout the Department. 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Research in Paediatric Medicine has continued its exponential growth and success. Division members have been exceptionally productive this year. Sustained success in grant support for research endeavours is evident, with Divisional faculty successfully competing for CIHR foundation scheme and SPOR grants, holding a total of more than 42 million dollars of grant funding, and numerous high-impact peer-reviewed publications.
augmented nursing staffing, in an attempt to continue to optimize patient flow in collaboration with our Emergency Department and Critical Care colleagues.

Activity in ambulatory general pediatrics has grown, with continued focus on providing urgent access to general pediatric consultation from the emergency department and inpatient units, in addition to established clinics addressing complex conditions, including growth and feeding (failure to thrive clinic), cleft lip and palate consultations, obesity in young children (STOMP early years program), neurofibromatosis, complex neurodevelopmental and behavioural problems, and medically-unexplained symptoms. The Complex Care Program and its satellites continue to grow, with Julia Orkin, providing leadership within the newly-established Complex Care Kids Ontario network. The Paediatric Advanced Care Team, led by Adam Rapoport, has continued to experience tremendous growth, with a notable increase in clinical activity, a sought-after elective experience, provincial committee development and a fellowship training program. Academic productivity in PACT has dramatically increased.

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 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 teaching for medical students and residents, and the SPRESS Program. Physicians in Paediatric Medicine continue to play key leadership roles in undergraduate and postgraduate education within the Department, University and Learning Institute, and participate actively in Royal College committees and examination boards. A Divisional focus on education scholarship continues with Zia Bismilla as the lead.

The Division continues to offer a large, diverse and active fellowship program, with a total of 28 fellows in the 2015/16 academic year, hailing from Canada, the US, Europe, the Middle East, UK and Mexico. Sarah Schwartz continues as the 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 our inpatient 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, medical education, global health and public health. Active fellowship programs which are unique in Canada continue in Paediatric Dermatology, Child Maltreatment Paediatrics and Community Paediatrics, and Paediatric Palliative Care.

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 successfully competing for CIHR foundation scheme and SPOR grants, holding a total of more than 42 million dollars of grant funding, and numerous peer-reviewed publications. Dr. Astrid Gutmann continues to play a leadership role in child health services research and health policy, with a tremendously productive research program and holds the position of Chief Science Officer at the Institute for Clinical Evaluative Sciences (ICES) and was recognized this year with awards for trainee and faculty mentorship from the Department and University.

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. Irene Lara-Corrales was the course director for the popular and impactful annual Pediatric Dermatology Update. 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 the co-leadership of Tanya Smith, nurse practitioner and Emma Cory. 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 now finalized 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 this year, chaired by Michelle Shouldice, and will be held in Regina in the fall of 2016. 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 pediatricians, primary health care providers, and research networks are essential to the Division and continue to grow. Congratulations on an excellent year!

HONOURS AND AWARDS

Au H: Group Winner for Excellence in Teaching: Departmental Award presented to the Department of Paediatrics, Markham Stouffville Hospital by the University of Toronto Markham Stouffville Site Family Medicine Teaching Unit. Toronto, Ontario, June 2015

Bernstein S: POWER Teaching Award for outstanding teaching, Department of Paediatrics, University of Toronto. 2015

Bernstein S: Canadian Association of Medical Education (CAME) Certificate of Merit Award. 2015


Coffey T: Winner of the POWER Teacher Award for Postgraduate Teaching, The University of Toronto, Department of Paediatrics, Toronto, Ontario, Canada. June, 2015.

Feldman M: RCPC Continuing Professional Development (CPD) Activity Grant (14.3-CPDS) - $1,000.00, PAEDIATRIC UPDATE 2015

Friedman JN: Canadian Paediatric Society, Hospital Paediatrics Resident Travel Grant (Jessica Malach, Julia Sorbara), 2015

Ford Jones L: Mothercraft Bill Bosworth Memorial Award, May 2015

Liy-Wong C, Pope E, Parkin P, Lara Corrales I: Awarded first place: Society for Pediatric Dermatology, poster award. The relationship between neurofibromatosis type 1, juvenile xanthogranuloma and malignancy, 2015

Lara-Corrales I: Awarded first place poster award: the relationship between neurofibromatosis type 1, juvenile xanthogranuloma and malignancy. 41st Annual Meeting, Society for Pediatric Dermatology, Boston, Massachusetts, USA. July 2015

Nelson K: Runner up, Senior Trainee Clinical Science Award, Department of Paediatrics Research Day, The Hospital for Sick Children, Toronto, Ontario 2015

Nelson K: Canadian Child Health Clinician Scientist Program Doctoral Award ($50,000 per year for 2 years). This national award provides salary support as well as research training opportunities for individuals from multiple disciplines in doctoral training programs

Newman C: Award for Teaching Excellence for the Paediatric Resident Lecture Series. 2015

Orkin J: Recognition for Clinical Excellence by Parents of Patients on Ward 7E. 2015

Orkin J: SPRESS Research Student Award, The Hospital for Sick Children 2015


Saunders N: Claire Bombardier Award ($1000) For the most promising student in the Clinical Epidemiology and Health Care Research Program at the Institute for Health Policy, Management and Evaluation, 2015

Saunders N: Thomas and Edna Naylor Award ($1000), For a graduate student (MSc or PhD) in the Institute of Health, Policy, Management, and Evaluation, University of Toronto who completes the best paper based on their thesis in the field of health services research, 2015

Shouldice, M: Runner up, Faculty Mentorship Award, Department of Pediatrics, University of Toronto, The Hospital for Sick Children, Toronto, Ontario, Canada. Jun, 2015

Shouldice, M: Richard Rowe Award, Department of Pediatrics, University of Toronto, The Hospital for Sick Children, June 2015

Silver S: Teaching Award: Lionel Weinstein Clerkship Award

Talarico S: R.H.A Haslam Preclerkship Teaching Award for Excellence in Preclerkship Teaching, Faculty Development Award, The Hospital for Sick Children, Toronto, Ontario, Canada, 2015

Talarico S: Helen P. Battly Award for Excellence and Achievement in Faculty Development for Innovation in Program Development and Design, 13th Annual Education Achievement Celebration, University of Toronto, Toronto, Ontario, Canada, 2015

Talarico S: Clinical Practice Award, 7B Awesome Award, The Hospital for Sick Children, Toronto, Ontario, Canada, 2015

Weingarten K: Academic Half Day Teaching Award, Haem/Onc: Awarded to the staff responsible for the year’s best formal teaching session, as judged by the fellow group. 2015

Weinstein Michael: Harry Bain Postgraduate Teaching Award, Winner, Department of Pediatrics, University of Toronto.

Weinstein, Miriam: Marvin Gerstein award for teaching; 2015 Department of Paediatric Annual Awards Day Celebration. The Hospital for Sick Children. June 2015

BOOK CHAPTERS


Li P, Goodman D, Guttmann A. “Pediatric Medical Practice Variations” in the HANDBOOK OF HEALTH SERVICES RESEARCH, in press Springer Verlag


Shouldice M, Ward M. Head Injuries in Children due to Child Abuse, Terminology. January 26, 2018
illness duration may reflect pathogenic mechanism. Pneumoniae infections in children: prodromal


1203475415612421 SRA acute asthma exacerbation.

6 Pediatric Cases and Review of the Literature. Journal

Hobnail Hemangioma (Superficial Hemosiderotic

AbuHilal M, Breslavet M, Ho N, Taylot G, Pope E.

for a randomized controlled trial. Trials 2015;2;16:132.

the primary care practice setting (OptEC): study protocol

Zlotkin SH, Parkin PC. Optimizing early child development


optimizing early child development for young children with non-anemic iron deficiency in

Abdullah K, Thorpe KE, Mamak E, Maguire JL,

Birken CS, Fehlings D, Hanley AJ, Macarthur C,

Birken CS, Fehlings D, Hanley AJ, Macarthur C,

Zlotkin SH, Parkin PC. An internal pilot study for a

randomized trial aimed at evaluating the effectiveness of iron interventions in children with non-anemic iron deficiency; the OptEC trial. Trials 2015;16:303.

Abdullah K, Thorpe KE, Mamak E, Maguire JL,

Birken CS, Fehlings D, Hanley AJ, Macarthur C,

Zlotkin SH, Parkin PC. Optimizing early child development for young children with non-anemic iron deficiency in the primary care practice setting (OptEC): study protocol for a randomized controlled trial. Trials 2015;2;16:132.

Abuhilal M, Breslavet M, Ho N, Taylot G, Pope E.

Hobnail Hemangioma (Superficial Hemosiderotic Lymphovascular Malformation) in Children: A Series of

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Rapport A, Liben S. Paediatric palliative care: There is always more we can do. Paedtr Child Health, 2015 Apr; 20(3): 123-124


GRANTS AND FUNDING


A Phase 3, Randomized, Double-Blind, Placebo-Controlled, Multinational Clinical Study to evaluate the Efficiency and Safety of 2.0mg/kg/week and 2.0 mg/kg/every other week BMN 110 in Patients with Mucopolysaccharidosis IVA (Morquio A Syndrome). Weinstein M, Hendriczs C, Faghfoury H, Al-Hertani W. Raiman J. Biomarin Pharmaceutical Inc. USD $56,690 CAD per patient. June 2012- June 2015

A Randomized, Controlled, Multidose, Multicentre, Adaptive Phase II/III Study in Infants with Proliferating Infantile Hemangiomas Requiring Systemic Therapy to Compare Four Regimens of Propanolol (1 or 3 mg/kg/day for 3 or 6 months) to Placebo (double blind). Pope E, Bradley T, Chakkitakandiyil A, Lara-Corrales I. Pierre Fabre Dermatologie $373,044 2010-2015

All-cause and cause-specific mortality trends in Ontario: Implications for health and health systems OPTMISE. Rosella L, Guttman A. Canadian Institutes of Health Research. $429,438 CAD 2015 – 2018

An Analysis of the Outcomes and Implementation of a Universal Funding Program for Insulin Pumps for Youth with Type 1 Diabetes. Guttman A. The Hospital for Sick Children Department of Paediatrics Creative Professional Activities Grant $9,185 CAD 2012 – 2015


Bringing PASS to the bedside: A communication bundle to improve patient safety and experience. Landrigan C, Bismilla Z, Coffey T, Beck CE and other co-investigators from each site. Patient Centered Outcomes Research Institute (PCORI) R-CRR-1306-03956. $1,500,000 USD. 2013 – 2017


Emerging team in rare diseases: achieving the ‘triple aim’ for inborn errors of metabolism, Potter E, Guttmann A. Canadian Institutes of Health Research $298,098/year CAD 2012 - 2017


Epidemiology Bullois Clinical Characterization and Outcomes Database. Pope E, Lara-Corrales I, Lee M. EB Medical Research Foundation $11,000 USD Dec 2013 - present.


Evaluating the implementation and impact of a medical-legal partnership. Beder M, Meaney C, Sridharan S, Pinto AD, Persaud N, Maguire J. St. Michael’s Hospital Translational Innovation Fund. $50,144. 2015-2016


Exploring Models of Care for Adolescents and Young Adults with Benign Hematological Disease. Baker J, Sgro M, Bonifacio J, Mistry N. St. Michael’s Hospital, AThe Hospital for Sick Children AFP Innovation Fund $12,000. 2015-2017


From Silos to Shared Care: Strengthening Ties Between CL Psychiatry and PACT to Strengthen Mental Health Resources for Children with Life-Threatening Conditions. Rapoort A, Mosher P, Wigator K Medical Psychiatry Alliance (MPA) Project Grant. (No monetary value. All project need to be donated in-kind.) November 2015


Measuring and Evaluating the Performance of integrated Health Systems for Complex Chronic Disease Patients. Stukel T, Guttmann A. Canadian Institutes of Health Research, Foundation Scheme Grant. $1,854,664 CAD 2015 – 2022
Mechanisms and biomarkers of growth faltering in early childhood. Roth D. Ontario Ministry of Research and Innovation (Early Researcher Award). $140,000 2015-2019


Quantifying healthy birth, growth and development knowledge integration. Roth D. Bill and Melinda Gates Foundation $149,600 US. 2015-2016


Reporting of studies Conducted using Observational Routinely-collected Data (RECORD). Benchimol E, Guttmann A. Canadian Institutes of Health Research, Operating Grant. $120,000 CAD 2013 – 2015

Resource Stewardship Workshop: Teaching internal medicine and pediatric residents to communicate effectively with patients to avoid potential harm from unnecessary diagnosis tests. Mukerji G, Weinerman A, Moore C, Atkinson A, Stroud L, Wong BM, Schwartz S. Education Development Fund, Faculty of Medicine, University of Toronto. $10,000. 2014-2016

Retrospective Chart Review of Systemic Treatments in Pediatric Psoriasis: international multicenter study. Lara-Corrales I, Paller A. International Psoriasis Council $3,000. April 2015- Present


Study: “Parental Perspectives on Advances Care Planning (ACP) for Individuals with Cerebral Palsy”. Hoffman A, Widger K, Humphreys J, Low V, Fishbein-Germon B, Rapoport A. Centre for Leadership in Child Development activity. $18,000.00 CAD April 1, 2016 March 31, 2017

Surgical interventions and outcomes of children with trisomy 13 and 18 in Ontario. Nelson K, Guttmann A. Norman Saunders Complex Care Initiative Grant $20,000 CAD 2012-Present


The Experiences and Expectations of Family Caregivers and Health Care Providers of Advance Care Planning in Children with Medical Complexity (CMC). Amin R, Orkin J; Cohen E, Rapoport A, Netten K, Adams S. Norman Saunders Complex Care Initiative Grant Competition. $23,304.00 CAD. December 2015 –December 2016


The TARGet Kids! research study, Maguire JL, Birken CS, Parkin PC. St. Michael’s Hospital Foundation $489,650. 2012-2017

The Validation of iscorEB for Patients with Epidermolysis Bullosa. Pope E, Lara-Corrales I, Bruckner A, Jackson

Gabriel Silver Foundation $9,660 USD, Jan 2014 - present.

The Validation of iscorEB for Patients with Epidermolysis Bullosa. Pope E, Lara-Corrales I, Bruckner A, EB Medical Research Foundation $7,760 USD Jan 2014 - present.

Topical Garlic Concentrate for Alopecia Areata in Children: a Prospective, Open-label Study. Pope E, Liy Wong M, Lara-Corrales I, Katipunan K. CANAAF $5,000 Feb 2015 – present

Topical Garlic Concentrate for Alopecia Areata in Children: a Prospective, Open-label Study. Pope E, Liy Wong M, Lara-Corrales I, Katipunan K. Canadian Dermatology Foundation $20,000 Feb 2015 – present


Vitamin D mediated regulation of autophagy; linking environmental-gene interactions in inflammatory bowel disease. Jones N, Roth D. Cohn's Colitis Foundation of Canada. 2015-2018


The Division of Respiratory Medicine is committed to providing excellence in inpatient care, education and research. Our members of the Division are active on all these fronts:

Dr. Sharon Dell is currently on a 6 month Sabbatical as a visiting scholar in the Department of Clinical Epidemiology School of Public Health at the University of Sydney in Australia. Sharon is strengthening her skills in clinical trials methodology for the rare disease research and establishing new collaborations in Primary Ciliary Dyskinesia research. Dr. Sharon Dell was recently awarded the American Thoracic Society Pediatric Clinician Educator Award at the American Thoracic Society Annual Conference.

Dr. Padmaja Subbarao was recently promoted to Associate Professor at the University of Toronto. She continues to co-Direct the CHILD study cohort for recruitment and retention, (summary details re Child Study) recent research award is looking at lung development.

The Home Ventilation Program continues to expand under the leadership of Dr. Reshma Amin. Her research continues to focus on the impact of children using long-term ventilation at home on the patient, family and the healthcare system. She is the pediatric lead for a provincial initiative to evaluate the use, education needs, health service utilization and outcomes of the Mechanical In-insufflator (Cough Assist) in the province of Ontario. She is also currently evaluating “fitness to fly” in a cohort of adolescents with Duchene Muscular Dystrophy.

Under the leadership of Dr. Indra Narang, SickKids Sleep Medicine program continues to advance in clinical care and over the past year has developed strategic alliances with 2 community based sleep facilities that will provide paediatric sleep services. This will be enhanced with commitment by the Sleep program at SickKids to train four Paediatric Respirologist’s in Sleep Medicine in the next academic year. Other clinical achievements include the successful introduction of a Paediatric to Adult Transitional Sleep Clinic in collaboration with Toronto General Hospital.

Dr. Indra Narang continues to advance research and is the current paediatric lead of the Sleep network, funded by CIHR to evaluate obstructive sleep apnea across the lifespan. Further, Dr. Narang has received funding from the

SickKids Sleep Medicine program continues to advance in clinical care and over the past year has developed strategic alliances with 2 community based sleep facilities that will provide paediatric sleep services.

Dr. Felix Ratjen and his team continue to conduct multiple studies in cystic fibrosis with a specific focus on treatments directed towards the basic defect. The team has developed specific expertise for physiological outcome measures and serves as a core center for North America for studies using multiple breath washout technology as an outcome measure. As a co-lead of the CF centre Dr. Ratjen is also moving individualized CFTR modulator therapy forward in close collaboration with Drs. Christine Bear, Janet Rossant and Theo Moraes.
Heart and Stoke foundation as well as the CHAK center
to evaluate the impact of obstructive sleep apnea on
cerebrovascular function and neurocognition in adolescence.

Dr. Melinda Solomon, led the fellowship training program
through another successful year. She continues to be the
Medical Director of the Bronchoscopy Program and the
Paediatric Lung Transplant Program, caring for both pre-
and-post transplant patients. Dr. Solomon has been the
Director of the Cystic Fibrosis Clinic at SickKids for over
10 years, and continues to be the facilitating teaching
of Cystic fibrosis to patients, families, trainees and other
healthcare professionals.

Dr. Hartmut Grasemann has developed multiple research
collaborations within the institution expanding his research
focus on nitric oxide metabolism in lung disease. This
year he has been promoted to full Professor based on
his research achievements. In addition to his productive
research portfolio Dr. Grasemann is one of two physicians
dedicated to the care of lung transplant patients which
has expanded over the years to include infant lung
transplantation

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studies in cystic fibrosis with a specific focus on treatments
directed towards the basic defect. The team has developed
specific expertise for physiological outcome measures
and serves as a core center for North America for studies
using multiple breath washout technology as an outcome
measure. As a co-lead of the CF centre Dr. Ratjen is also
moving individualized CFTR modulator therapy forward in
close collaboration with Drs. Christine Bear, Janet Rossant
and Theo Moraes.

PUBLICATIONS

of nosocomial infection in a Canadian pediatric intensive care unit: The nursing sentinel sheet system. Journal

Alpern AN, Brumback LC, Ratjen F, Rosenfeld M, Davis SD, Quintner AL. Initial evaluation of the Parent Cystic


Amin R, Sayal A, Syed F, Daniels C, Hoffman A, Moraes T, Cox P. How Long Does It Take to Initiate

Amin R, Sayal A, Syed F, Daniels C, Hoffman A, Moraes TJ, Cox P. How long does it take to initiate

Amin R, Sayal P, Sayal A, Massicotte C, Pham R, Al-Saleh S, Drake J, Narang I. The association between sleep-disordered breathing and magnetic resonance imaging findings in a paediatric cohort of Chiari 1


Amin R, Stanojevic S, Kane M, Webster H, Ratjen F. A Randomized Controlled Trial to evaluate the Lung

Amin R, Vresk L, Cohen E. Nutritional and Metabolic Assessment for children receiving Long-term


Douda DN, Grasemann H, Pace-Asciak CR, Palaniyar N. A lipid mediator Hexasilin A3 is a natural inducer of neutrophil extracellular traps in human neutrophils. Mediators of Inflammation 2015: ;


A Phase 3 Efficacy and Safety Study of Ataluren (PTC124) in Patients with Nonsense Mutation Cystic Fibrosis. Ratjen F. PTC Therapeutics, Inc. $20,583 fixed cost - $10,965/patient. 2014 - 2016

A Phase 3, Open-Label Study to Evaluate the Pharmacokinetics, Safety, and Tolerability of Lumacaftor in Combination with Ivcacaftor in Subjects 6 Through 11 Years of Age With Cystic Fibrosis, Homozygous for the F508del-CFTR Mutation. Ratjen F. Vertex Pharmaceuticals. $74,534.32 USD. 2015 – 2016

A Phase 3, Rollover Study to Evaluate the Safety and Efficacy of Long term Treatment with Lumacaftor in Combination with Ivcacaftor in Subjects Aged 12 Years and Older with Cystic Fibrosis, Homozygous or Heterozygous for the F508del CFTR Mutation. Ratjen F. Vertex Pharmaceuticals. $88,116.00 USD. 2014 – 2015

A pilot study testing the effect of ivcacaftor on lung function in subjects with cystic fibrosis, residual CFTR function and FEV1 >/=40% predite, VX12-770-113. Ratjen, F. Vertex Pharmaceuticals. $23,886 USD. 2014 – 2015


Assessing CFTR function in gene corrected iPS cell-derived lung epithelium. Rossant J, Moraes T, INSTITUTION. $100,000 USD. February 2016 – January 2018


Assessment of Cerebrovascular Abnormalities and their Relationship to Neurocognitive Deficits in Obese Children with Obstructive Sleep Apnea. Narang I, Kassner A. Center for Healthy Active Kids (CHAK) Catalyst Grant. The Hospital for Sick Children. $25,000 CAD. January 1-2015 – December 31-2015

A Two-Part Multicenter Prospective Longitudinal Study of CFTR-dependent Disease Profiling in Cystic Fibrosis (PROSPect). Ratjen F. Cystic Fibrosis Foundation Therapeutics Inc. $177,731.00 USD. 2014 – 2019


Cystic Fibrosis Canada Program for Individualized CF Therapy. Ratjen, F. SickKids Foundation. $7,500,000 CAD. 2015 – 2019

Deciphering the metabolic signatures of the metabolic syndrome (MetS) in young children. Subbarao P, Anand S. DoHAD Team Grant LOI. $10,000 CAD. April 2015 – November 2015

Determinants of Clinical Outcomes in Children and Youth Living with Skeletal Deformity. Zabjek K, Amin R, Zeller R, Matther S, Degiuse J. CIHR Project Scheme Competition. $300,000 CAD for 3 fiscal years April 2016 - March 31 2019

Development of highly efficient and clinically applicable nucleic acid delivery approaches for permanent correcting CF lung disease caused by all CFTR mutations. Gonska, T; Yeger, H; Bear, C; Moraes, T; Hu, J. INSTITUTION. $500,000 USD. February 2016 – January 2018


Discovery of therapies targeting the CF mutation common in Qatar. Bear C, Moraes T. Al Qamra Project. $3,193,056 USD. January 2014 – January 2017
Early Cystic Fibrosis Lung Disease Studies in Humans, NHLBI (R01). Ratjen F, Subbarao P. National Institutes of Health (NIH) $1,738,992 USD. 2012 – 2016

Early signs of efficacy study with BAY63-2521 in adult homozygous DF508 Cystic Fibrosis patients. Ratjen, F. Bayer $33,766.40 USD. 2014 – 2015

Early life determinants of asthma, Sears M, Subbarao P. CIHR $1,033,194 CAD. 2014 – 2019


Increasing Awareness of Childhood Narcolepsy. Narang, I. Wake Up Narcolepsy, Inc. $5,000 CAD. 2016 – 2017

Interpleural DNase and tissue plasminogen activator in pediatric empyema trial. Ratjen, F, Cohen, E. Canadian Institutes of Health Research. $315,121 CAD. 2012 - 2015

Interpleural DNase and tissue plasminogen activator in pediatric empyema (DPTA trial). Ratjen, F, Cohen, E. Physicians Services Incorporated. $91,000 CAD. 2013 - 2015


Narrowing the gender gap: Modulating estrogen/IL-17 signaling to control Th17 cells and neutrophil extracellular traps in the cystic fibrosis lung. Sweezy N, Palaniyar, N. Cystic Fibrosis Canada. $123,000/year CAD. 2015 - 2018

Pediciatric to Adult Sleep Disorders Clinical and Research Transition Care Program. Ryan C, Narang I. Department of Medicine Integrating Challenge Grant & Division of Respiratory Medicine, Toronto General Hospital. $50,000 CAD. 2013 – 2016

Primary human nasal epithelial cell culture in CF to test responses to CFTR modulators. Moraes, T. Cystic Fibrosis Canada. $15,000 CAD. July 2014 – July 2015

Programmatic research to understand how modifiable environmental factors interact with the genome in the development of asthma. Subbarao, P, Turvey S. CIHR. $1,675,435 CAD. 2016 - 2021


Randomized, double-blind, placebo-controlled, cross-over multi-center study to assess the efficacy and safety of inhaled Tobramycin nebulex solution (TOBI®) for the treatment of early infections of P. aeruginosa in cystic fibrosis subjects aged from 3 months to less than 7 years. Ratjen, F. Novartis. $6,750 CAD per patient. 2010 - present

Saline Hypertonic in Preschoolers (SHIP-CT) – Study. Ratjen, F. Cystic Fibrosis Foundation Therapeutics. $170,931 USD. 2015 - 2018

SHIP (Saline Hypertonic in Preschoolers) Study. Ratjen F. Cystic Fibrosis Foundation Therapeutics Inc. $2,058,043 USD. 2014 – 2018

Short-chain fatty acids in the cystic fibrosis lung. Grasemann H. SickKids CF Centre Catalyst Research Grant. $50,000 CAD. June 2014 - December 2015


stackingExercises


The Canadian Respiratory Research Network: Origin and Progression of Airway Disease (CRRN). Ratjen F, Aaron, S. Canadian Institutes of Health Research. $4,330,000 CAD. 2013 – 2018

The Canadian Respiratory Virus Research Collaborative. Marchant D, Moraes T. Li Ka Shing Institute of Virology, University of Alberta. $30,000 CAD. February 2016 – January 2019


The effects of mild pulmonary exacerbations on clinical outcomes in cystic fibrosis. Ratjen, F. Vertex Pharmaceuticals. $83,300 USD. 2015 – 2016


The Impact of developmental deficiency of Lgl1 on long-term respiratory risk. Sweezey N, Kaplan F. Canadian Institutes of Health Research. (CIHR) $776,484 CAD. 2011 - 2016


Toronto CHILD Study. Subbarao P. Don & Debbie Morrison. $500,000 CAD. 2013 - 2018

Understanding the impact of maternal and infant nutrition on infant/child health. Subbarao P, Anand S. CIHR. $1,946,614 CAD. 2013 – 2018


Providing and fostering excellence in scholarly clinical care for children with rheumatic diseases

From left to right: Dr. Brian Feldman, Audrey Bell-Peter, Kristi Whitney, Dr. Lynn Spiegel

RHEUMATOLOGY

The Division of Rheumatology provides comprehensive care for children with rheumatic diseases. The ambulatory clinics have approximately 5700 patient visits per year at The Hospital for Sick Children. In addition to the general rheumatology clinics, there are unique multidisciplinary subspecialty clinics for children with autoinflammatory diseases, dermatomyositis, morphea, systemic juvenile idiopathic arthritis, 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.

The Division of Rheumatology has one of the strongest resident and fellowship training programs in North America.

Our program offers a comprehensive range of services for the evaluation and treatment of children with a vast range of paediatric rheumatic and inflammatory diseases. Our program is also far reaching; our members have extended our services to Northern Ontario. Rheumatology provides clinical care and undertakes research studies in systemic inflammatory disorders and inflammatory diseases of the bones and joints.

The Division of Rheumatology has one of the largest paediatric rheumatology fellowship training programs in North America and is fully accredited by the Royal College of Physicians and Surgeons of Canada. This academic year, our fellows originated from Canada, India, Palestine and the Netherlands. Our graduates have been successful in obtaining academic placements around the world and trainees have been productive in the research arena. In addition, the Division has given paediatric rheumatologists the opportunity to subspecialize – both in the clinical aspect of systemic and neonatal lupus erythematosus and vasculitis and also in the development of their research skills.

Research foci include the development of trial designs for the study of rare diseases, outcome, prognosis and system dynamics.

Dr. Rae Yeung was the recipient of the 22nd Annual Abraham Shore Memorial Lectureship in Pediatric Rheumatology. She received the award in Calgary which was hosted by Dr. Susan Benseler.

American College of Rheumatology – a number of our staff and trainees presented at the ACR in November. For more information here is the link for the supplement: http://acrabstracts.org/wp-content/uploads/2015/10/acr-2015-abstracts-rev2.pdf

Dr. Ronald Laxer and collaborators published the 7th edition of the Textbook of Pediatric Rheumatology.

The Regional Paediatric Rheumatology Community Dinner took place on January 19th. This semi-annual event allows staff and community partners to meet and discuss thought-provoking cases. Thank you to all the presenters for showcasing their most interesting and challenging cases.

RED Day – RED day took place on Saturday, May 14th, 2016. The theme was: Be Prepared: Your Force Awakens. The keynote speaker was Dr. Paul Badali and featured musical performances by a patient.
treatment studies in juvenile idiopathic arthritis, systemic lupus erythematosus and neonatal lupus, scleroderma, dermatomyositis, vasculitis and central nervous system vasculitis; in addition we have a strong translational and basic science research program.

Our mandate is to provide excellent scholarly clinical care, undertake research studies about systemic inflammatory disorders and inflammatory diseases of the bones and joints in childhood, and train physicians to become prominent leaders in the field of Paediatric Rheumatology.

**HONORS AND AWARDS**

**Yeung, R:** Winner of the Abraham Shore Lectureship Award, Calgary, Alberta, Canada. October, 2015.

**Laxer, R:** Winner of the CRA Distinguished Rheumatologist Award, Canadian Rheumatology Association Annual Meeting, Lake Louise, Alberta, Canada. February, 2016.

**BOOK CHAPTERS**


**PUBLICATIONS**


Feldman BM, Pullenayegum E: Response to ‘limits of agreement between raters are required for use of HJHS 2.1 in clinical studies’. Haemophilia. 2015 Jan; 21(1): e71.


Hiraki LT, Gallagher M, De Boer I, Canty A, Sun L, Boright AP, et al. Genetic Signal for Renal Function Decline in Type 1 Diabetes (T1D) Identified by Analysis of Repeated Longitudinal Measures. Arthritis Rheumat. 2015; 67(10);


An open label canakinumab (AC2885) dose reduction or dose interval prolongation efficacy and safety study in patients with Systemic Juvenile Idiopathic Arthritis (SJIA). Schneider R. Novartis Pharmaceutical Ltd. $82,244 CAD. January 1, 2015 – December 31, 2106


Assessing Substance Use and Concurrent Disorders in Adolescents with Chronic Conditions. Levy, D., Leslie K. The Hospital for Sick Children Paediatrics Consultants Partnerships Grant. $5,660 CAD. January 1, 2014 – Present

Autoantibody conformational epitopes in Lupus and NLE. Hamilton, R., Deber, C., Jaugey, E., Silverman, E.D., Gramolini, A. Canadian Institutes of Health Research. $926,103 CAD. April 1, 2014 – Ongoing


Chronic childhood vasculitis: Characterizing the individual rare diseases to improve patient outcomes. Cabral D., Benselear S., Foel D., Graham J., Hancock R., Luzmani R. Ross C, Yeung RSM. Canadian Institutes of Health Research. $2,500,000 CAD. April 1, 2011 – March 31, 2016

Chronic Childhood Vasculitis: Characterizing the individual rare diseases to improve patient outcomes (Pediatric Vasculitis Initiative or PedVas). Benselear, S., Yeung, R., Antaya, R. University of British Columbia. $336,040 CAD. January 31, 2012 – January 30, 2017

CIHR Doctoral Award - Improving design and analysis of longitudinal studies of prognosis in uncommon diseases. Lim, L., Feldman, B. Canadian Institutes of Health Research. $105,000 CAD. April 30, 2012 – April 29, 2015


Ro52 Antibody Targets with dual roles in Lupus and NLE. Hamilton, R., Silverman, E.D. Alliance for Lupus Research. $586,426 USD. June 1, 2014 – ongoing


The genetics of kidney function decline in pediatric lupus. Silverman, ED, Hiraki, LT, Paterson, AD. Lupus Foundation of America (LFA). Pediatric Lupus. $100,000 USD. April 1, 2015 – March 31, 2016.


Translating Research into Practice Identifying Factors that Influence the Uptake of Canadian Research Findings in the Clinical Care of Children with Arthritis. Levy, D., Stringer, E. Canadian Initiative for Outcomes in Rheumatology Care (CIORA). $74,990 CAD. January 1, 2015 – Present


STAFF LISTING
GRAND ROUNDS

The Department of Paediatrics Grand Rounds are held weekly and serve as the flagship academic activity for the Department of Paediatrics.

The Grand Rounds Committee during the period April 2015 - March 2016 was chaired by Lillian Sung and included Ronald Laxer (past Chair), Eyal Cohen, Anu Wadhwa, Marvin Gans, Theo Moraes, Sanjay Mahant, Mallory Downie and Andrew Helmers.

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 given by Chris Parshuram, Patrick McNamara, Elena Pope, Jill Hamilton, Shelly Weiss, Vicky Ng, Hartmut Grasemann, Lillian Sung and Mark Palmert. Named lectureships continue to be an important component of the Grand Rounds program. This past year, Dr. Denis Daneman, the outgoing Chief, Department of Paediatrics delivered the Harry Bain Lecture. The Robert H. A. Haslam Lecture was given by Dr. Freda Miller, Cell and Molecular Developmental Neurobiologist at The Hospital for Sick Children, while Dr. Lillian Sung from the Division of Haematology/ Oncology gave the Daniel Burton Leukemia Lecture as her professorial rounds. Dr. Denise Adams from Harvard Medical School gave the Laski Lecture. Dr. Benjamin Wilford from Seattle Children’s Hospital presented the Christine Harrison Lecture on Bioethics. Dr. Polly Ferguson from Akron gave the Abe Shore Lecture and Dr. Seetha Sankaran from the Children’s Hospital of Michigan gave the Barry Smith Lecture. Dr. Lorelei Lingard from the University of Western Ontario gave Grand Rounds as part of this year’s Medical Education Day. The inaugural Grand Rounds for “Diversity Day” focused on representation and inclusion of diverse communities was given by Dr. Joane Reede. Dr. Michelle Shouldiece invited Judge Stephen Gouge to discuss Child Maltreatment and Paediatrics in an Adversarial System. A very notable Grand Rounds were given by Dr. Fergus Cameron of South Africa, during Dr. Daneman’s symposium. We were also fortunate to be able to host many additional visitors to Grand Rounds (see Schedule).

This year we continued to live-stream the Grand Rounds to members of the Department of Paediatrics. The lectures are archived for two years thus allowing department members who might not be able to attend the "live" sessions to still benefit from the lectures. This year, we also performed the first evaluation of Grand Rounds attendance and quality. Attendance to Paediatric Grand Ronds has increased over time and the quality of sessions as judged by the audience has been very high.

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, Sam Mendolia and Roberto Linueraes for their audio-visual technical expertise.

APRIL 2015 – MARCH 2016 SCHEDULE

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecturer</th>
<th>Title</th>
<th>Institution</th>
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<tbody>
<tr>
<td>April 1</td>
<td>Ingrid Tein, BSc, MD, FRCP (C)</td>
<td>Associate Professor of Pediatrics, Staff Neurologist, The Hospital for Sick Children, University of Toronto</td>
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<tr>
<td>April 2</td>
<td>Felix Ratjen, MD PhD FRCP PC FERS Head, Division of Respiratory Medicine Sellers Chair of Cystic Fibrosis Professor, University of Toronto The Hospital for Sick Children, University of Toronto</td>
<td>Healthier Children. Better outcomes: Cystic Fibrosis in the 21st century</td>
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<tr>
<td>April 4</td>
<td>John D. Lantos, MD Professor of Pediatrics, University of Missouri Kansas City School of Medicine Director, Children’s Mercy Bioethics Center</td>
<td>Current Controversies in Paediatric Bioethics</td>
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<tr>
<td>May 15</td>
<td>Ron Keren, MD, MPH Vice President of Quality and Chief Quality Officer The Children’s Hospital of Philadelphia</td>
<td>Diagnostic Imaging and Antimicrobial Prophylaxis for Children Diagnosed with a UTI</td>
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<tr>
<td>June 3</td>
<td>Tim Keiffer, PhD Professor, Cellular &amp; Physiological Sciences and Surgery University of British Columbia</td>
<td>Cell-Based Insulin Replacement for Diabetes</td>
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<tr>
<td>June 10</td>
<td>Kelly Leslie MD, Med FRCP Professor of Paediatrics Division of Adolescent Medicine Hospital for Sick Children Director, Children’s Hospital</td>
<td>Surviving Thriving in Academic Medicine: The role of Faculty Development</td>
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<tr>
<td>June 20</td>
<td>Sanjay Mahant, MD MSc FRCP Division of Paediatric Medicine Hospital for Sick Children Associate Professor, Department of Paediatrics University of Toronto</td>
<td>Excellent Clinicians: Humility over Hubris</td>
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<tr>
<td>May 13</td>
<td>Matthew L. Warman, MD Investigator, Howard Hughes Medical Institute Professor of Genetics and Orthopaedic Surgery, Harvard Medical School Director, Orthopaedic Research Laboratories, Boston Children’s Hospital</td>
<td>Heritable Skeletal Fragility Disorders, New Genes, New Pathways, New Therapies</td>
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<tr>
<td>May 20</td>
<td>Allison A. Eddy, MD, FRCP Head, Department of Paediatrics University of British Columbia Chief of Paediatric Medicine BC Children’s Hospital</td>
<td>Science and Chronic Kidney Disease: Adventures, Discoveries And Life Lessons.</td>
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<tr>
<td>May 27</td>
<td>Barry Smith Lecture. The Robert H. A. Haslam Lecture was given by Dr. Freda Miller, Cell and Molecular Developmental Neurobiologist at The Hospital for Sick Children, while Dr. Lillian Sung from the Division of Haematology/Oncology gave the Daniel Burton Leukemia Lecture as her professorial rounds. Dr. Denise Adams from Harvard Medical School gave the Laski Lecture. Dr. Benjamin Wilford from Seattle Children’s Hospital presented the Christine Harrison Lecture on Bioethics. Dr. Polly Ferguson from Akron gave the Abe Shore Lecture and Dr. Seetha Sankaran from the Children’s Hospital of Michigan gave the Barry Smith Lecture. Dr. Lorelei Lingard from the University of Western Ontario gave Grand Rounds as part of this year’s Medical Education Day. The inaugural Grand Rounds for “Diversity Day” focused on representation and inclusion of diverse communities was given by Dr. Joane Reede. Dr. Michelle Shouldiece invited Judge Stephen Gouge to discuss Child Maltreatment and Paediatrics in an Adversarial System. A very notable Grand Rounds were given by Dr. Fergus Cameron of South Africa, during Dr. Daneman’s symposium. We were also fortunate to be able to host many additional visitors to Grand Rounds (see Schedule). This year we continued to live-stream the Grand Rounds to members of the Department of Paediatrics. The lectures are archived for two years thus allowing department members who might not be able to attend the “live” sessions to still benefit from the lectures. This year, we also performed the first evaluation of Grand Rounds attendance and quality. Attendance to Paediatric Grand Ronds has increased over time and the quality of sessions as judged by the audience has been very high. 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, Sam Mendolia and Roberto Linueraes for their audio-visual technical expertise.</td>
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### APRIL 2015 – MARCH 2016 SCHEDULE cont’d

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<tr>
<th>Date</th>
<th>Speaker(s)</th>
<th>Topic</th>
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<tr>
<td>June 17</td>
<td>Steven Mittelman, MD, PhD</td>
<td>Daniel Burton Lecture: Obesity and Cancer: Lessons from Childhood Leukemia</td>
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<tr>
<td>July 8</td>
<td>Adi Ovadia &amp; Luis Murguia</td>
<td>From infancy to adulthood: the unique spectrum of immunodeficiencies</td>
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<tr>
<td>July 15</td>
<td>Nicole Coles, Meg Wolfe-Wylie &amp; Jennifer Gallie</td>
<td>Got Milk? The Many Faces of Hypocalcemia</td>
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<tr>
<td>July 22</td>
<td>Ayesha Chaudhry, Rebekah Jobling, Maha Saleh &amp; Pierre Sinajon</td>
<td>Exome Sequencing – One test, two diagnoses, three lives</td>
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<td>July 29</td>
<td>Chia Wei Teoh, Murali Bhagavatula &amp; Hassan Faqrehi</td>
<td>Hyperkalaemia: A Potpourri of Clinical Cases</td>
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<td>August 5</td>
<td>Maria Jose Soto &amp; Shilpa Shah</td>
<td>Madness in the Method of Stayin’ Alive: Controversies in CPR</td>
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<tr>
<td>August 12</td>
<td>Ajiola Alabi, Nancy Nashid &amp; Jacqueline Wong</td>
<td>Hit Me With Your Best Shot: The Meningococcal B Story</td>
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<td>August 19</td>
<td>Mehl Vairala &amp; Andrea Human</td>
<td>Running Hot: an Approach to Recurrent Fevers</td>
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<td>August 26</td>
<td>Conal Morgan, Ronand Ramroop &amp; Emilio Alvarezlos</td>
<td>Physiology, Management and Outcomes of Hypoplastic Left Heart Syndrome</td>
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<td>September 2</td>
<td>Karen Thomas, Amina Benlamti, NICU Fellows Neonatology Resident Rounds</td>
<td>The Breast Milk Challenge</td>
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<td>September 9</td>
<td>Bernard Kaplan, MBCh, FAAP</td>
<td>Re-imagining The Hemolytic Uremic Syndromes</td>
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<td>September 16</td>
<td>Jennifer Stinson, PhD, RN-EC, CPNP, Associate Professor Nursing, Paediatrics, University of Toronto Centre for the Study of Pain, Mary Jo Haddad Nursing Chair in Child Health</td>
<td>Improving Outcomes in Child Health: Harnessing the Potential of Electronic and Mobile Technologies</td>
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<td>September 23</td>
<td>Canceledled for Tom Kippur</td>
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<tr>
<td>September 30</td>
<td>Joan Y. Reed, MD, MS, MPH, MBA, Dean for Diversity and Community Partnership at Harvard Medical School</td>
<td>Diversity Day: Diversity Inclusion Achieving Excellence through Diversity</td>
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<td>October 7</td>
<td>David Goldblum, OC, MD, FRCP, Professor, Senior Medical Advisor, Centre for Addiction and Mental Health; Professor of Psychiatry, University of Toronto</td>
<td>The Mental Health Commission of Canada – The First Eight Years.</td>
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<tr>
<td>October 14</td>
<td>Susan Swedo, MD, Pediatrics and Developmental Neuroscience Branch (PDNB), National Institute of Mental Health, Magnuson Clinical Center, Bethesda, Maryland</td>
<td>Research in the field of Paediatrics and Neuropsychiatry</td>
</tr>
<tr>
<td>October 21</td>
<td>Victor Blanchette, MD, MA, MB, MRCS, LRCP, DCH, FRCP(C), FRCP McCaig Magee Medical Director, SickKids-Caribbean Initiative Centre for Global Child Health Hospital for Sick Children</td>
<td>Global Research Partnerships: Hemophilia as a Model Disease</td>
</tr>
<tr>
<td>October 28</td>
<td>Christopher Parshuram, MB,ChB, DPhil, FRACP, Professor, Critical Care Medicine &amp; Paediatrics, Critical Care Medicine, Health Policy Management &amp; Evaluation Hospital for Sick Children</td>
<td>Safety Scientist Experiments</td>
</tr>
<tr>
<td>November 4</td>
<td>Denise M. Adams, MD, Marjory J. Johnson Chair of Vascular Tumor Research Medical Director, Hemangioma and Vascular Malformation Fellowship Director, Hematology / Oncology Professor, UC Department of Pediatrics</td>
<td>Vascular Anomalies 2015</td>
</tr>
<tr>
<td>November 11</td>
<td>Benjamin Wilford, MD, Director, Treuman Katz Center for Pediatric Bioethics Professor and Chief, Division of Bioethics; Professor, Pulmonary and Sleep Medicine, Department of Pediatrics; Seattle Children’s Hospital</td>
<td>Christine Harrison Lecture: Tracheostomies and Assisted Ventilation in Children with Profound Disabilities: Navigating Family and Professional Values</td>
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<td>November 18</td>
<td>Jovian Collins, MD, Madeline Drake, MD, Jessica Malach, MD, Ursula Madej, MD</td>
<td>Cases from the Wards</td>
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<tr>
<td>November 25</td>
<td>Denis Daneman, MBCh, FRCP DSc(Med), Professor and Chair, Department of Paediatrics, University of Toronto Paediatrician-in-Chief, The Hospital for Sick Children</td>
<td>The Patient Teacher: In the shoes of Harry Bain</td>
</tr>
<tr>
<td>December 2</td>
<td>Lillian Sung MD, PhD, Professor, Department of Paediatrics, Senior Scientist, Child Health Evaluative Sciences, The Research Institute The Hospital for Sick Children</td>
<td>Helping Kids Feel Better: Putting the SPARK in Healthcare</td>
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<tr>
<td>December 9</td>
<td>Patrick McNamara, MB, FRCP, Professor, Department of Paediatrics, Staff Neonotologist, Associate Scientist, Research Institute The Hospital for Sick Children</td>
<td>Redefining the Foundations of Neonatology: Role of Physiology in Guiding Cardiovascular Car</td>
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<tr>
<td>December 16</td>
<td>Paediatric Residents</td>
<td>Holiday Skits</td>
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MEDICAL EDUCATION TRAINING AND SCHOLARSHIP IN THE DEPARTMENT OF PAEDIATRICS, UOFT, 2015-2016

The Department of Paediatrics is committed to providing the best possible training for future paediatricians. This report serves to recognize the excellence and dedication of our teachers, educators and education leaders in realizing this goal. It celebrates their achievements and outlines promising new directions for research, innovation, teaching and development in medical education. Our educational story is one of constant renewal and growth. Ongoing work by our educators address gaps and maximize the opportunities for learning offered to students and trainees. Our educational leaders and their committees ensure that our training programs incorporate the most effective educational practices and that our graduating physicians are competent and committed to clinical excellence and are poised to make important contributions to paediatric healthcare research and education.

This year we would like to extend our profound gratitude to Dr. Denis Daneman for his unwavering support of the Department’s educational enterprise during his tenure as Chair of the Department of Paediatrics. He challenged us to strive for excellence, fueled our creativity, provided the resources to appropriately support our educational initiatives, created new opportunities for the growth and development of students, residents, fellows and faculty and nurtured and mentored a new generation of academic leaders. Dr. Daneman has been a hands-on teacher and educator, engaging trainees and teachers alike with his infectious enthusiasm, getting to know our personal stories, stretching our perspectives and enlarging our imaginations.

Many new programs and initiatives have stemmed from his vision and direct support. The Office of Medical Education was expanded with new, separate, but collaborative roles for the Associate Chair (Education) and the Director of Postgraduate Education. In addition two new portfolios, Education Scholarship and Faculty Development were established. New student research programs, SPRESS the PERC summer program, are now well established and thriving. Perhaps most importantly, Dr. Daneman has infused our programs, trainees and faculty with his humanitarian spirit and social consciousness, challenging us to always remember the essence of what we do.

Rayfel Schneider, Professor of Paediatrics Associate Chair, Medical Education

APRIL 2015 – MARCH 2016 SCHEDULE cont’d

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<th>Date</th>
<th>Speaker and Affiliation</th>
<th>Topic</th>
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<tr>
<td>January 13</td>
<td>Elena Pope MD Division of Paediatric Medicine (Dermatology) Professor, Department of Paediatrics, The Hospital for Sick Children</td>
<td>Working with Orphan Diseases: Challenges and Opportunities</td>
</tr>
<tr>
<td>January 20</td>
<td>Ryan Smith, MD Shazeen Suleman, MD Holden Sheffield, MD</td>
<td>Cases from the Wards</td>
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<td>January 27</td>
<td>Jill Hamilton MD, Division of Endocrinology Professor, Department of Paediatrics, The Hospital for Sick Children</td>
<td>The “ABCs” of Childhood Obesity</td>
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<tr>
<td>February 3</td>
<td>Shelly Weiss, MD Division of Neurology Professor, Department of Paediatrics, The Hospital for Sick Children</td>
<td>Better nights, better days; a clinical and research update in the evaluation and treatment of insomnia in children with neurodevelopmental disabilities</td>
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<tr>
<td>February 10</td>
<td>Vicky Ng, MD Division of GI Professor, Department of Paediatrics, The Hospital for Sick Children</td>
<td>Pediatric Liver Transplantation in 2016: Something for Everyone to Care About</td>
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<td>February 17</td>
<td>Paediatric Residents</td>
<td>Resident Grand Rounds: Cases from the Wards</td>
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<tr>
<td>February 24</td>
<td>Hartmut Grasemann, MD Division of Respiratory Medicine Professor, Department of Paediatrics, The Hospital for Sick Children</td>
<td>The Nitric Oxide Paradox in Asthma, Obesity, and beyond…</td>
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<tr>
<td>March 2</td>
<td>Lorelei Lingard, MD Founding Director &amp; Senior Scientist, CERI Professor, Department of Medicine Professor, Faculty of Education Adjunct Professor, Department of Family Medicine Associate Scientist, Lawson Health Research Institute</td>
<td>Myths and Truths about Clinical Teamwork, and how we understand “Competence” in Medical Education</td>
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<tr>
<td>March 9</td>
<td>Catherine Birken, MD Division of Paediatric Medicine Associate Professor, Department of Paediatrics, The Hospital for Sick Children</td>
<td>TARGETing Child Health Prevention Research in Community Settings – how can we move this field forward?</td>
</tr>
<tr>
<td>March 16</td>
<td>Cancelled for March Break</td>
<td></td>
</tr>
<tr>
<td>March 23</td>
<td>Seetha Shankaran, MD Professor of Pediatrics Wayne State University School of Medicine Director, Division of Neonatal/Perinatal Medicine Children’s Hospital of Michigan and Hutzel Women’s Hospital</td>
<td>Barry Smith Lecture: Hypothermia for Neonatal HIE, current and future directions</td>
</tr>
<tr>
<td>March 30</td>
<td>Fergus Cameron, BMedSci, MBBS, DipRACOG, FRACP, MD Director, Diabetes Services Deputy Director of the Department of Endocrinology and Diabetes and Director Healthy Bones Unit Royal Children’s Hospital Melbourne</td>
<td>Dr. Daneman’s Symposium: The cargo cult of diabetes care-perspectives from the Antipodes</td>
</tr>
</tbody>
</table>
The Department of Paediatrics supports medical education through 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). The MEAC works to enhance excellence in teaching and education and to 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 activities of the education portfolios and the educational accomplishments of faculty and trainees are provided in the body of the report.

**Educational Administrative Staff**
Mary Antonopoulos, Undergraduate Education
Joanna Barnes, Undergraduate Education
Margarita Komarova, Undergraduate Education
Susan Jenkins, Administrative Supervisor
Sandra Layno, Postgraduate Education
Josefina Bento, Postgraduate Education
Michelle Wan, Continuing Medical Education
Clare Schlesinger, Faculty Development & Medical Education Scholarship

**Education Scientists**
Tina Martimianakis, PhD, Department of Paediatrics
Maria Mylopoulos, PhD, Learning Institute and Department of Paediatrics
Catharine Walsh, MD, FRCP, PhD, Learning Institute and Department of Paediatrics

**Education Evaluator**
Kathryn Parker, PhD, Holland-Bloorview Hospital and Department of Paediatrics

**Faculty pursuing formal training in education 2015-2016**
Blathnaid McCoy (Education Scholars Program)
Damian Noone (Education Scholars Program)
Sherri Baine (Stepping Stones)
Jordan Carr (Stepping Stones)
Gordon Soon (Stepping Stones)
Suzan Schneeweiss (NEAL)

**Trainees pursuing formal training in education 2015-2016**
Mohammad Zubairi, (Masters in Education)
Julia Sharp (Stepping Stones)
Leanne Shamrakov (Stepping Stones)
Rebecca Smith (Stepping Stones)
Rachel Markin (Stepping Stones)
Rebecca Levy (Stepping Stones)

**Faculty completed formal training in education 2015-2016:**
Clare Hutchinson, (Masters in Education)
Michaela Cada (Education Scholars Program)
Emma Cory (Education Scholars Program)
Katherine Hick (Education Scholars Program)
Angela Orsino (Education Scholars Program)
Sharon Naymark (Stepping Stones)
Melissa Carter (Stepping Stones)

**Trainees who completed formal training in education 2015-2016:**
Maha Saleh (Stepping Stones)
Melanie Ostreicher (Stepping Stones)
Joanna Humphreys (Stepping Stones)
EDUCATIONAL TRAINING IN THE
DEPARTMENT OF PAEDIATRICS

UNDERGRADUATE EDUCATION

Director
Dr. Angela Punnett

Educational Program Coordinators
Mary Antonopoulos
Joanna Barnes

Members of the Pediatric Undergraduate Education Committee (PUGMEC):
Dr. Hosanna Au
Dr. Nirit Bernhard
Dr. Angela Punnett
Dr. Seetha Radhakrishnan
Dr. Shawna Silver
Dr. Talia Wise
Dr. Jennifer Young
Dr. Angela Orsino (Holland-Bloorview)
Dr. Dror Koltin (THP-CVH)
Dr. Katarzyna Gwiazda (THP-MH)
Dr. Gagandeep Saund (Brampton)
Dr. Angela Orsino (Holland-Bloorview)
Dr. Talya Wise
Dr. Susanna Talarico
Dr. Ronald Cohn

Highlights from 2015-2016

The Longitudinal Integrated Clerkship (LINC) program expanded to include students at 3 academies this year. We would like to extend our thank you to our local and community faculty for their continued support and supervision of students in this new model. The final touches for the new Foundations Curriculum for Preclerkship are nearing completion. This integrated learning model and earlier introduction to clinical medicine will commence in the Fall of 2016.

Continuing our record for leadership in UME at the University, the following faculty have been appointed to new positions: Hosanna Au as Director of Life Cycle Course in the Foundations curriculum in addition to her myriad of other leadership roles in UME; Nirit Bernhard as Director of Portfolio, a rapidly expanding course that expands preclerkship and clerkship; Mara Cole as Co-Site Director with Sharon Naymark at St Joseph’s Health Centre; Ra Han as Co-Director of the LINC program at the Fitzgerald Academy; Sally Kenawy and Gilbert Miller as Co-Site Directors at Humber River Regional Hospital; Leah Tattum as Site Director at the Scarborough Hospital- General; Kushal Raghubir as Site Director at the Scarborough Hospital- Birchmount. A big thank you to exiting site directors Nirit Bernhard (SJHC), Joseph Porepa (HRRH), Peter Azzopardi (Scarborough-General), and Raymond Shu (Scarborough-Grace) for their years of outstanding service in their roles. Finally, a heart-felt congratulations and best wishes to two amazing paediatric leaders: Jay Rosenfield, who completed his 10-year term as Vice Dean, Undergraduate Medical Education and Denis Daneman, who is completing his 10-year term as Chair, Paediatrics. We look forward to working with Ronald Cohn as incoming Chair, Paediatrics.

Congratulations to the teaching award winners this year:

RHA Haslam Pre-Clerkship Teaching Award
Susanna Talarico

Lionel Weinstein Clerkship Teaching Award
Shawna Silver

Community Paediatrics Clerkship Teaching Award
Nick Blanchette

Preclerkship

Our office continues to host the summer research program - PeRCS (10 students) and SPRess (9 students) and we would like to thank participating faculty for providing diverse projects, mentorship and role modelling. Thank you also to our staff leaders Brinita Kamath & Seetha Radhakrishnan (PeRCS) and Susanna Talarico (SPRESS) for coordinating these highly successful research programs.

As we transition to the Foundations curriculum, this will be the final year of the MMMD curriculum and ASCM for general Paediatrics in the 2nd year of preclerkship. We greatly appreciate the contributions of faculty and residents to lectures, seminars, PBL, and clinical skills teaching during these courses. We look forward to exciting new opportunities in the new curriculum.

Clerkship

SickKids hosted the 5th annual Paediatric Undergraduate Program Directors of Canada (PUPDOC) in the Fall of 2015. The Directors worked on a new electronic educational card game under the direction of their special guest, Mike Paget, E-learning Manager at University of Calgary. This promises to be a great tool for students. Locally, the 6-week core clerkship program involves at least 250 teachers across 12 sites and the LINC program now spans 3 academies with plans for further growth. A dedicated undergraduate education committee provides oversight for orientation, educational activities and learning environment issues. In addition, Paediatrics continues to offer a wide selection of popular electives and selectives (TTR placements).

At Convocation Hall last year we congratulated the following winners for their Awards in Paediatrics:

Dr. Roy Simpson Scholarship in Paediatrics
Pamela Anne Newman

Dr. Yumin Li Access to Excellence in Paediatrics Award
Julia Alexandra Maria DiLabio

Dr. Yumin Li Access to Excellence in Paediatrics Research Award
Shama Sud

Dr. Carl Witsu Prize in Paediatrics
Esther Kitai Rosenthal

The final word always goes to our teachers, the heart of this education program. Thank you for your ongoing commitment to and enthusiasm for education. You are an inspiration to our students and our community!

POSTGRADUATE EDUCATION

Director
Dr. Adelle Atkinson

Educational Administrative Staff
Sandra Layno
Josefina Bento

Members of the Postgraduate Education Committee 2015/16
Dr. Adelle Atkinson, Dr. Ann Jefferies, Dr. Eddy Lau, Dr. Michelle Shouldice, Dr. Melinda Solomon, Dr. Elizabeth Jimenez, Dr. Aideen Moore, Dr. Jeff Kobayashi, Dr. Michael Hill, Dr. Clare Hutchinson, Dr. Silvio Gonzalez, Dr. Ra Han, Dr. Shawna Silver, Dr. Katherine Hick, Dr. Dr. Andrew Heimers, Dr. Mallory Downie, Dr. Brie Yama, Dr. Thomas McLoughlin, Dr. Laura Kinlin, Dr. Michelle Gould, Dr. Melanie Bechard, Dr. Elizaveta Limenis, Dr. Carol Lam, Dr. Suparna Sharma, Dr. Shama Sud, Dr. Sohail Azzopardi, (PGH-General)

Dr. Jeff Weisbrot (YCH)
Dr. Joseph Porepa (HRRH)
Dr. Yehuda Mozes (RVCH)
U of T medical students:
Chief Pediatric Residents:
Mallory Downie & Andrew Helmers

Sharma Sud

in Paediatrics Research Award
Shama Sud

Dr. Carl Witsu Prize in Paediatrics
Esther Kitai Rosenthal

The final word always goes to our teachers, the heart of this education program. Thank you for your ongoing commitment to and enthusiasm for education. You are an inspiration to our students and our community!
The core program continues to be the largest training program in Canada with unparalleled resources both in depth and breadth of patient problems 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) and include international medical graduates (Canadians who studied outside North America and new immigrants to Canada). 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 a variety of 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 a rich environment to acquire the knowledge and skills essential to the practice of Paediatrics.

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 engaged in scholarly activities on topics related to clinical research, education, patient safety, quality assurance and patient advocacy. Our Residency Scholarship Oversight Committee, continues to provide resources and guidance to the residents under the leadership of Dr. Hans Hitzler and Dr. Binita Kamath, and the engagement of multiple faculty across the organization who continue to mentor and supervise resident scholarly projects.

A primary focus for the program continues to be enhancing the teaching and evaluation of the new 2015 CanMEDS roles. There is a robust CanMEDS curriculum with an academic ½ day, which covers a wide variety of topics and a CanMEDS OSCE offered each spring with almost 100 trainees taking part. Over the last few years, real time feedback during the OSCE was introduced with tremendous trainees taking part. Over the last few years, real time feedback during the OSCE was introduced with tremendous success. This year, a physical examination simulation day was held during the academic ½ day for the first time, with expert faculty demonstrating and teaching the core residents these clinical skills, and then evaluating their performance and providing feedback. Since the implementation of CanMEDS 2015, there is increased emphasis on patient safety, quality and stewardship in the curriculum as well as a focus on physician wellness.

The program is starting to think forward to Competency Based assessment and the development of milestones and entrustable professional activities. The timeline for the beginning of this transition to Competency By Design (CBD) is the fall of 2016. It is an exciting time in postgraduate medical education as we move towards a new model of ensuring competence, along the continuum through robust observational data and assessment.

Advocacy and social paediatrics continue to be a significant area of focus of the program. There are currently a number of major advocacy projects underway under the leadership of the resident advocacy group. In addition to the Gosford Park Public School, our residents are very involved with the Rosedale Heights Secondary School and Firgrove Primary school in the Jane and Finch neighbourhood. All of these schools have at risk children and youth, and have found this collaboration beneficial for both the children and their parents. Other advocacy projects include clothing drives, The POP Clinics (a paediatric consultation clinic for uninsured children) 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 CaRMS resident selection, 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.

**TOTAL NUMBER OF CORE PAEDIATRIC RESIDENTS 2015/16**

<table>
<thead>
<tr>
<th>PGY1</th>
<th>PGY2</th>
<th>PGY3</th>
<th>PGY4</th>
<th>TOTAL</th>
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<tr>
<td>21</td>
<td>21</td>
<td>20</td>
<td>8</td>
<td>70</td>
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</table>

**Highlights from 2015-16**

Postgraduate teaching in Paediatrics is decentralized with more than 10 sites involved in delivering our curriculum. The Core Residency Training Program trains individuals from around the world with a variety of backgrounds and training, making the program a rich environment to acquire the knowledge and skills essential to the practice of Paediatrics.

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, such as looking at how residents think about assessment, and perceptions of wellness and work-life balance amongst trainees.

A primary focus for the program continues to be enhancing the teaching and evaluation of the new 2015 CanMEDS roles. There is a robust CanMEDS curriculum within the academic ½ day, which covers a wide variety of topics and a CanMEDS OSCE offered each spring with almost 100 trainees taking part. Over the last few years, real time feedback during the OSCE was introduced with tremendous success. This year, a physical examination simulation day was held during the academic ½ day for the first time, with expert faculty demonstrating and teaching the core residents these clinical skills, and then evaluating their performance and providing feedback. Since the implementation of CanMEDS 2015, there is increased emphasis on patient safety, quality and stewardship in the curriculum as well as a focus on physician wellness.

The program is starting to think forward to Competency Based assessment and the development of milestones and entrustable professional activities. The timeline for

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**SUBSPECIALTY EDUCATION**

Chair: Dr. Rayfel Schneider, Educational Administrative Staff: Sue Jenkins

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>PROGRAM DIRECTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescent Medicine*</td>
<td>Katherine Hick³</td>
</tr>
<tr>
<td>Cardiology*</td>
<td>Jennifer Russell³</td>
</tr>
<tr>
<td>Clinical Genetics*</td>
<td>Roberto Mendoza¹, Melissa Carter³</td>
</tr>
<tr>
<td>Clinical Pharmacology*</td>
<td>Margaret Thompson (RC stream), Irena Nulman¹</td>
</tr>
<tr>
<td>Developmental Paediatrics*</td>
<td>Anne Kawamura¹</td>
</tr>
<tr>
<td>Emergency Medicine*</td>
<td>Suzanne Beno², Tania Principi²</td>
</tr>
<tr>
<td>Endocrinology*</td>
<td>Diane Wherrett¹</td>
</tr>
<tr>
<td>Gastroenterology/Hepatology/Nutrition*</td>
<td>Simon Ling⁴, Yaron Avitzur³</td>
</tr>
<tr>
<td>Haematology/Oncology*</td>
<td>Michaela Cada³, Angela Punnett¹, Ahmed Naqvi</td>
</tr>
<tr>
<td>Immunology/Allergy*</td>
<td>Eyal Grunebaum³</td>
</tr>
<tr>
<td>Infectious Diseases*</td>
<td>Anu Wadhwa¹</td>
</tr>
<tr>
<td>Neonatology*</td>
<td>Emer Finan², Martin Skidmore¹</td>
</tr>
<tr>
<td>Nephrology*</td>
<td>Rulan Parekh¹</td>
</tr>
<tr>
<td>Neurology*</td>
<td>Ann Yeh, Blathnaid McCoy</td>
</tr>
<tr>
<td>Paediatric Medicine</td>
<td>Michelle Shouldice, Sarah Schwartz, Sanjay Mahant</td>
</tr>
<tr>
<td>Paediatric Dermatology</td>
<td>Michell Shouldice¹, Sarah Schwartz</td>
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<tr>
<td>Paediatric Oncology</td>
<td>Miriam Weinstein, Elena Pope</td>
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<tr>
<td>Paediatric Hospital/Inpatient Medicine</td>
<td>Emma Cory</td>
</tr>
<tr>
<td>Paediatric Hospital/Inpatient Medicine</td>
<td>Sarah Schwartz</td>
</tr>
<tr>
<td>Palliative Care</td>
<td>Kevin Weingarten</td>
</tr>
<tr>
<td>Respiratory Medicine*</td>
<td>Melinda Solomon¹</td>
</tr>
<tr>
<td>Rheumatology*</td>
<td>Shirley Tei¹</td>
</tr>
</tbody>
</table>

¹ Member of Subspecialty Program Directors Committee; ² Royal College Program
There are 16 Royal College accredited programs in the Department of Paediatrics as well as clinical fellowships in Academic Paediatric Medicine, Community Paediatrics, Dermatology and Child Maltreatment. There are also a number of boutique, highly specialized fellowship training programs within the paediatric subspecialties. The Program Directors meet on a regular basis to discuss their programs and consider ways to better support training.

This year, our Royal College-accredited programs participated in the annual national subspecialty paediatrics match, attracting candidates from across the country. The subspecialty programs continued to attract excellent applicants from around the world. A total of 25 trainees from across Canada and the United States matched to our programs within the paediatric subspecialties. An additional 14 positions were allocated to highly competitive Canadian and international trainees to begin training in Paediatric subspecialties.

<table>
<thead>
<tr>
<th>TOTAL NUMBER OF POSTGRADUATE TRAINEES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Subspecialty Residents</td>
</tr>
<tr>
<td>Number of Clinical Fellows</td>
</tr>
<tr>
<td>Number of Research Fellows</td>
</tr>
<tr>
<td>Number of Core Paediatric Residents</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

CONTINUING EDUCATION

Director
Dr. Mark Feldman

Educational Administrative Staff
Michelle Wan

Members of the Continuing Education Committee
Mark Feldman (Chair), Andreea Dragulescu, Trey Coffey, Bonnie Fleming-Carroll, Eyal Grunebaum, Aideen Moore, Mort Goldbach, Morton Goldbach, Saul Greenberg, Ian Kitai, Karen Leslie, Golda Milo Manson, Mark Palmert, Angela Punnett, Suzan Schneeweiss, Gordon Soon, Melinda Solomon, Margaret Thompson, Michael Weinstein, Shelly Weiss

Highlights from 2015-2016

Our flagship departmental CE event, Paediatric Update May 11-14, 2016 reached new heights as the already largest paediatric CE event led by a department of paediatrics in Canada, with an attendance of 300 registrants over the 4 days. This year, thirty five (35) faculty and Sickkids staff participated in the delivery of the program along with 10 guest presenters. The Conference also featured a very successful Infectious Diseases Subspecialty Day chaired by Dr. Ian Kitai, which provided an opportunity to explore emerging trends and issues that relate to major infectious diseases affecting children including a state of the art update to diagnosis, prevention and management of common and emerging infectious disease problems. To date, the 2016 subspecialty day has been our highest ever attended with over 200 paediatricians across Canada registered.

The conference also received increased financial support from the Royal College of Physicians and Surgeons this year in addition to unrestricted education grants from industry and non-profit organizations.

Recognizing the importance of assessment and feedback in continuing education, an innovative, electronic, pre & post conference test was first 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 was a recent requirement of the RCPCSC for our maintenance of competence. For the first time at a large paediatric conference in Canada, this ‘knowledge assessment’ component qualified for RCPCSC category 3 (assessment) MOC credits. This year, we have continued to expand the MOC 3 program to increase the number of course offerings to 15 for 2016 compared to 10 in 2015 and 5 in 2014. Moreover, to the best of our knowledge, for the first time at any large national CE event, within any medical discipline, Test-Enhanced Learning will be critically evaluated in 2016 at Paediatric Update via a randomized controlled trial. This study is supported with a grant from the University of Toronto Education Development Fund.

For the 2015/16 academic year, Dr. Golda Milo-Manson has been recognized with a Department of Paediatrics teaching award for sustained contributions to CE in her efforts and expertise heading the very successful Developmental Paediatrics Conference and for providing invaluable insights and wisdom to our Paediatric Update Committee over many years. Her co-winner is Dr. Thomas Walters whose 2016 Dept. of Paeds CE award recognizes excellence in Course Coordination for leading the IBD imaging course.

Faculty members throughout the Department of Paediatrics have been very active in continuing education activities again this 2015-2016 academic year. City Wide Paediatric rounds, supervised by Dr. Mark Feldman from the Division of Paediatric Medicine, continued to be a very popular event attracting 120 community-based paediatricians per quarter.

The 2015/16 academic year marked the launch of the inaugural SickKids Teaching Scholars Program. The STSP is a ‘teach the teachers’ interprofessional ‘in-house’ course intended to develop junior faculty and fellows and interprofessional staff into scholarly teachers. Full complement of 26 learners have provided high evaluations of the course and its teachers at the mid-course mark for feedback.

Finally, many more of our divisions have been engaged in a variety of educational offerings (see table 2).

### TABLE 2: EDUCATIONAL OFFERINGS, DEPARTMENT OF PAEDIATRICS; JULY 1, 2015-JUNE 30, 2016

<table>
<thead>
<tr>
<th>DIVISION/DEPARTMENT</th>
<th>COURSE DIRECTOR/ SUPERVISOR</th>
<th>CE OFFERINGS, PAEDIATRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>JULY 1, 2015 - JUNE 30, 2016</td>
</tr>
<tr>
<td>Dr. Lillian Sung</td>
<td>Weekly Paediatric Grand Rounds</td>
<td></td>
</tr>
<tr>
<td>Dr. Tina Martimianakis</td>
<td>Monthly Medical Education Scholarship Journal Club</td>
<td></td>
</tr>
<tr>
<td>Dr. Tina Martimianakis</td>
<td>Monthly Medical Education Scholarship Rounds</td>
<td></td>
</tr>
<tr>
<td>Dr. Rayfel Schneider</td>
<td>Annual SickKids Paediatric Research Day May 18, 2016</td>
<td></td>
</tr>
<tr>
<td>Dr. Mark Feldman</td>
<td>SickKids Annual Paediatric Update Conference May 11-14, 2016</td>
<td></td>
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<tr>
<td>Dr. Mark Feldman, Michele Durrant</td>
<td>Teaching Scholars Program Sept 15-August 2016</td>
<td></td>
</tr>
<tr>
<td>Dr. Alene Toulany</td>
<td>Paediatric Co-Learning Curriculum in Quality Improvement Sept 16 and 17 2015, Dec 27 and 28 2015, June 3, 2016</td>
<td></td>
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<tr>
<td>Dr. Shelly Weiss, Dr. Lisa Robinson</td>
<td>Diversity Day September 30, 2015</td>
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<tr>
<td>Dr. Shelly Weiss</td>
<td>Medical Education Day March 2, 2016</td>
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<tr>
<td>Adolescent Medicine</td>
<td>Weekly Divisional Rounds Wednesday at 10:30 – 11:30 am, Quarterly Journal Club</td>
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</table>

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DEPARTMENT OF PAEDIATRICS ANNUAL REPORT 2015-16  | SICKKIDS  277
| TABLE 2: EDUCATIONAL OFFERINGS, DEPARTMENT OF PAEDIATRICS; JULY 1, 2015-JUNE 30, 2016 cont’d |
|---------------------------------------------------------|-----------------------------------------------|
| Cardiology                                              | Andreea Dragulescu, CE Lead                   |
|                                                         | Congenital and Paediatric Echocardiography    |
|                                                         | From Basics to Advanced                      |
|                                                         | April 28 – 30, 2016                          |
| Centre for Brain and Mental Health                      | Drs. Luc Mertens Jan Marek & Folkert Meijboom|
| Developmental Paediatrics                               | 8th Annual Brain & Mental Health Day Neuroscience Research Symposium |
|                                                         | April 6, 2016                                |
| Emergency Medicine                                      | Dr. Frida Miller & Dr. Tony Pignatelli       |
|                                                         | R8th Annual Brain & Mental Health Day Neuroscience Research Symposium |
|                                                         | April 6, 2016                                |
| Gastroenterology                                        | Dr. Suzan Schneeweiss                        |
|                                                         | Paediatric Emergency Ultrasound Course       |
|                                                         | Sept 30, 2015                                |
| Haematology/Oncology                                    | Dr. Angela Punnett                           |
|                                                         | Cross Talks                                  |
| Infectious Diseases                                     | Dr. Angela Punnett                           |
| Immunology                                              | Dr. Ian Kitai                                |
| Paediatric Medicine                                    | Dr. Upton Allen                              |
| Paediatric Medicine Journal Club                        | Dr. Mark Feldman                             |
| Paediatric Medicine Journal Club (B-monthly)            | Dr. Irene Lara-Corrales                      |
| Paediatric Medicine Journal Club                        | Dr. Mark Feldman                             |
| Paediatric Medicine Journal Club                        | Dr. Suzan Williams & Dr. Leonardo Brandao    |
| Paediatric Medicine Journal Club                        | 8-Week Summer Lunch and Learn Series         |
| Paediatric Medicine Journal Club                        | “Bleed & Clotting disorders in Children”     |
| Paediatric Medicine Journal Club                        | Weekly from July 9-August 27, 2015           |
| Paediatric Medicine Journal Club                        | Dr. Angela Punnett                           |
| Paediatric Medicine Journal Club                        | Cross Talks                                  |
| Paediatric Medicine Journal Club                        | Garron Family Cancer Centre                  |
| Paediatric Medicine Journal Club                        | May 28, 2015; June 12, 2015; Feb 4, 2015     |
| Paediatric Medicine Journal Club                        | Dr. Angela Punnett                           |
| Paediatric Medicine Journal Club                        | Annual Childhood Cancer Therapy Update (CCTU) |
| Paediatric Medicine Journal Club                        | February 3, 2016                             |
| Paediatric Medicine Journal Club                        | Dr. Suzan Schneeweiss                        |
| Paediatric Medicine Journal Club                        | Paediatric Update – ID Day                   |
| Paediatric Medicine Journal Club                        | May 11, 2016                                 |
| Paediatric Medicine Journal Club                        | Dr. Valerie Waters                           |
| Paediatric Medicine Journal Club                        | Infectious Disease Clinical & Research Forum |
| Paediatric Medicine Journal Club                        | A monthly series of clinical research related topics of interest to ID Fellows, Staff and other members of the ID community. |
| Paediatric Medicine Journal Club                        | February 2, 2016                             |
| Paediatric Medicine Journal Club                        | February 23, 2016                            |
| Paediatric Medicine Journal Club                        | March 22, 2016                               |
| Paediatric Medicine Journal Club                        | March 30, 2016                               |
| Paediatric Medicine Journal Club                        | April 26, 2016                               |
| Paediatric Medicine Journal Club                        | May 24, 2016                                 |
| Paediatric Medicine Journal Club                        | June 28, 2016                                |
| Paediatric Medicine Journal Club                        | Dr. Yaron Avitzur                            |
| Paediatric Medicine Journal Club                        | GHN Division Teaching Rounds                 |
| Paediatric Medicine Journal Club                        | Weekly on Wednesdays all year round          |
| Paediatric Medicine Journal Club                        | Dr. Robert Bandsma                           |
| Paediatric Medicine Journal Club                        | GHN Research Seminars                        |
| Paediatric Medicine Journal Club                        | Biweekly on Wednesdays                       |
| Paediatric Medicine Journal Club                        | September - June                             |
| Paediatric Medicine Journal Club                        | Dr. Robert Bandsma                           |
| Paediatric Medicine Journal Club                        | GHN Journal Club                             |
| Paediatric Medicine Journal Club                        | 6 – 8 Occurrences per year                   |
| Paediatric Medicine Journal Club                        | Dr. Ronald Cohn/Adel Gilbert                 |
| Paediatric Medicine Journal Club                        | Conversations with Genetics: Your Day to Day Practice |
| Paediatric Medicine Journal Club                        | Dr. Sarah Bowdin                             |
| Paediatric Medicine Journal Club                        | Workshop in Applied Genomic Medicine         |
| Paediatric Medicine Journal Club                        | May 9-11, 2016                               |
| Paediatric Medicine Journal Club                        | Dr. David Malkin                             |
| Paediatric Medicine Journal Club                        | 2015 Multidisciplinary Symposium on Childhood Cancer |
TABLE 2: EDUCATIONAL OFFERINGS, DEPARTMENT OF PAEDIATRICS; JULY 1, 2015-JUNE 30, 2016 cont’d

<table>
<thead>
<tr>
<th>Pharmacology</th>
<th>Margaret Thompson, CE Lead</th>
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<tr>
<td>Respiratory Medicine</td>
<td>Melinda Solomon, CE Lead</td>
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<tr>
<td>Rheumatology</td>
<td>Gordon Soon, CE Lead</td>
</tr>
<tr>
<td>Neonatology</td>
<td>Aideen Moore, CE Lead</td>
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<tr>
<td>Nephrology</td>
<td>Damien Noone, CE Lead</td>
</tr>
<tr>
<td>Neurology</td>
<td>Shelly Weis, CE Lead</td>
</tr>
</tbody>
</table>

### Pharmacology
- Margaret Thompson, CE Lead
- Weekly Clinical Pharmacology and Toxicology Rounds
- Weekly Rounds for Motherisk Program

### Respiratory Medicine
- Melinda Solomon, CE Lead
- Dr. Indra Narang
- Paediatric Sleep Symposium
- March 6, 2015

### Rheumatology
- Gordon Soon, CE Lead
- Dr. Shirley Tse
- Weekly Academic Rounds and/or Journal Club
- Dr. Brian Feldman
- Rheumatology Education Day (RED) (May 14, 2016)
- Dr. Brian Feldman
- Semi-Annual Rheumatology Community Rounds (Jan 19, 2016)
- Dr. Earl Silverman
- Immunology Teaching Rounds
- Neely Lerman and Karen Quefelec
- Drs. Earl Silverman, Deborah Levy and Linda Hiraki
- Lupus teaching Rounds
- Drs Brian Feldman, Linda Hiraki and Deborah Levy
- Research Methods Course
- Neely Lerman

### Neonatology
- Aideen Moore, CE Lead
- Weekly Academic Journal Club
- Dr. Hilary Whyte
- 14 Health — Triage, Transport, Treatment and Transition Conference
- October 6, 2015
- Dr. Dary Weisz
- 15th Annual Neonatal Research Day
- April 20, 2016
- Dr. Kyong-Soon Lee
- Canadian Neonatal Transport Network (CNTN) Annual Meeting
- October 5, 2015

### Nephrology
- Damien Noone, CE Lead
- Weekly Divisonal Rounds
- Weekly Transplant Centre Educational Rounds
- Damian Noone

### Neurology
- Shelly Weis, CE Lead
- Weekly Divisional Rounds
- Dr. Ann Yeh
- 2015 Neuroinflammation Symposium and 6th Annual MB-ON end MS RRTC Retreat
- April 30-May 1, 2016

### FACULTY DEVELOPMENT

#### Members of the Faculty Development Committee
- Dr. Shelly Weiss
- Dr. Nirit Bernhard
- Dr. Doug Campbell
- Dr. Anne Dipchand
- Dr. Mark Friedberg
- Dr. Tina Martimianakis
- Dr. Sanjay Mehta
- Dr. Paul Nathan
- Dr. Susan Schneeweiss
- Dr. Rayfel Schneider

#### Dr. Jennifer Young

**Highlights from 2015-2016**

On March 2, 2016, the Faculty Development Committee organized an extremely successful Medical Education day. Lorelei Lingard, PhD, Director, Centre for Education Research & Innovation, Professor, Department of Medicine Schulich School of Medicine & Dentistry at University of Western Ontario was the invited keynote speaker and there were 50 attendees. The topic for Department of Paediatrics grand rounds was “Myths and Truths about Clinical Teamwork, and their Implications for how we understand “Competence” in Medical Education.” Following grand rounds there was a 90-minute interactive workshop led by Dr. Lorelei Lingard titled “3 Pearls for improving your Scholarly Writing”. The day concluded with a panel of education scholars who presented their research in the area of education. The speakers included Claire Hutchinson MD, Staff Physician, Rheumatology, The Hospital for Sick Children, Susanna Talarico BSc, BEd, MD FRCP, MScCH, Associate Staff Physician, Paediatric Medicine, The Hospital for Sick Children and Vishi Gnanakumaran, MA, PhD candidate, Industrial-Organizational Psychology & Rebecca Lee, BA, MA Student, Industrial-Organizational Psychology, University of Guelph.

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.

The Department of Paediatrics Faculty Mentorship Award was introduced in 2013 to recognize a faculty member for his or her outstanding approach to mentoring. Each year, letters of nomination are submitted to the Faculty Development Committee and a subcommittee is appointed to review all candidates and adjudicate. Drs. Jonathan Hellmann and Astrid Guttmann were the co-recipients of the 2016 award, which was presented as part of the Department of Paediatrics’ annual awards day in June 2016. Drs. Prakesh Shah, Patrick McNamara, Karen Leslie and Hilary Whyte were also nominated for the award.

The Faculty Development committee meets 5-6 times per year and coordinates innovative programs. The inaugural Diversity Day took place in September 2015. The keynote grand rounds speaker was Dr. Joan Reede, MD, MS, MPH, MBA, Dean for Diversity and Community Partnership at Harvard Medical School. Following the grand rounds, invited local speakers, like Olafor, Senior Officer, Service Learning and Diversity Outreach, Office of Health Professions Student Affairs Faculty of Medicine, University of Toronto, Malika Sharma, MD FRCP Fellow, Wilson Centre For Research in Education, University of Toronto Infectious Diseases/HIV Physician, Maple Leaf Medical Clinic and Lisa Richardson MD MA FRCP, Assistant Professor of Medicine, University of Toronto, Co-Lead, Indigenous Health Education, UME, University of Toronto presented regarding topics related to diversity at the University of Toronto and inspired a lively discussion. This event received exceptionally positive feedback and has become an annual event with the next event planned for November 2016.

The Faculty Development Committee has also organized medical education and career development presentations to the paediatric divisions upon request. Topics have included research methodology, mentorship, professionalism, and feedback evaluation. Five divisions have participated in the last year.

Dr. Weiss, in her role as Director, FDC is co-supervising with Dr. Leanne Son Hing PhD, University of Guelph, a doctoral student in the Department of Organizational Psychology at the University of Guelph who is conducting a qualitative research study to evaluate pediatric faculty development.
wellbeing. In phase one of the study, 30 faculty members participated. The results of phase one were presented by Vish Gnanakumaran, PhD candidate at the 2016 Medical Education day. Phase two involved having the faculty who were interviewed participate in focus groups to provide feedback on the data collected. 14 of the 30 faculty members interviewed participated in the focus groups. Currently the data is being analyzed to prepare a manuscript for submission for publication.

Finally, Dr. Weiss represents the FDC in new initiatives at the University of Toronto. The first is as a member of the Faculty Development Leaders Committee, chaired by Dr. Karen Leslie at the Center for Faculty Development (CFD). In this role, Dr. Weiss was invited to attend a ‘Mentoring Think Tank’ also at the CFD in May 2016. Dr. Weiss is a member of a community of practice which ‘Mentoring Think Tank’ also at the CFD in May 2016. In this role, Dr. Weiss was invited to attend a ‘Mentoring Think Tank’ also at the CFD in May 2016. Dr. Weiss is a member of a community of practice which

**SCHOLARSHIP/RESEARCH**

**Director**

Dr. Tina Martimianakis

**Educational Administrative Staff**

Clare Schlesinger

**Members of the Educational Scholarship Enhancement Committee**

Dr. Tina Martimianakis (Chair)

Dr. Anu Wadhwa

Dr. Maria Mylopoulos

Dr. Nikki Woods

Dr. Angela Punnett

Dr. Shelly Weiss

Dr. Melinda Solomon

Dr. Catharine Walsh

**Highlights from 2015-2016**

**Administration and Coordination**

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

**Funding**

Educational research and educational development are supported through two separate grant competitions offered twice a year. As of Spring 2016, the grants provide up to $10,000 to support 1 or 2 year projects led by members of the Department (faculty and trainees) that contribute meaningfully to the educational mission of our programs. This past year, 1 application was successful in the Innovation and Development stream and 1 Research Grant was approved for funding. The office and committee also provides support and mentorship on grant development related to the Educational Development Fund, UofT competition. Proposals are submitted to an internal competition for matched funding. The ESEC committee adjudicates the proposals and provides formative feedback to the project team. Selected projects are then recommended for submission to the EDF fund competition with matched funding and a letter of support from the Associate Chair (Education).

**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.

**MES ROUNDS 2015-2016**

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>Sept 24</td>
<td>Everyone Has A Say But Who Is Listening?</td>
<td>Sarah Schwartz and Brie Yama</td>
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<tr>
<td>Oct 26</td>
<td>An Exploration of Paediatric Residents and Allied Healthcare Professionals Perceptions of Multisource Feedback</td>
<td>Mahan Kulasegaram</td>
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<tr>
<td>Jan 25</td>
<td>Promises &amp; Pitfalls of Epidemiological Designs</td>
<td>Malika Sharma</td>
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<tr>
<td>Feb 22</td>
<td>Creating a Profession? Exploring the need for a Global Child Health Fellowship - 300in a Canadian context *</td>
<td>Sanjay Mahant (Joint with WC)</td>
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<tr>
<td>March 29</td>
<td>Accountability, Advocacy, Activism: Action or just alliteration?</td>
<td>Mary Patterson</td>
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<tr>
<td>May 2</td>
<td>Expertise, humility and motivation</td>
<td>Ryan Brydges</td>
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**EDUCATIONAL JOURNAL CLUB 2015-2016**

<table>
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<tr>
<th>Date</th>
<th>Title</th>
<th>Presenter(s)</th>
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<tr>
<td>Nov 16</td>
<td>Wilson Centre Rounds</td>
<td>Zia Bismila &amp; Adelle Atkinson</td>
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<tr>
<td>Dec 7</td>
<td>The implementation of a night float system at a large Canadian Paediatric training program: Perceived impact on patient care, education and quality of life</td>
<td>Zia Bismila &amp; Adelle Atkinson</td>
</tr>
<tr>
<td>Jan 11</td>
<td>Thinking about generational differences in identity constructions</td>
<td>Tina Martimianakis</td>
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<tr>
<td>Feb 8</td>
<td>Decolonizing professions: The health care practitioner caught in the middle</td>
<td>Tim Mickleborough</td>
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<tr>
<td>May 9</td>
<td>The Simulation of Visually Diagnosed Tests: Climbing the Learning Curve with Deliberate Practice</td>
<td>Kathy Boutis</td>
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This past academic year our faculty and residents regularly contributed to leading clinical and educational journals. Our educational research and scholarship is disseminated through peer-reviewed publications. Below are some examples:

**Peer Reviewed Publications**


- **Hubley D, Peacocke S, Maxwell J & Parker, K.** Simulation for system change: Holland Bloovir’s experience using simulation to enhance the use of technology at the point-of-care. *Healthcare Quarterly.* 2015.


- **Martimianakis MA.** Medical Education, Social responsibility and praxis: Responding to the needs of all children. *Paediatrics and Child Health* 2016;21(5):252-253.


Online Publications

Book Chapters


Parker K, Ito S. Building quality curricula: the GRIP Fellowship Program in Paediatric Clinical Pharmacology. In: Global Research in Paediatrics (Barker C ed), 2015: (in press)


EDUCATIONAL FUNDING
In the past academic year, the grant capture of our faculty, residents and fellows included 58 awards totaling $2,816,988.93 (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 2015-2016 academic year, 2 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

PC: Education Innovation & Development

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 following awards are in progress:
Adapting theatre practice to enhance role-playing and communication skills of Occupational Therapy trainees. Stier J, Nelies LJ, Carnahan H, Walsh CM.


Education Development Fund, University of Toronto. $19,875 CAD. August 2015 – August 2016.

The interaction of children’s education and health policies with the relations of children, parents, educators and health professionals: Implications for health policy, health professions education, and practice. Ng S, Phelan S., Miller F, Leslie K.

Educational Development Fund. $20,000. 2014-2016.


PoRCS: The Pediatric Research and Clinical Summer (PoRCS) Program

Cardiovascular Genetics and Phenotypes of Inherited Arrhythmia Syndromes. Hamilton R, Tofghi T.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

Differences in Brain Development Associated with Neonatal Pain. Miller S, Halani S.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

International paediatric travelers: risk perception, incidence of disease and adherence with recommendations at a tertiary care centre based travel clinic. Morris S, Jackson E.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

Nocturnal Hypoxemia, Hypercapnia and Childhood Stroke.

Dlamani N, Toutourgi S.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

Predictors of pediatric rheumatic disease outcomes.

Feldman B, Goldberg T.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

Pathophysiology of DGKE-associated atypical hemolytic-uremic syndrome (aHUS).

Lemaire M, Nayak A.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

Preschoolers at Risk: Preventing Obesity and Cardiometabolic Health Outcomes in Early Childhood A TARGet Kids! Study.

Birken C, Altbaum J.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

Stability of mitochondrial RNA sequence variants.

Sontheimer N, Sonney S.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

The prognostic utility of a normal neurological examination in neonates with hypoxic ischemic encephalopathy in the era of cooling.

Ly L, Dziegielewski C.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

Thrombophilia Impact During Patient Admission to a Paediatric Hospital.

Brandao L, Lu C.

The Pediatric Research and Clinical Summer (PoRCS) Program. $4,000. June – August 2016.

SPReSS: The Social Pediatrics Research Summer Studentship (SPReSS) Program

ITHELLOPS: Evaluating an Educational Intervention to Train Paediatric Residents on Taking a Social History.

Au H, Gupta J.


Strengthening Community Resource Utilization for Parents of Children with Down Syndrome – Phase 2.

Bernhard N, Sayal P.


School Based Health Care: A Model for Improving Educational Achievement for Children in Inner City Schools.

Freeman S, Cheung A.


Speech and Language Delay in the Children of Adolescent Parents - an exploration of the barriers to effective intervention.

Hick K, Saab D.


A retrospective review of children and adolescents evaluated at the SickKids tuberculosis clinic because of notifications from the Immigration Medical Exam.

Kitai I, Yang C.


Evaluation of Social Determinants of Health (GTA) and Diabetes Care in GTA Regional Diabetes Clinics.

Mahmud F, Cummings L.


Housing & Health - An exploration of housing instability amongst children with medical complexity.

Orkin J, Zahn A.


Developmental Screening at the 18 month well-child visit in Community Health Centres: expansion of the TARGet Kids! Network.

Parkin P, Jiang P.


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


A qualitative investigation of faculty well-being at The Hospital for Sick Children. Weiss SK, Son Hing L, Gnanakumaran V. SickKids (Dr. D. Daneman) Pediatric Chair Fund. $8,000 CAD. Jan 2015-Mar 2016

A structured simulation-based training curriculum to improve the non-technical performance of endoscopy trainees: A randomized control trial. Walsh CM, Samir C, Weiss SK, Son Hing L, Gnanakumaran V. SickKids (Dr. D. Daneman) Pediatric Chair Fund. $8,000 CAD. Apr 2014-Mar 2016


Center for the Study of Adult Literacy: Developing instructional approaches suited to the cognitive and motivational needs of struggling adult readers. Greenberg D, Lovett MW, Graesser A, Frijters J, Branum-Martin D. Institute of Education Sciences (US Department of Education). $10,000,000 USD. Sep 2012-Aug 2017


Medical student experiences with disability and chronic illness. Stengiopoulos E, Martimianakis MA. Ontario Medical Student Association/Associated Medical Services. $5,000. 2016.

Unraveling the complexity of collaborative decision making in a geriatrics interprofessional team meeting. Seng TT. Collaborators: Ling MLC, Lim WS, Ong YH, Chan M. Martimianakis MA. National Health Care Group Health Outcomes and Medical Education Research (HOMER), Singapore. $9,632. 2016 - 2018

**AWARDS**

**International**

Walsh, C.M. Recipient of the Teri Li Award, in recognition of novel and/or extensive educational efforts in pediatric Gastroenterology for a junior faculty (within 10 years of fellowship), North American Society for Pediatric Gastroenterology, Hepatology and Nutrition, October 2015

Walsh, C.M. Recipient of the NASPGHAN Endoscopy Prize, in recognition of best endoscopy related research presentation, North American Society for Pediatric Gastroenterology, Hepatology and Nutrition Annual Meeting, October 2015

**National**

Martimianakis, M. A. Recipient of the CAME Meredith Marks New Educator Award, in recognition of scholarly contributions to the field of medical education, Canadian Association for Medical Education, April 2016

Martimianakis, M. A. Co recipient, along with Maria Mylopoulos and Nikki Woods of the Early Career Medical Educators (ECME) Mentorship Award, ECME group. April 2016

Mylopoulos, M. Co recipient, along with Maria Athina (Tina Martimianakis) and Nikki Woods of the Early Career Medical Educators (ECME) Mentorship Award, ECME group. April 2016

University

Coates, P. Winner of the W. T. Aikins Award for Excellence in Undergraduate Teaching for Course/Program Development and Coordination, Faculty of Medicine, University of Toronto, May 2016.

Weiss, S. Winner of the Colin R. Woolf Award for Long-Term Contributions to Continuing Education, Faculty of Medicine, University of Toronto, May 2016.

Department of Paediatrics, University of Toronto


Doctor, S & Ipp, M: Winners of the Postgraduate Community Teaching Award in recognition of excellence in the teaching of paediatric residents within community-based hospitals and offices, June 2016.

Gans, M: Winner of the Marvin Gerstein Award for excellence in teaching as nominated by core paediatric residents, June 2016.

Griffiths, A: Winner of the Subspecialty Teaching Award for commitment to excellence in teaching the subspecialty residents and clinical fellows, The Hospital for Sick Children, Toronto, June 2016.

Hellmann J, Guttmann A: Winners of the Denis Daneman Faculty Mentorship Award for outstanding approach to mentoring, June 2016.

Kanani R & Carr J: Winner of the Lionel Weinstein Clerkship Teaching Award for excellence in clerkship teaching, June 2016.

Milo-Manson, G: Winner of the Continuing Medical Education Award for Sustained Excellence in Contributions to Continuing Education in Department of Paediatrics/University of Toronto Continuing Education sponsored event, June 2016.

Nofech-Mozes, Y: Winner of the Community Paediatrics Clerkship Award, June 2016

Schonfeld, D: Winner of the Harry Bain Award for excellence in teaching as nominated by core paediatric residents, June 2016.

Wadhwa, A: Winner of the PERLS Award (Paediatric Educational Resident Lecture Series Award) for excellence in teaching at the Paediatric academic sessions, June 2016.

Walters, T: Winner of the Continuing Medical Education Award for excellence in course coordination in a Department of Paediatrics/University of Toronto Continuing Education sponsored event, June 2016.

Griffiths, A: Winner of the Subspecialty Teaching Award for commitment to excellence in teaching the subspecialty residents and clinical fellows, The Hospital for Sick Children, Toronto, June 2016.

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POWER TEACHING AWARDS

For outstanding contributions for Postgraduate Teaching

Dr. Ron Laxer
Dr. Valerie Waters
Dr. Astrid Guttmann
Dr. Jonathan Wasserman
Dr. Paige Church

Divisional/Hospital: Residents/Fellows

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

Dr. Joey Latino (PGY3)
Dr. Jessica Malach (PGY4)

CanMEDS Award – (Core Trainee)
Dr. Laura Erdman

CanMEDS Award – (SubspecialtyTrainee)
Dr. Daniel Rosenfield

PeRLS Awards – Fellow
Dr. Connall Morgan

DEPARTMENT OF PAEDIATRICS

RESEARCH DAY WINNERS

Core Paediatrics
Winner: Sandra Isabel

Basic Science – Junior Trainee
Winner: Lindsay Cho (Rheumatology)

Basic Science – Senior Trainee
Winner: Simon Eng (Rheumatology)

Clinical Science – Junior Trainee
Winner: Thiviya Selvanathan (Neurology)

Clinical Science – Senior Trainee

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.

PAEDIATRICS FACULTY HOLDING LEADERSHIP POSITIONS OUTSIDE THE DEPARTMENT

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Role</th>
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<tbody>
<tr>
<td>Dr. Adelle Atkinson</td>
<td>Chair, Power Steering Committee, Member, UG Admissions Committee</td>
</tr>
<tr>
<td>Dr. Hosanna Au</td>
<td>Paediatrics Lead, PreClerkship Program, Director of Life Cycle Course</td>
</tr>
<tr>
<td>Dr. Susanna Talarico</td>
<td>Associate Director of the Portfolio Course, Medical Director, AboutKidsHealth</td>
</tr>
<tr>
<td>Dr. Stacey Bernstein</td>
<td>Clerkship Director, University of Toronto</td>
</tr>
<tr>
<td>Dr. Nicola Jones,</td>
<td>Principle Investigator and Lead, Canadian Child Health Clinician Scientist</td>
</tr>
<tr>
<td>Dr. Karen Leslie</td>
<td>Director of Centre for Faculty Development, University of Toronto</td>
</tr>
<tr>
<td>Dr. Tina Martlmanakia,</td>
<td>Associate Medical Services (AMS) Phoenix Project Management Committee</td>
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<td>Strategic lead International, Wilson Centre</td>
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<tr>
<td>Dr. Jonathan Pirie</td>
<td>Chair, Board of Examiners, Faculty of Medicine</td>
</tr>
<tr>
<td>Dr. Seetha Radhakrishnan</td>
<td>Director of the Electives Program, University of Toronto</td>
</tr>
<tr>
<td>Dr. Norman Rosenblum</td>
<td>Associate Dean, Physician Scientist Training, University of Toronto</td>
</tr>
<tr>
<td>Dr. Jay Rosenfield</td>
<td>Vice Dean, Undergraduate Medical Education at the University of Toronto (2005-2016)</td>
</tr>
<tr>
<td>Dr. Suzan Schneeweiss</td>
<td>Associate Dean, Continuing Professional Development, Faculty of Medicine, University of Toronto</td>
</tr>
<tr>
<td>Dr. Rayfel Schneider</td>
<td>National CaRMS Paediatric Subspecialty Match Steering Committee</td>
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<tr>
<td>Dr. Brian Simmons</td>
<td>Director, Standardized Patient Program, University of Toronto</td>
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unnecessary tests and treatments do not add value to care. In some cases they can potentially expose patients to harm; they can lead to more testing to investigate false positives; and often they can contribute to a patient’s stress levels. These tests and treatments also put an increased strain on the resources of our health-care system.

That’s why SickKids is participating in Choosing Wisely Canada, a campaign to help clinicians and patients engage in conversations about unnecessary tests and treatments to help make smart and effective choices that will ensure high-quality care.

As part of the campaign, national specialty societies have developed lists of “Five Things Clinicians and Patients Should Question.” These lists identify tests and treatments commonly used in each specialty, which are not supported by evidence and/or could expose patients to unnecessary harm.

As a paediatric health centre that cares for children with highly complex and specialized medical conditions, SickKids is the first hospital in Canada to create its own ‘top 5’ recommended list of tests and treatments that our staff should aim to reduce. Led by Dr. Jeremy Friedman, Associate Chair (clinical) in the Department of Paediatrics, this top five list was created by first engaging stakeholders at SickKids to identify hospital tests and treatments they believed were being used inappropriately at times. These items were then combined with existing recommendations for paediatric care from various Choosing Wisely specialty lists, after which the Department of Paediatrics’ Clinical Excellence Committee reduced the list based on strength of evidence and appropriateness for our hospital. Finally, the list was included in an anonymous survey sent to all full-time medical faculty and paediatric resident trainees, where the highest ranked recommendations were reviewed with a scoring system that factored in: ease of implementation; expected value; ease of measurement; and alignment with hospital initiatives.

THE ‘CHOOSING WISELY’ INITIATIVE AT SICKKIDS

A physician champion for each of the recommendations on the ‘top 5’ list was chosen (Drs Olivia Ostrow, Deena Savlov, Sanjay Mahant, Carolyn Beck, Tania Principi and Kathy Boutis). With the help of hospital representatives from information services, public affairs, child health services and decision support, an implementation strategy was tailored for each of the five items. These generally involved quality improvement projects, re-design of ordering pathways, education of the teams involved and feedback and audit of the measured results. The initiative was launched in January of 2016 and initial improvements in the measured outcomes have been seen for all items. Some examples are provided in the accompanying graphs:

From left to right: Drs. Sanjay Mahant, Jeremy Friedman, Tania Principi, Carolyn Beck, Olivia Ostrow, Deena Savlov (Kathy Boutis is not pictured, as she is on Sabbatical)
Choosing Wisely at SickKids

Prior to choosing IVIG, consideration should be given to its expense, its requirement for a day-hospital or overnight admission, and its side-effect profile that frequently includes aseptic meningitis.

Baseline: A cross-sectional study of management of newly diagnosed typical ITP from 2007 – 2009. From 2013 – 2015, a QI bundle was implemented to decrease the use of IVIG.

Choosing Wisely at SickKids

In North America, approximately 2 million children present to emergency departments annually with ankle injuries; about 12% demonstrate fractures on plain films.

A paediatric clinical decision rule has been developed, validated and demonstrated a safe reduction in unnecessary radiographs by up to 60%.

Measuring our progress:
Baseline data was established, and progress measured over 16 weeks

Clinical care is enriched by the patient safety and quality strategies; choosing wisely initiatives; greater accountability and more.
About SickKids

Healthier Children. A Better World.™ is a vision everyone at SickKids shares. And it will continue to guide us as we look to the future of SickKids. By working together and with our partners in the community, we can lead transformational change that will improve the lives of children everywhere and create a better world for all of us.

http://www.sickkids.ca/Paediatrics/index.html