DIVISIONAL OVERVIEW

The Division of Neonatology welcomes Dr. Simone Vaz to the faculty at Mount Sinai Hospital and Dr. Eugene Ng as a full-time faculty member at Sunnybrook Health Sciences Centre and Dr. Shoo Lee, who was appointed Chief of the Department of Newborn and Developmental Paediatrics at Sunnybrook Health Sciences Centre.

The Division of Neonatology wishes to thank Dr. Rosemary Moodie, Dr. Shaheen Doctor and Dr. Maggie Shu for their service and significant contributions and they deserve our enormous thanks and best wishes.

The three level III NICUs at The Hospital for Sick Children, Mount Sinai Hospital and Women’s College Hospital site continue to suffer from a shortage of sufficient level III NICU beds to adequately meet the maternal and neonatal needs of our catchment area, which has continued to result in regrettable deferrals of patients out of region, province and country. The Ministry of Health and Long-Term Care commissioned a Neonatology Task Force, with province-wide representation including representatives from the three Toronto NICUs, to address the issue of current level III NICU bed requirements across the province, and the predicted increase in requirements over the next 10–15 years. This was delivered in 2007. The Ministry of Health and Long-Term Care responded by announcing 28 additional neonatal beds for the province, including three additional NICU beds for Mount Sinai and three for SickKids. All six additional beds have been opened.

Mount Sinai Hospital was awarded the Ontario Human Milk Bank, and will be establishing it in partnership with SickKids and Sunnybrook Health Sciences Centre. The Milk Bank will be led by Dr. Sharon Unger. It will be the first in Ontario and one of only two in Canada.

The integrated University of Toronto Neonatal Follow-Up Program was established under the leadership of Dr. Elizabeth Asztalos. The program will integrate the neonatal follow-up programs at the three NICUs (Mount Sinai, SickKids, Sunnybrook). Dr. Edmond Kelly (Mount Sinai), Dr. Linh Ly (SickKids) and Dr. Paige Church (Sunnybrook) were appointed Directors of the Neonatal Follow-Up Clinics at their respective hospitals. A common neonatal follow-up protocol will be adopted at all follow-up clinics. New clinics will be established at SickKids and Mount Sinai to replace the joint follow-up clinic at SickKids.

The Division’s Neonatal-Perinatal Fellowship Training Program continues to train the largest number of subspecialty trainees in neonatology of any centre in Canada, under the leadership of Program Director, Dr. Martin Skidmore.

The Division established the new Clinician-Scientist Scholar Training Program under the leadership of Dr. Robert Jankov. The program is designed for neonatal fellows who have completed the Royal College-required training program in neonatal perinatal medicine and are interested in pursuing further research training to establish a career in research. The inaugural candidate in the program is Dr. Constance Williams.

The Maternal-Infant Care (MiCare) Research Centre was established at Mount Sinai Hospital. The centre coordinates several national and international research networks and will also provide research support to members of the Division, including research nurses and coordinator support, statistical and methodologic consultations, database establishment and maintenance, computer programming and other support.

The Division continues to be well supported by major funding agencies for its various foci at the three sites, including lung biology, epidemiology, outcomes-based research and clinical trials.

This year we had 112 publications, and received grant funding of $126,992,072. This represents increase of 31% and 54.8% respectively compared to previous year.
HONOURS AND AWARDS

Asztalos E: Associate Professor, Department of Obstetrics and Gynecology, Faculty of Medicine, University of Toronto, November 2009.

Doctor S: Medical Director, Neonatal Intensive Care Unit, North York General Hospital, 2010-Present.

Jefferies A: Excellence in Teaching Award, Neonatal-Perinatal Division, University of Toronto, June 2010.

Lee K-S: Interim Clinical Director, NICU, Hospital for Sick Children, June-September 2009.

Lee S: Chief, Department of Newborn and Developmental Paediatrics, Sunnybrook Health Sciences Centre, 2010.


Ng N: Deputy Chief, Department of Newborn and Developmental Paediatrics, Sunnybrook Health Sciences Centre, 2010.


Unger S: Women of Distinction Koeffler Foundation (Honoree), Mount Sinai Hospital, 2009.

Williams C: Canadian Institutes of Health Research Doctoral Award – Frederick Banting and Charles Best Canada Graduate Scholarship, April 2010.

Williams C: JKR Wightman Scholarship in Ethics from the Royal College of Physicians and Surgeons, for paper entitled: “Shared Decision Making in the NICU: the Virtuous Triad”.

Banihani R: Award for Poster Presentation, CPS Annual Meeting, Vancouver, BC, June 2010.


Lewis J: Trainee of the Year Award, Neonatal-Perinatal Medicine Fellowship Training Program, University of Toronto, 2010.

PUBLICATIONS


El-Khuffash A, McNamara PJ: Doppler ultrasound in neonatal haemodynamics. Seminars in Fetal and Neonatal Medicine 2010: June 18 [Epub ahead of print].


Ng E, Taddio A, Ohlsson A: Intravenous midazolam infusion for sedation of infants in the neonatal intensive care unit (Review update). Cochrane Database of Systematic Reviews 2010: CD002052


Stade B, Sgro M, Bailey C, Dzendoletas D, Bennett D, and Dowswell T: Psychological and/or educational interventions for reducing prenatal alcohol consumption in pregnant women and women planning pregnancy. Cochrane database of systematic reviews 2009: 15(2): CD004228.


Turner D, Zlotkin SH, Shah PS, Griffiths AM: Omega-3 fatty acids (fish oil) for maintenance of remission in inflammatory bowel disease: a systematic review and meta-analyses. Inflammatory Bowel Diseases 2010: June 17 [Epub ahead of print].


**BOOKS AND BOOK CHAPTERS**


**FUNDING**


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

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

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

A national role-based survey investigating the use of information technology in Canadian neonatal intensive care units. Percival JC, McGregor C, Catley C, James A. *Canadian Patient Safety Institute* ($20,000 2009-2010)

Airway modulation of pulmonary vascular tone during development and following pulmonary hypertension. Belik J. *Canadian Institutes of Health Research* ($110,108/year 2004-2009)

An innovative multi-faceted approach to implementation of recommendations for management of infants at increased risk for sepsis for inter-professional health care team. Shah V. *Ministry of Health and Long-Term Care Innovation Fund* ($41,850 2009)


Assessment and evaluation of a pilot interprofessional OSCE (iOSCE). Simmons B, Reeves S, Wagner S. *Undergraduate Medical Education Curriculum Renewal Fund – University of Toronto/The University of Toronto Office of Interprofessional Education* ($19,141 2009)

Assessment and evaluation of a pilot interprofessional OSCE (iOSCE). Simmons B, Reeves S, Wagner S. *Matching Funds Medical Council of Canada/The University of Toronto Office of Interprofessional Education* ($10,000 2009)


Calgary Impact of (ACoRN) acute care of at risk newborn education program in rural China. Singhal N, Lee S. *Canadian Institutes of Health Research* ($90,000 2008-2010)


Canadian Pediatric Surgery Network Extension (CAPSNet-X). Puligandla P, Lee S. *Canadian Institutes of Health Research* ($10,000 2009-2010)

CIHR team in children’s pain. Stevens B, Lee S. Canadian Institutes of Health Research ($4,054,611 2006-2011)


CIHR Team in Maternal-Infant Care. Lee S. Canadian Institutes of Health Research ($5,640,990 2008-2013)


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


DOMINO donor milk for improved neurodevelopmental outcomes. Unger S. Canadian Institutes of Health Research ($920,270 2010-2015)

Donor human milk versus preterm formula as a substitute for mother’s own milk for feeding very low birth weight infants. O’Connor D, Asztalos E. Canadian Institutes of Health Research ($920,271 2010-2015)

Donor human milk versus preterm formula as a substitute for mothers’ own milk for feeding very low birth weight infants. Campbell D. Canadian Institutes of Health Research ($184,000 2009)


Effect of folic acid supplementation in pregnancy on preeclampsia. Wen S, Lee S. Canadian Institutes of Health Research ($6,525,375 2009-2014)

Efficacy and safety of methyxanthines in very low birth weight infants. Schmidt B, Asztalos E, Ohlsson A. Canadian Institutes of Health Research ($2,038,135 2010-2015)


Endothelial eNOS uncoupling and role of BMP-9 in the regulation of pulmonary vascular tone during development and following pulmonary hypertension. Belik J, Letarte M, Toporsian M, Jerkic M. Heart and Stroke Foundation ($86,906/year 2007-2009)

EPIQ-II project. James A. Canadian Institutes of Health Research ($42,215 2009-2011)
Establishment of a Canadian-based international research network to improve quality of life, communication, and economic outcomes in head and neck cancer survivors. Rieger J, Lee S. Canadian Institutes of Health Research ($100,000 2010-2011)

Evaluation of case-based Interprofessional Education (IPE) sessions: Development and implementation. Wagner S, Reeves S, Simmons B. Undergraduate Medical Education Curriculum Renewal Fund – University of Toronto/The University of Toronto Office of Interprofessional Education ($13,951 2009)


Harmonizing evidence with consumer expectations, interdisciplinary knowledge and organizational matrixes to attain optimal mode of birth patterns. Andruschak J, Lee S. Canadian Institute of Health Research ($195,346 2008-2010)


Hypercapnia as therapy for neonatal pulmonary hypertension. Jankov RP. Canadian Institutes of Health Research ($579,880 2009-2014)

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

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

Implementation of a wireless positive patient identification system for the prevention of breast milk errors in the NICU. O’Brien K, Unger S. Ministry of Health and Long-Term Care Innovation Funds ($56,807 2009-2010)

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

Inhibition of physiological apoptosis as a major component of chronic neonatal lung injury. Tanswell AK, Jankov RP. Canadian Institutes of Health Research ($430,045 2007-2012)

Initiative for translational hypertension research. Branko B, Lee SK. University of Alberta ($300,000 2008-2011)

Innovation Fund. Sgro M. Innovation Fund, Physicians Services Association, St. Michael’s Hospital ($13,000 2009)


Knowledge Translation Supplement. Shah V. Canadian Institutes of Health Research Meetings, Planning and Dissemination Grant ($38,788 2009)


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

MiTy Trial (Metform in Women with Type 2 Diabetes in Pregnancy Trial). Feig D, Lee S. Canadian Institutes of Health Research ($1,735,119 2010-2011)


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


Multiple courses of antenatal corticosteroids for preterm birth. Murphy K, Lee S. Canadian Institutes of Health Research ($7,980,470 2000-2010)


Observational study on the effects of enteral feeding and feeding methods on respiratory pattern as assessed by diaphragm electrical activity (EAdi) in very low birth weight (VLBW) preterm infants. Ng E, Schurr P, Reilly M, Dunn M, Beck J. Physician Services Incorporated Foundation ($26,000 2008-2009)

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

Pediatric Academic Societies (PAS) Annual Meeting. Sgro M. Mead Johnson Nutritionals Canada ($2,600 2010)


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

Randomized study of vasopressin vs epinephrine in a neonatal model of asphyxial cardiac arrest. McNamara PJ. American Academy of Pediatrics ($28,940 2007-09)


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

Rho-kinase inhibitor as therapy for chronic neonatal pulmonary hypertension. Jankov RP, McNamara PJ. Canadian Institutes of Health Research ($323,592 2007-2010)

Role of reactive oxygen/nitrogen species in normal and aberrant postnatal lung growth. Tanswell AK. Canadian Institutes of Health Research ($557,560; 2010-2015)

Role of reactive oxygen/nitrogen species in normal and aberrant postnatal lung growth. Tanswell AK. Canadian Institutes of Health Research ($708,400; 2004-2009)

Role of Rho-kinase in hypoxia-mediated pulmonary hypertension. Jankov RP. Dean’s Fund New Staff Grants Program, Faculty of Medicine, University of Toronto ($10,000; 2005-2009)


Simulation in neonatal resuscitation. Campbell D. Innovation Fund, Physicians Services Association, St. Michael’s Hospital ($12,000 2009)


Sustainability grant for IPE development at the University of Toronto Office of Interprofessional Education. Oandasan I, Wagner S, Lowe M, Sinclair L, Tassone M, Simmons B, Parker K. Ontario Ministry of Training for Colleges and Universities ($150,000 2009)

The Canadian Pediatric Surgery Network (CAPSNET): Establishing best practices for gastroschisis and congenital diaphragmatic hernia. Bouchard S, Lee S. Canadian Institutes of Health Research ($100,000 2010-2011)

The CHIPS Trial (Control of Hypertension in Pregnancy Study). Magee L, Lee S. Canadian Institutes of Health Research ($4,263,450 2008-2014)

The developing lung: Cellular and molecular physiology. Tanswell AK. Canadian Institutes of Health Research ($252,476/year 2004-2009)


The MiTy Trial (Metformin in women with type 2 diabetes in pregnancy). Feig D, Asztalos E. Canadian Institutes of Health Research ($1,735,119 2010-2015)


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

