



39TH ANNUAL SHIELDS RESEARCH DAY

DEPARTMENT OF ANESTHESIA
FACULTY OF MEDICINE
UNIVERSITY OF TORONTO

FRIDAY, MAY 11TH, 2018
HART HOUSE, 7 HART HOUSE CIRCLE
TORONTO, ONTARIO M5S 3H3

07:45 AM Breakfast and Registration

Location: The Great Hall

Wifi: UofT
SSID: hhwireless
Key: discovery

08:30 AM Welcome

Location: The Great Hall

Dr. Beverley Orser, Chair, Anesthesia

Dr. Zeev Friedman, Chair, Annual Shields Research Day 2018

08:45 AM Session A – Oral Presentations

Location: The Great Hall

Moderators: Drs. Keyvan Karkouti and Brian Cuthbertson

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| <p>A1 The Effect of Anesthetic Technique on Mortality and Major Morbidity Following Hip Fracture Fixation
Sarah Tierney - Fellow</p> | <p>A2 Inflammation and Anesthetic Drugs Synergistically Interact to Impair Cognition in Mice
Shahin Khodaei – Graduate Student</p> |
| <p>A3 Development of a Head-Mounted Holographic Needle Guidance System for Enhanced Ultrasound Guided Regional Anesthesia
Julian Wiegelmann - Fellow</p> | <p>A4 Prognostic Impact of Preoperative Ambulatory Blood Pressure on Mortality Following Major Elective Noncardiac Surgery
Ashwin Sankar - Resident</p> |
| <p>A5 Vascular Permeability Associated with Modelled Traumatic Brain Injury is Reduced by Administration of Human Umbilical Cord Perivascular Cells
Tanya Barretto – Graduate Student</p> | <p>A6 Innervation of the Posterior Capsule of Knee Joint: A Cadaveric Study
John Tran – Graduate Student</p> |
| <p>A7 Canadian Consensus Guidelines for the Perioperative Management of Patients on Buprenorphine
Akash Goel - Resident</p> | |



09:30 AM Session B - Poster Session

Location: East Common Room

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| B1 | Neurocognitive Functioning Following CPAP Treatment in Elderly Patients with Obstructive Sleep Apnea: A Metaanalysis of Randomized Controlled Trials
Talha Mubashir - Research Assistant | B2 | Sensing Tissue Stiffness: New Therapies for Heart Failure and Cardiac Fibrosis
Julia Plakhotnik - Graduate Student |
| B3 | Effect of Internal Jugular Vein Compression on Intracranial Volume: A Transorbital Ultrasound Study of the Optic Nerve
Michael Dinsmore - Fellow | B4 | Optimizing Discharge Opioid Prescription for Major Joint Replacement Surgery: A Longitudinal Quality Assurance Survey
Rakhi Talak - Research Assistant |
| B5 | Effects of human umbilical cord perivascular cell conditioned media in a model of traumatic brain injury in adult
Eileen Liu - Graduate Student | B6 | Development of a High-Fidelity Novel Training Model for Dynamic Trans-orbital Ultrasonography of Optic Nerve Sheath Diameter
Zakir Hajat - Fellow |
| B7 | Preoperative anemia increases the risk of blood product transfusion in children undergoing spine surgery.
Montserrat Fontanals - Fellow | B8 | The Pattern and Distribution of Body Fluid During Pregnancy: A Systematic Review and Meta-Analysis
Julia Pasquale - Medical Student |
| B9 | Systematic Review of the saddle block for perianal ambulatory patients
Carla Todaro - Fellow | B10 | Differential cardiovascular response following hemodilution with colloid versus crystalloid
Nikhil Mistry - Research Assistant |
| B11 | Incidence and recovery of recurrent laryngeal nerve injury in children with biventricular physiology following aortic arch surgery: a retrospective cohort study
Minako Sano - Fellow | B12 | Adverse Heart-Lung Interactions in Ventilator-Induced Lung Injury
Bhushan Katira - Fellow |
| B13 | Relative efficacy of TIVA and adjuvant intraoperative dexmedetomidine in reducing emergence delirium in children: a network meta-analysis
Maria-Alexandra Petre - Resident | B14 | Extubation in the operating room and use of healthcare resources after pediatric cardiac surgery: A retrospective cohort
Mehr Jain - Medical Student |
| B15 | Seasonal Variation Amongst Incidence Of Hypothermia in Severely Ill Trauma Patients
Kennedy Ninh Hao - Medical Student | B16 | Sleep Study Parameters for Predicting Perioperative Complications in Patients with Obstructive Sleep Apnea: A Review
Colin Suen - Resident |



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| B17 | Differential effect of dexmedetomidine on intracranial EEG recordings from human hippocampus and neocortex
Joshua Bennitz - Fellow | B18 | Comparison of cost and outcomes for minimally invasive percutaneous versus surgical paddle lead implantation for spinal
Pranab Kumar - Fellow |
| B19 | A clinical comparison of two bronchial blockers versus double-lumen tubes for one-lung ventilation
Serena Shum - Fellow | B20 | Survey on associated symptoms and morbidities in carriers of RYR1 genetic variants
Carlos Alberto Ibarra Moreno - Fellow |
| B21 | Surface Ultrasound as Screening Tool for Diagnosis of Obstructive Sleep Apnea (OSA): A Systemic Review of Literature
Arvind Tuteja - Research Assistant | B22 | Opioid medication errors and resultant harm in pediatric practice: five years' experience of adverse event reporting in a quaternary pediatric hospital.
David Greaney - Fellow |
| B23 | Evaluation of iPACK Block - A Cadaveric Study
Laura Giron-Arango - Fellow | B24 | Pre-operative biomarkers and Imaging Tests as predictors of post-operative delirium in non-cardiac surgical patients
Farrah Ayob - Fellow |
| B25 | Integration of Virtual and Augmented Reality to the Operating Room via the Microsoft
Stephen Szeto - Medical Student | B26 | Virtual Reality and Pain Management: An Evidence Based Review
Elizabeth Maxwell - Fellow |
| B27 | A Systematic Review of Paresthesia-Free Spinal Cord Stimulation Modes for Complex Regional Pain Syndrome
Yasmine Hoydonckx - Fellow | B28 | Twitter Hashtags for Anesthesiologists
Nan Gai - Fellow |
| B29 | Evaluation of sleep health in interventional clinical trials for patients with chronic neuropathic pain: A systematic review
Aidan McParland - Medical Student | B30 | Pain, Agitation and Delirium in Cardiovascular Intensive Care Unit; Barriers for implementation
Victoria Postnikova - Graduate Student |
| B31 | A Retrospective Analysis of the Incidence and Treatment of Hypothermia in Pediatric Trauma Patients
Grahme Weisgerber - Fellow | B32 | Transient paraplegia following Epidural Blood Patch
Chaminda Wijeratne - Fellow |
| B33 | Evaluation of sleep health in pain questionnaires used in the chronic pain population: A systematic review of literature. Shreya Desai - Research Assistant | B34 | Case report - Supraclavicular Brachial Plexus Neurolysis for a Malignant Peripheral Nerve Sheath Tumor
Weiyang Christopher Liu - Fellow |



Anesthesia UNIVERSITY OF TORONTO

10:00 AM Session C – Oral Presentations

Location: The Great Hall

Moderators: Drs. Greg Hare and Hannah Wunsch

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| <p>C1 Elevated Red Cell Distribution Width (RDW) is an Adverse Prognostic Indicator in Elective Noncardiac Surgery: A Retrospective Cohort Study
Justyna Bartosko - Resident</p> <p>C3 Competency By Design: A Mixed Methods, Ethnographic Study
Gianni R. Lorello – Faculty
Stephanie Ladowski – Resident (presenter)</p> <p>C5 Ketamine Prevents a Persistent Increase in I-Aminobutyric Acid Type-A Receptor Function In Hippocampal Neurons After General Anesthesia
Winston Wenhuan Li – Graduate Student</p> <p>C7 Comparison of the North American Caffeine Halothane Contracture Test and The Japanese Calcium-Induced Release Test for Diagnosis of Malignant Hyperthermia Susceptibility
Carlos Alberto Ibarra Moreno - Fellow</p> | <p>C2 A Carbon Nanotube Sensor to Develop Precision Therapies for Heart Failure
Manpreet Malhi – Graduate Student</p> <p>C4 The Risk of Severe Aortic Stenosis in Elective Non-Cardiac Surgery
Jay S. Han - Resident</p> <p>C6 Mental Illness After Intensive Care: A Population Based Cohort Study
Lavarnan Sivanathan</p> |
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11:15 AM Session D – Oral Session

Location: The Great Hall

Moderators: Drs. David Mazer and Duminda Wijeyesundara

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| <p>D1 Risk Factors for Opioid Induced Respiratory Depression in Surgical Patients: A Systematic Review and Meta-Analysis
Kapil Gupta - Fellow</p> <p>D3 Weeding Out The Problem: The Impact of Preoperative Cannabinoid Use on Pain in The Perioperative Period
Weiyang Christopher Liu - Fellow</p> <p>D5 Using Patient-Reported and Wearable-Technology Data to Assess Outcomes of Spinal Cord Stimulation Trials for Neuropathic Pain Syndromes
Nimish Mittal - Fellow</p> | <p>D2 Anesthetic Activation of GABA (A) Receptors in Astrocytes Triggers a Persistent Increase in a Tonic Inhibitory Current in Hippocampal Neurons
Arsene Pinguielo – Graduate Student</p> <p>D4 Morphine Alters Cancer Metabolic Pathways
Doorsa Tarazi – Graduate Student</p> <p>D6 Heart Rate Variability can Predict Post-Induction Hypotension in Patients with Cervical Myelopathy
Sujoy Banik - Fellow</p> |
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12:00 PM Lunch Break and Poster Viewing

Location: The Great Hall

1:00 PM FACULTY GUEST SPEAKER:

Dr. David Mazer, Professor of Anesthesia

“Trials and Tribulations of Clinical Trials – What I’ve Learned from TRICS”

1:15 PM ANNUAL SHIELDS LECTURE:

Professor Irene Tracey, Head of Department of Nuffield Chair Anesthetic Science

“Advanced Neuroimaging of Pain, Analgesia and Anesthesia Induced Altered States of Consciousness”

2:15 PM ANESTHESIOLOGIST & PHILANTHROPY

Dr. Hal Marryatt

Contributions to the Department of Anesthesia

2:25 PM FORMER CHAIR, DEPARTMENT OF ANESTHESIA (2003-2006)

Dr. David Bevan

Tribute to Dr. Arthur Scott

2:40 PM ACADEMIC FACULTY PROMOTIONS

Dr. Beverley Orser, Chair, Department of Anesthesia

2:50 PM Shields Day Awards Presentation Session

Bateman, Hammell, Rothbart, Byrick, Bryan and Bevan Awards, Residents and Fellows Tuition Awards, Laws Travel Award, and Clinical Excellence Award

3:15 PM Closing Remarks

Location: The Great Hall

Dr. Beverley Orser, Chair, Anesthesia

Dr. Zeev Friedman, Chair, Annual Shields Research Day 2018

3:20 PM Departure



ANNUAL SHIELDS LECTURE – PROFESSOR IRENE TRACEY

“Advanced Neuroimaging of Pain, Analgesia and Anesthesia Induced Altered States of Consciousness”

Professor Irene Tracey holds the Nuffield Chair of Anaesthetic Science and is Head of the Nuffield Department of Clinical Neurosciences at the University of Oxford – a 550-person world-leading basic and clinical research department. Irene did her undergraduate and graduate studies at the University of Oxford from 1985-1993 and then held a postdoctoral position at Harvard Medical School until 1996. In 1997, Irene helped to co-found the now world-leading Oxford Centre for Functional Magnetic Resonance Imaging of the Brain (FMRIB) at the University of Oxford and was its Director from 2005 until 2015. She was also Head of the Nuffield Division of Anaesthetics and an Associate Head of the Medical Sciences Division at Oxford prior to taking up her current post. Over the past 18 years her multidisciplinary research team has contributed to a better understanding of pain perception, pain relief and nociceptive processing within the injured and non-injured human central nervous system using advanced neuroimaging techniques. More recently, they have been investigating the neural bases of altered states of consciousness during anaesthesia.



Alongside senior leadership roles within the University, Irene has served and continues to serve on many national and international committees, such as the International Association for the Study of Pain (IASP), REF2014, British Neuroscience Association and Lundbeck Brain Prize Committee. She is currently appointed to the Council of the MRC. She is a passionate advocate for women in science and is involved in several mentorship schemes. In 2008 she was awarded the triennial Patrick Wall Medal from the Royal College of Anaesthetists and in 2009 was made an FRCA for her contributions to the discipline. In 2015 she was elected a Fellow of the Academy of Medical Sciences and in 2017 won the Feldberg Foundation Prize. In September 2019, she will become the Warden of Merton College, Oxford – one of Oxford’s oldest undergraduate and graduate colleges dating back to 1264.

She is married to Professor Myles Allen, a climate physicist, and they have three children: a daughter and two sons.



THE AWARDS

Dr. Evelyn Bateman Award

Named in honor of Dr. Evelyn Bateman, Chief of Anesthesia at the Women's College Hospital from 1956-1972, this award recognizes excellence in anesthesia at the undergraduate level.

Dr. David Bevan Award

The Dr. David Bevan Award is awarded to the presenter of the best overall research poster at the Annual Shields Research Day

Dr. A.C. Bryan Award

The A.C. Bryan Award is Awarded to a graduate student judged to have presented the best research project at the Annual Shields Research Day.

Dr. R.J. Byrick Award

The R.J. Byrick Award recognizes the best fellow's research paper presented at the Annual Shields research Day. Dr. Byrick was the Department's 6th Chair of Anesthesia, serving from 1993-2003. He was then Vice-Dean of Clinical Affairs for the Faculty of Medicine, University of Toronto, until 2007. Dr. Byrick is currently a clinician at St. Michael's Hospital.

Awards for Clinical Excellence

For excellent clinical skills (Anesthesia and Critical Care Medicine) and consistent demonstration of exemplary patient service.

Dr. Thomas Donald Hammell Award

The Thomas Donald Hammell Memorial Award in Anesthesia recognizes outstanding contributions to the Residency Program (as chosen by other residents).

Dr. Alan K. Laws Travel Fellowship Award

The Laws Travel Fellowship Award one of two awards given by the Department of Anesthesia in honor and memory of Dr. Alan Laws. This award provides travel support for senior residents or fellows to advance their research programs in anesthesia.

Dr. Hynek Rothbart Award

The Dr. Hynek Rothbart Award is awarded to the best paper presented by a resident at the Annual Shields Research Day.

UT Anesthesia Resident and Fellows Tuition Awards

Awarded to meritorious Anesthesia residents and/or fellows who are engaged in graduate studies that are clearly integrated into their existing residency/fellowship program, and are linked with their overall career plan.

Thank you to our sponsors for their generous educational grants in support of this event:



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