

2006-2007



Department of Anesthesia

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Chair's Introduction

This is my first introduction to the annual report of the Department of Anesthesia at the University of Toronto. As I read the report several things are apparent.

First, the department is successful: our faculty members provide anesthetic care to approximately 100,000 patients during surgery or childbirth, in addition to caring for thousands of adults and children in intensive care, undergoing treatment for chronic pain, or requiring assistance during palliative care. All of this adds up to a lot of service, which is just fine, as this service is our primary aim, and what defines us as clinicians. Providing state-of-the-art service really is the hallmark of the outstanding clinician. Of course, we know all too well that 'state-of-the-art' only has meaning when it is driven by clinical experience, research and education of the very best caliber.



Second, the department is additionally successful in that it scores consistently in the pivotal areas of research and education. We are fortunate to be in a leadership position among departments across the country in many of the metrics of academic success: this is a feature of our size, of our being a member of the University of Toronto community, of our students and faculty, and of our patients who allow us to treat them and who provide us with provoking challenges, and who need practice-changing solutions.

Third, what does this annual report represent? Is it bragging – in the written word – about our operating grants, prizes, publications, invited talks, and awards as metrics of academic performance? It is indeed all of those things, but it is much more. Our whole mission is ultimately about looking after patients better, and our annual report is a check-up on how that enterprise has gone over the previous year.

We recognize that because our clinical outcomes – in anesthesia – are so good, some believe that there is little room, or need, for further improvements in the care that is available. But we also realize that targeting the 'average' patient will never adequately serve the many 'outliers' whom we have the privilege to treat on a daily basis. Beyond that, targeting only the 'average' patient will stifle our imagination and innovation. Ultrasound in regional anesthesia was developed not because 'on average' regional anesthesia worked adequately; it was developed because regional anesthesia did not reach an 'excellent' grade in every patient. Now, with the assistance of research, education and expertise in ultrasound, regional anesthesia is close to 'excellent' in almost every patient. This is a marvelous illustration of how things that appear to be reasonable can be made far better. Additional examples of progress in this report include research in mechanisms of anesthesia, 'e-health', perioperative blood product use, critical care medicine and trauma, and development of the anesthesia care team.

Please enjoy this report, share it with your friends and colleagues, and contact us if you wish to learn more about the department or the profession more broadly. Read it and realize the commitment of the many in the department towards the goal of improving the profession. Read this report and recognize that research – the discovery of new knowledge – is our only way forward, and education is how we learn about it. While we look back with pride on this year's successes in the clinical, education and research realms, we look forward with humility, enthusiasm and determination to find out more, to teach and learn from each other, and to provide ever better care for our primary responsibilities – our patients.

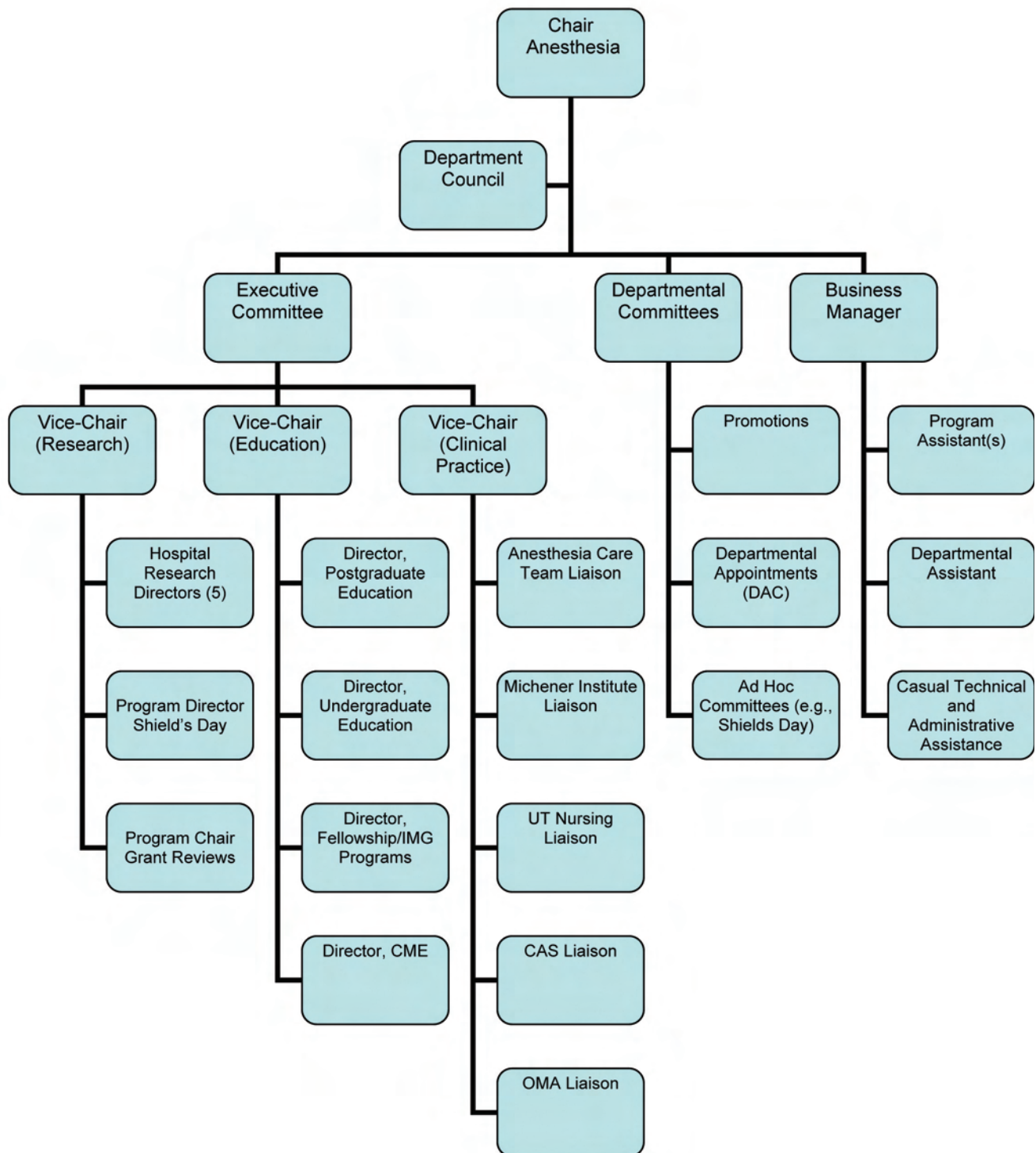
On behalf of all the readers of this report, I thank those whose contributions made it possible.

A handwritten signature in black ink, appearing to read 'Brian Kavanagh', with a stylized flourish at the end.

Brian Kavanagh

Organizational Chart

As of February 2007



Who Are We?

Administrative Team



Dr. Brian Kavanagh
Chair



Dr. Gerald O'Leary
Vice-Chair, Clinical Affairs



Dr. Patricia Houston
Vice-Chair, Education



Dr. David Mazer
Vice-Chair, Research



Ms. Wendy Kubasik
Business Manager



Dr. Mark Levine
Director, Postgraduate
Education Program



Dr. Isabella Devito
Director, Undergraduate
Education Program



Ms. Jennifer Morris
Assistant, Graduate Program



Mr. Danny Cavanagh
Departmental Assistant



Ms. Kathryn Bailey
Assistant, Graduate Program
(on leave)

Departmental Committees

	Members	Terms of Reference
EXECUTIVE COMMITTEE	B. Kavanagh (Chair), G. Faclier, P. Houston, J. Kronberg, W. Kubasik, M. Levine, G. O'Leary, D. Mazer, L. Roy	Makes operational and policy-related decisions on basis of Chair's strategic direction including the financial, administrative, educational and research-related issues of the Department.
DEPARTMENTAL COUNCIL	B. Kavanagh (Chair), S. Beattie, S. Belo, I. Devito, G. Faclier, G. Fox, P. Houston, J. Kronberg, W. Kubasik, W. Middleton, D. Mazer, E. Mosher, G. O'Leary, L. Roy, M. Levine, P. Slinger	Provides the Chair with guidance on strategic issues; harmonizes goals and operations of the Department with other UT institutions and affiliated hospitals.
DEPARTMENTAL APPOINTMENTS COMMITTEE (DAC)	D. McKnight (Chair), R. Crago, S. Halpern, W. Kubasik (secretary), M. O'Driscoll, J. Wasserman	Ensures consistent and appropriate appointment processes for the department; conducts performance reviews of full-time appointments in accordance with the Procedures Manual for the Policy for Clinical Faculty as revised from time to time.
PROMOTIONS COMMITTEE	G. Fox (Chair), B. Bissonnette, V. Chan, I. Devito, P. Houston, J. Katz, B. Kavanagh (ex-officio), W. Kubasik (secretary), D. Mazer, C. McCartney, P. Morgan, B. Orser, H. Zhang	Reviews faculty applications for promotions; provides recommendations to Chair on promotions.
UNDERGRADUATE EDUCATION COMMITTEE	I. Devito (Chair), D. Chandra, H. El-Beheiry, P. Houston, D. Irwin, G. Kannellakos, B. Kavanagh, K. Lin, P. Mark, I. Randall, J. Robertson, A. Samah, R. Sunder, M. Vandervyver, D. Cavanagh (secretary)	Promotes excellence in undergraduate education through all years of Medicine, specifically promoting excellence in teaching perioperative medicine (including preoperative evaluation skills; resuscitation; pain management; technical skills; team centered care). Develops and implements innovative teaching through simulation and web-based educational tools.
POSTGRADUATE EDUCATION COMMITTEE	M. Levine (Chair), I. Devito, H. Fischer, S. Halpern, P. Houston, B. Kavanagh, H. Lee, I. McGhee, D. Middleton, B. Morningstar, P. Murphy, V. Naik, E. Ng, D. Riegert, J. Wasserman	Develops and revises postgraduate academic program; evaluates residents, teachers and rotations; participates in a fair, open and transparent selection process for new residents; ensures program adherence to the Standards of Accreditation of the RCPSC; reviews residents in difficulty and makes recommendations to Program Director.
CONTINUING MEDICAL EDUCATION	P. Slinger (Chair), P. Angle, S. Davies, L. Eisen, P. Houston, B. Kavanagh, J. Kay, C. Knapp, C. Loffelmann, J. Tarshis, M. van der Vyver, L. Venkatraghavan, J. Wong	Develops, plans, implements and reviews various continuing education initiatives within the department including web-based learning.
RESEARCH COMMITTEE	D. Mazer (Chair), P. Angle, B. Kavanagh, A. Baker, S. Beattie, M. Crawford, A. Macarthur, P. Mak, D. McKnight, B. Orser, G. Petroz	Defines priorities, provides advice, and implements new initiatives that promote and support current and future research activities in the department; provides protocol review service and assistance for departmental faculty applying for grants; promotes linkages to foster departmental research activities.
SHIELDS DAY PLANNING COMMITTEE	G. Petroz (Chair), B. Kavanagh, W. Kubasik, S.L. Loo	Organizes the scientific program including theme, speakers, and overall program. Implements program and logistical details.

Faculty Members

Professors Emeritus

Bevan, David, Emeritus Professor

Duffin, James, Emeritus Professor

Professors

Baker, Andrew, St. Michael's Hospital

Bohn, Desmond J, Hospital for Sick Children

Chan, Vincent, University Health Network

Cooper, Richard M, University Health Network

Fisher, Joseph, University Health Network

Halpern, Stephen, Women's College Hospital

Jadad, Alejandro, University Health Network

Kavanagh, Brian, Hospital for Sick Children

McGrath, Patricia, Hospital for Sick Children

Slinger, Peter, University Health Network

Tweed, Arnold, University Health Network

Bissonnette, Bruno, Hospital for Sick Children

Byrick, Robert J, St. Michael's Hospital

Chung, Frances F, University Health Network

Cox, Peter, Hospital for Sick Children

Fox, Gordon, Mount Sinai Hospital

Houston, Patricia, St. Michael's Hospital

Katz, Joel, University Health Network

Mazer, David, St. Michael's Hospital

Orser, Beverley, Sunnybrook Health Sciences

Stewart, Donna, University Health Network

Associate Professors

Beattie, W Scott, University Health Network

Carvalho, Jose, Mount Sinai Hospital

Crawford, Mark, Hospital for Sick Children

Hare, Gregory, St. Michael's Hospital

Karkouti, Keyvan, University Health Network

Kronberg, Jean, Women's College Hospital

Macarthur, Alison, Mount Sinai Hospital

McCartney, Colin, Sunnybrook Health Sciences

Mullen, Brendan, Mount Sinai Hospital

Roy, Lawrence, Hospital for Sick Children

Stoyka, William, St. Michael's Hospital

Yao, Zhenhai, University Health Network

Brown, Stephen C, Hospital for Sick Children

Crago, Ronald R, University Health Network

Djaiani, George, University Health Network

Jelenich, Sandra, St. Michael's Hospital

Karski, Jacek, University Health Network

Lu, Wei-Yang, Sunnybrook Health Sciences

Manninen, Pirjo, University Health Network

McKnight, David, St. Michael's Hospital

Murphy, Patricia, University Health Network

Stewart, Tom, Mount Sinai Hospital

Wong, David, University Health Network

Zhang, Haibo, St. Michael's Hospital

Assistant Professors

Abrahamson, Simon, St. Michael's Hospital

Angle, Pamela J, Women's College Hospital

Awad, Imad, Sunnybrook Health Sciences

Baker, James, St. Michael's Hospital

Barlow, Ross, Hospital for Sick Children

Bercovici, Mark, Sunnybrook Health Sciences

Bertram, Susan, Sunnybrook Health Sciences

Bradwell, John, University Health Network

Brull, Richard, University Health Network

Cassar-Demajo, W, University Health Network

Chan, Herman, Sunnybrook Health Sciences

Chapman, Martin, Sunnybrook Health Sciences

Cooke, Mary Ellen, Mount Sinai Hospital

Cybulski, Karen, Hospital for Sick Children

Davallou, Mojgan, Women's College Hospital

Ananthanarayan, C, Mount Sinai Hospital

Avila, Arsenio, Sunnybrook Health Sciences

Bahrey, Lisa, University Health Network

Balki, Mrinalini, Mount Sinai Hospital

Belo, Susan, Sunnybrook Health Sciences

Berdock, Steven, Hospital for Sick Children

Bowry, Richard, St. Michael's Hospital

Braude, Bernard, Hospital for Sick Children

Campbell, Fiona, Hospital for Sick Children

Chan, Bok Man, St. Michael's Hospital

Chandra, Deven, St. Michael's Hospital

Chen, Robert, St. Michael's Hospital

Cooper, Andrew, Sunnybrook Health Sciences

Darrah, William, St. Michael's Hospital

Davies, Sharon, Mount Sinai Hospital

De Lacy, John, Sunnybrook Health Sciences
Devito, Isabella, Mount Sinai Hospital
Dodgson, Bruce, Hospital for Sick Children
Edmonds, John, Hospital for Sick Children
El-Beheiry, Hossam, University Health Network
Faclier, Gil, Sunnybrook Health Sciences
Fischer, Howard, Mount Sinai Hospital
Foster, Harry, Sunnybrook Health Sciences
Gagliese, Lucia, University Health Network
Gofeld, Michael, Sunnybrook Health Sciences
Goldszmidt, Eric, Mount Sinai Hospital
Grant, Carol, Hospital for Sick Children
Guest, Cameron, Sunnybrook Health Sciences
Heggie, Jane, University Health Network
Hughes, Vincent, St. Michael's Hospital
Isaac, Lisa, Hospital for Sick Children
John, Elizabeth, University Health Network
Joo, Hwan, St. Michael's Hospital
Katz, Abraham, St. Michael's Hospital
Kay, Joseph, Sunnybrook Health Sciences
Knox, Bruce, St. Michael's Hospital
Kurrek, Matt, The Scarborough Hospital
Lai, Jacob, University Health Network
Lee, Henderson, Toronto East General Hospital
Levene, Richard, St. Michael's Hospital
Luginbuehl, Igor, Hospital for Sick Children
Macpherson, Bruce, Hospital for Sick Children
Mallon, Joseph, Sunnybrook Health Sciences
Markwell, Hazel, St. Michael's Hospital
McDonnell, Conor, Hospital for Sick Children
McGuire, Glenn, University Health Network
McLean, John, St. Michael's Hospital
McNama, Pat, University Health Network
Meineri, Massimiliano, University Health Network
Michel, Ernest, Mount Sinai Hospital
Minkovich, Leonid, University Health Network
Morgan, Pamela, Women's College Hospital
Naik, Viren, St. Michael's Hospital
Ng, Elaine, Hospital for Sick Children
O'Leary, Gerald, University Health Network
Peng, Philip, University Health Network
Petroz, Guy, Hospital for Sick Children
Prabhu, Atul, University Health Network
Riegert, Daniel, Sunnybrook Health Sciences
Robertson, James, Hospital for Sick Children
Samahin, Ashmal, Toronto East General
Shumka, David, University Health Network

de Ruiter, Joost, Hospital for Sick Children
Djordjevic, Dragan, Women's College Hospital
Dosch, Elizabeth, University Health Network
Eisen, Leonard, Mount Sinai Hospital
Evans, Wayne, University Health Network
Fedorko, Ludwik, University Health Network
Fleming, Ivor, Mount Sinai Hospital
Friedman, Zeev, Mount Sinai Hospital
Gardner-Nix, J, Sunnybrook Health Sciences
Goldenson, Gordon, Sunnybrook Health Sciences
Graham, Marianne, Sunnybrook Health Sciences
Grise, Ann, University Health Network
Hayes, Jason, Hospital for Sick Children
Holtby, Helen, Hospital for Sick Children
Idestrup, Christopher, Sunnybrook Health Sciences
John, Justin, Hospital for Sick Children
Joo, Daisy, Hospital for Sick Children
Karsli, Cengiz, Hospital for Sick Children
Katznelson, Rita, University Health Network
Kettles, Jane, Toronto East General Hospital
Kolton, Michael, St. Michael's Hospital
Laflamme, Claude, Sunnybrook Health Sciences
Lambert, Stephane, St. Michael's Hospital
Leung, Peter, St. Michael's Hospital
Levine, Mark, Hospital for Sick Children
Mackenzie, Terence A, St. Michael's Hospital
Mak, Peter, Scarborough General Hospital
Mark, Patrick, Toronto East General Hospital
McCluskey, Stuart, University Health Network
McGhee, Irene, Sunnybrook Health Sciences
McKenzie, Robert, Sunnybrook Health Sciences
McLeod, Elizabeth, Hospital for Sick Children
McRae, Karen, University Health Network
Meschino, Alfie, Toronto East General Hospital
Middleton, William, University Health Network
Morgan, Anwar, Women's College Hospital
Morningstar, Beverly, Sunnybrook Health Sciences
Naser, Basem, Hospital for Sick Children
O'Driscoll, Martha, Sunnybrook Health Sciences
Ondhia, Manharlal, Sunnybrook Health Sciences
Perlas, Anahi, University Health Network
Pollard, Brian, St. Michael's Hospital
Rieger, John, Mount Sinai Hospital
Roberts, Martyn, University Health Network
Safa, Behnam, Sunnybrook Health Sciences
Sarmah, Anita, Sunnybrook Health Sciences
Sinclair, Lesley, Sunnybrook Health Sciences



Smith, Terry, Sunnybrook Health Sciences
Solaric, Bojana, University Health Network
Srebrnjak, M, Women's College Hospital
Tanner, Keith, Sunnybrook Health Sciences
Tarshis, Jordan, Sunnybrook Health Sciences
Taylor, Katherine, Hospital for Sick Children
Teresi, James, Mount Sinai Hospital
Tharmaratnam, Uma, Mount Sinai Hospital
Tousignant, Claude, St. Michael's Hospital
Tumber, Paul, University Health Network
Urbach, Gordon, Mount Sinai Hospital
Urbankiewicz, Les, Toronto East General Hospital
van der Vyver, M, Women's College Hospital
van Rensburg, Adriaan, University Health Network
Vegas, Annette, University Health Network
Venkat Raghavan, L, University Health Network
Wasowicz, Marcin, University Health Network
Wassermann, Jeffrey, St. Michael's Hospital
Wong, Jean, University Health Network
Wong, Sophia, Sunnybrook Health Sciences
Yee, Doreen, Sunnybrook Health Sciences
You-Ten, Eric, Mount Sinai Hospital
Zaarour, Christian, Hospital for Sick Children

Lecturers

Barclay, Alasdair L, Mount Sinai Hospital
Chochinov, M, Sunnybrook Health Sciences
Dattilo, Kathleen, University Health Network
Friedlander, Mark, North York General Hospital
Ho, Alexander, St. Michael's Hospital
Hsu, Vivienne, Toronto East General Hospital
Irwin, Darryl, Mount Sinai Hospital
Kamble, Vaibhav, Toronto East General
Kapoor, Sunil, Toronto East General Hospital
Kataoka, Mark, St. Michael's Hospital
Knapp, Charles, North York General Hospital
Kong, Anna, Toronto East General Hospital
Lam, Desmond, Toronto East General Hospital
Loffelmann, Carol, St. Michael's Hospital
Middleton, Claire, University Health Network
Palmgren, Elisabeth, Toronto East General
Robison, Gordon, Toronto East General
Sakotic, George, St. Michael's Hospital
Seary, Richard, Mount Sinai Hospital
Wijeyesundera, D, University Health Network

Brown, Stephen D, North York General
Choi, Mabel, Sunnybrook Health Sciences
Dickson, Jeffrey, St. Michael's Hospital
Gourlay, Douglas, Mount Sinai Hospital
Ho, Peter, Mount Sinai Hospital
Hussain, Kamal, Women's College Hospital
Jariani, Marjan, University Health Network
Kanellakos, George, University Health Network
Kashin, Brian, North York General Hospital
Kemp, Sheelagh, Hospital for Sick Children
Ko, Raynauld, University Health Network
Kulchyk, James, Toronto East General Hospital
Lin, Ken, St. Michael's Hospital
Loke, Julian, University Health Network
Mosher, Emily, Toronto East General Hospital
Peliowski, Arie, Hospital for Sick Children
Rucker, Joshua, Mount Sinai Hospital
Salman, Aliya, Mount Sinai Hospital
Singh, Davindra, St. Michael's Hospital

Anesthesia Fellows 2006-2007

The Hospital for Sick Children

Adudu, Philomena	Nigeria	Al Atassi, Abdulaleen	Saudi Arabia
Der, Tara	Canada	Flowerdew, James	US
Hull, Rebecca	England	Ilavajady, Srinivasan	UK
Lopez, Alejandra	Colombia	Szabo, Elod	Canada
Taguchi, Nobuko	Japan	Thalayasingam, Priya	Australia
White, Michelle	UK	Whitty, Robert	Ireland
Witherell, Heidi	US	Wong, Gail	Australia

Mount Sinai Hospital

Hamed, Hala	Egypt	Haque, Shamim	Pakistan
Ibrahim, Hisham	Egypt	Iqbal, Mirza	Pakistan
Khemka, Rakhi	India	Lee, Yung	Brazil
Li, Victor	China	Rofaeel, Ayman	Egypt
Siddiqui, Mughina	Pakistan	Siddiqui, Naveed	Pakistan
Sujith, Dandina	Ireland	Tanaka, Motoshi	Japan
Terblanche, Nicolaas	South Africa		

St. Michael's Hospital

Alam, Syed	Canada	Bould, Dylan	England
Carmona, Paula	Spain	Crabtree, Nick	New Zealand
Desmet, Matthias	Belgium	Frampton, Claire	New Zealand
Honorato, Cristina	Spain	Hultzer, Michelle	Canada
Joa-Macaisa, Perlita	Philippines	Tellez, Juan	Colombia

Sunnybrook Health Sciences Centre

Anns, Jonathan	UK	Eipe, Naveen	India
Evangelista, Raymond	Philippines	Goldchtaub, Valeri	Israel
Guzzo, Angelina	Canada	Kapitoulski, Boris	Israel
Li, Yong	China	Lim, Teddy	Canada
Kummer Mendes, Carmen	Brazil	Restrepo, Carlos	Colombia
Sinclair, Colin	UK		

UHN/Toronto General Hospital

Barbosa, Rubens	Brazil	Biswas, Rahul	India
Dochev, Atanas	Canada	Hegazy, Nasr	Egypt
Husain, Farhan	UK	MacDougall, Peter	Canada
Moosavi, Mansour	Iran	Mukherjee, Cirojit	Germany
Narayanaswamy, Manu	Australia	Naughton, Finola	Ireland
O'Croinin, Donall	Ireland	Pandurengan, Amaran	UK
Snyman, Adam	South Africa	Srinivas, Coimbatore	UK
Zhang, Huan	China	Zhu, Tao	China

UHN/Toronto Western Hospital

Apichatibutra, Narisa	Thailand	Chakravarti, Sucharita	India
Diddee, Raman	UK	Duggan, Edel	Ireland
Hamming, Jeremy	Canada	Lobo, Giovanni	Brazil
Manickam, Baskar	UK	Morales, Eduardo	Columbia
Nair, Gopakumar	India	Pandurengan, Amaran	UK
Rigamonti, Andrea	Italy	Shah, Bhadresh	India
Siddiqui, Mughina	Pakistan	Soares, Luiz	Brazil
Wijayatilake, Dhuleep	UK		

Women's College Hospital

Chinnapa, Vinod
Shah, Bhadresh
Sridhar, Jami

India
India
India

Gislason, Rachel
Soliman, Ahmed

Canada
Egypt

Residents 2006-2007

PG5:

Ali Asghar Abbass
Michael Bloom
Jonathan Kong
Paul McHardy
Timothy Welke

Nasser Al-Kemyani
David Chang
Rohit Kumar
Diana Tamir

Rashad Alqasim
Meredith Ford
Hoi Kwan Lee
Anna Toptchieva

PG4:

Raed Alali
Jennifer Brunton
Rosemin Darani
Catherine Kim
Jasvir Marwaha
Dov Weiss

Yasser Alsayegh
Liza Chelico
Peter Darby
Alyssa Li
Daniella Samuel

Steven Bernstein
Hance Clarke
Josef Hrdina
Anton Marinov
Kathryn Simms

PG3:

Richard Ahn
Chris Coutinho
Danny Grossi
Nisha Kanani
Magid Morgan
Collan Simmons

Elizabeth Au-Yeung
Thomas Donnelly
Mohammed Hussein
Nick Lo
Sheila Riaz
Greg Silverman

Alvin Chang
Ockert Fourie
Mital Joshi
Ihab Louis
Katharine Ryans

PG2:

Maria Carmen Angeles
Jasmine Cheung
Jerod Gollant
Megan Hayter
Alison Ling
Lisa Roberts
Hany Youssef

Jay Banerjee
Stephen Choi
Ahmed Hamdy
Michael Hiscox
Rachel Martin
Hala Sunbul

Andrew Borden
Maneesh Desphande
John Hanlon
Rob Kriz
Philip Perna
Hamid Yarkandi

PG1:

Abdi Abdulrahman
Monica Chuang
Ben Ari Fried
Han Kim
Rachel Meyer
Amy Trang

Tim Ararat
Abelina D'Costa
Diana Hayward
Kyle Kirkham
Rachael Seib
Darlene Weekes

Karen Caputo
Catherine Delbridge
Terence Ip
Bobby Mehta
Uma Shastri
Mohammad Yaseen

Selected Chairs, Honors and Awards

We are pleased to announce the recipients of our departmental awards in 2007. The following awards were presented to the awardees at our 28th Annual Shields Research Day, 2007:

- The *Dr. John Desmond Award* recognizes excellence in clinical teaching of undergraduate students: **Robert Chen** (Assistant Professor, St. Michael's Hospital)
- The *Dr. Gerald Edelist Award* is awarded to a faculty member in recognition of excellence as a clinical teacher of residents in anesthesia: **Viren Naik** (Assistant Professor, St. Michael's Hospital)
- The *David Fear Award* is awarded for outstanding contributions to continuing medical education and continuing professional development in the Department of Anesthesia: **Sharon Davies** (Assistant Professor, University Health Network, Mount Sinai Hospital)
- The *UT Anesthesia Faculty Research Award* is awarded in recognition of contributions to research in anesthesia: **Joel Katz** (Professor, University Health Network, TGH)
- The *RJ Byrick Award* recognizes the best Fellow's research paper presented at the Annual Shields Research Day: **Michelle White** (Clinical Fellow, The Hospital for Sick Children)
- The *AC Bryan Award* is awarded to a graduate student judged to have presented the best research project at the Annual Shields Research Day: **Albert Tsui** (Graduate Student, St. Michael's Hospital)
- The *Dr. Hynek Rothbart Award* is awarded to the best paper presented by a resident at the Annual Shields Research Day: **Dov Weiss** (PG4)
- The *Thomas Donald Hammell Memorial Award* in Anesthesia recognizes outstanding contributions to the Residency Program (as chosen by other residents): **Timothy Welke** (PG5)
- The *Dr. Evelyn Bateman Award* is awarded in recognition of excellence in anesthesia at the undergraduate level: **Ian Randall** (OT7)
- The *Alan Laws Travel Fellowships* are awarded to support academic and research interests/projects in anesthesia: **Angelina Guzzo** (Clinical Fellow, Sunnybrook Health Sciences Centre) and **Paul McHardy** (PG5)

We are also pleased to announce that members of the Department of Anesthesia at the University of Toronto were the recipients of numerous prestigious awards at the **Canadian Anesthesiologists' Society (CAS)** meeting in Calgary, AB. Please join us in congratulating the following individuals:

- The *Dr. John Bradley Young Educator Award*: **Viren Naik** (Assistant Professor, St. Michael's Hospital)
- The *CAS Research Recognition Award*: **Frances Chung** (Professor, University Health Network, TWH)
- The *CAS Research Award in Anesthesia*: **Zeev Friedman** (Assistant Professor, University Health Network, Mount Sinai Hospital)
- The *Dr. RA Gordon Patient Safety Research Award*: **Pamela Angle** (Assistant Professor, Women's College Hospital)
- The *Dr. Earl Wynands Research Award* in Cardiovascular Anesthesia and/or Peri-Operative Blood Conservation: **Gregory Hare** (Associate Professor, St. Michael's Hospital)

Who Are We?

- The *Richard Knill Research Competition*: **Gregory Hare** (Associate Professor, St. Michael's Hospital)
- The *Bristol Myers Squibb Canada-CAS Career Scientist Award* in Anesthesia and Peri-Operative Medicine: **Keyvan Karkouti** (Associate Professor, University Health Network, TGH)
- The *Baxter Corporation Canadian Research Award in Anesthesia*: **Richard Brull** (Assistant Professor, University Health Network, TWH)
- The *Smiths Medical Canada Ltd Canadian Research Award in Pain Research and/or Regional Anesthesia*: **Joseph Kay** (Assistant Professor, Sunnybrook Health Sciences Centre)
- The *Abbott Laboratories Ltd/CAS Fellowship in Anesthesia*: **Meredith Ford** (PG5)
- The *Resident's Competition*: **Dov Weiss** (PG4)

The following awards were also bestowed in 2006-2007:

- **Pamela Morgan** (Professor, Women's College Hospital), received the *Best Paper in Anesthesia Education and Simulation* award at the Canadian Anesthesiologists' Society Annual Meeting in June 2007
- **Beverley Orser's** (Professor, Sunnybrook Health Sciences Centre) research was profiled in *Scientific America* in June 2007. She also received the *Research Recognition award from the Canadian Anesthetists' Society* in June 2006
- **Marianne Graham** (Assistant Professor, Sunnybrook Health Sciences Centre) received the *Bob Mackenzie Clinical Teachers Award* in December 2006, Sunnybrook Anesthesia Department
- **Alejandro Jadad** (Professor, University Health Network, TGH) gave the Gary Hermance Lecture at the *Association for Excellence in Communication* and received the *Chief Scientist's Distinguished Lecturer Award* from Health Canada in 2006

Report from the Vice-Chair, Clinical Practice Dr. Gerald O'Leary

Anesthesia care teams – the 'made in Ontario' response to personnel concerns and a desire to permit the development of meaningful inter-professional, team-based practice – are now being piloted throughout the province. This is the most significant issue in clinical practice that occurred in 2006-07.



Last fall, the MOHLTC funded a \$10M, 2-year project led by Keith Rose across nine hospitals to evaluate the integration of anesthesia care teams into anesthesia practice. This was a competitive process, wherein all hospitals in the province were invited to propose how they would develop an anesthesia care team in their institution. Each institution provided a business plan and a vision for anesthesia care, and all proposals were signed off by the CEO Anesthetist-in-Chief. The departments of anesthesia in all the province's hospitals were invited to compete for inclusion in the anesthesia care team pilot project, and most did. The successful institutions were: Halton Healthcare; Kingston General Hospital; London Health Sciences Centre; Royal Victoria Hospital; Sault Area Hospital; Sunnybrook Health Sciences Centre; the Ottawa Hospital; Toronto East General Hospital; and the University Health Network. The diversity in geographic location was as great as the diversity in the depth of previous experience of working with anesthesia care teams. Moreover, similar diversity was found in the range of scope of proposed practice across the continuum of perioperative anesthesia; this feature suggests that the care teams will explore the full and evolving range of perioperative care that characterizes the practice of the modern anesthesiologist. The leader of this project, Dr. Keith Rose, is Associate Professor of Anesthesia at the University of Toronto and formerly anesthetist-in-chief at St. Michael's Hospital, is currently VP Medical Affairs at the North York General Hospital.

In preparation for this province-wide initiative, two committees are busy at work. First, the ACT advisory committee, co-chaired by Dr. Stephen Brown and Ms. Sue Bead, reviewed the candidate applications and continue to advise on the implementation specifics. Several members of this committee meet on a regular basis with local site leaders and refine elements of the proposed teams' functions. So far so good. At the UHN we have at this stage extensive experience with anesthesia care teams. Our sense is that the team approach is superior. Indeed, our faculty value the prospect immensely, and contribute extensively to the education of anesthesia assistants (respiratory therapists and nurses training at the Michener Institute), in order that the team members will be taught by those best qualified to do so. I am a strong proponent of the ACT model. I simply see no viable, palatable alternative to address our personnel resource issue. I equally firmly believe that there are areas of care that can be safely delegated and supervised. I think our goal should be to have the best educated, motivated assistants that we can recruit and train. I think we need to proactively discuss how we integrate them and their skill set safely, effectively and openly into our practice at each of our hospitals. However, the introduction of any system can bring problems as well as benefits.

Hence, the second committee involved in the Anesthesia Care Team project. Chaired by Dr. Brian Kavanagh, this committee is charged with evaluating the effectiveness of the anesthesia care teams, and has a broad membership including the chairs of all the provincial medical schools. Dr. Keyvan Karkouti, a member of this committee, has the responsibility of designing and overseeing the research methodology that will demonstrate whether – and why – the teams have had a favorable impact on the safety, quality, and volume of anesthesia services, as well as the cost, compared with previous practice.

This pilot project is a very constructive approach to the anesthesia care team issue. All professions undergo significant changes over time – we are hopeful that this will be good for the profession, good for standards, good for cost-benefit, and most importantly, good for patients. We must celebrate the accomplishments of 2006-07 (and before), by making sure that we are open to continued development and excellence in 2007-08 (and beyond!).

Hospital Statistics

The following table records anesthesia-related clinical data obtained from the UT affiliated local teaching hospitals for the period July 1, 2006 to June 30, 2007:

	TGH	TWH	Mount Sinai	Women's	Sunnybrook	St. Mike's	Sick Children's	TOTAL - ALL SITES
General Anesthetics:	9,461	7,030	9,295	4,041	11,600	14,800	18,000	74,227
Regional Anesthetics:	200	3,600	5,684	73	2,500	1,210	1,000	14,267
Deliveries:	n/a*	n/a*	6,385	3,642	n/a*	2,825	n/a*	12,852
Epidurals/spinals:	704	1,200	5,351	2,051	1,200	2,120	300	12,926
Caesarian sections:	n/a*	n/a*	2,170	1,248	n/a*	832	n/a*	4,250
Caesarian section rate:	n/a*	n/a*	34%	34%	n/a*	29%	n/a*	
Pain clinic cases:	n/a*	205	1,589	202	2,750	1,797	367	6,910
Acute pain service:	3,082	2,472	2,601	252	7,000	500	860	16,767
ICU beds:	60	23	16	2	65	56	25	247

* This service is not provided at this hospital

Report from the Vice-Chair, Education Dr. Patricia Houston

The Department of Anesthesia provides exemplary educational programs across the spectrum of undergraduate, graduate and continuing medical education and professional development. This is accomplished due to the commitment and dedication of our excellent teachers and the recognition of the value of their contribution to the academic achievements of our department. We are teachers of perioperative medicine and include in our curriculum and evaluation processes the Canadian Medical Education Directions for Specialists (CanMEDS) competencies. Anesthetists are recognized by the other departments and faculties as experts at teaching resuscitation and team-centered skills both in the clinical setting and in simulation centers.



The Undergraduate program continues to meet the challenge of teaching an increasing number of undergraduate students from the University of Toronto and elective students from Canada and abroad. Dr. Pam Morgan stepped down this year from the position of Chair of Undergraduate Education after eleven years of dedication to the undergraduate portfolio. She is noted for the development of a Simulator Education Day which has been emulated by many other departments in Canada since its inception. Dr. Isabella Devito has taken on this important position as of July 1, 2007 and is leading the development of the University of Toronto Medical Student Textbook. Dr. Devito and the Undergraduate Committee will also be exploring the increased use of simulation and web-enabled learning in the undergraduate program.

The Postgraduate program led by Dr. Mark Levine underwent a very successful Royal College of Physicians and Surgeons of Canada accreditation review this year. The program was noted for its use of simulation in the curriculum and the opportunities provided to residents for developing research skills and participating in scholarly activities. Dr. Viren Naik, a member of the Postgraduate Committee, who is internationally known for his teaching and research activities in simulation, was awarded the John Bradley Young Educator Award at the Canadian Anesthesiologists Society meeting. A resident from the program, Dr. Dov Weiss, won the resident research prize at this year's CAS for a research project he completed with Dr. Naik. The number of international Fellows seeking further post-residency training at our university continues to grow exponentially. Currently, there are 88 Fellows training in sub-specialty anesthesia from 24 different countries at the University of Toronto.

Dr. Peter Slinger chairs the Continuing Education Committee. The CE committee expanded its mandate this year to include professional development as one of its core roles. The committee is responsible for fourteen different courses as well as a University-wide Grand Rounds webcast and online CME modules on the University website. These programs are nationally recognized for their excellence and are very well attended by local faculty and community hospital physicians, as well as academic physicians from across Canada. The Committee plans to undertake a needs assessment of the faculty in the upcoming year to better formulate educational objectives for our continuing education and professional development programs, and to support the design of curriculum and evaluation tools to meet these needs.

As the educational programs in the department continue to grow, it is clear that additional educational expertise and support will be required to maintain and improve the quality of our programs. To this end, the UT department has initiated the recruitment of a full-time professional educator who will work collaboratively with the Vice-Chair Education, Education Directors, and other education leaders to enhance the educational experience for both teachers and trainees across the continuum of anesthesia education.

Undergraduate Education **Dr. Isabella Devito, Director** **Undergraduate Education Program**

The strength of the Undergraduate program continues to be the dedication of the faculty of the Department of Anesthesia. Our faculty are involved in all years of the medical curriculum. Our involvement begins with the selection of the medical school class and ends with the graduation ceremonies.



In Years 1 and 2, the faculty are involved in teaching ASCM (Art and Science of Clinical Medicine) I and II, DOCH (Determinants of Community Health) II, Metabolism and Nutrition, Foundations of Medical Practice and Brain and Behavior. They are highly evaluated and their commitment to excellence is greatly appreciated.

This year, Roderick Cheung, one of our second year medical students at the University of Toronto placed second in the CAS Medical Student Essay Contest for his essay entitled, "High-Fidelity Patient Simulation: Future of Anesthesia Education."

The Department of Anesthesia's elective program continues to be an extremely popular program. Our electives program accepts local, national and international students in their third or fourth year of medicine. We continue to have record numbers of students requesting rotations in Toronto. Our rotations are in such high demand, that we unfortunately had to turn away students. To remedy this, we will be encouraging Community Hospitals with faculty who have an interest in teaching to partner with us. This will be a tremendous support to our already established program.

Our faculty's most intensive contribution to undergraduate teaching is the fourth year Anesthesia rotation. This is comprised of a two-week rotation for the first two blocks, and a seven to eight day rotation for the last three blocks. The shortened rotation is necessary to accommodate the CaRMS interviews. The students in the shortened blocks continue to ask for a longer rotation. The major objectives of the rotation are to understand the implications of pre-existing disease for patients undergoing anesthesia, to learn the principles and practices of acute resuscitation, and pain management.

As part of their two-week rotation, all fourth year students participate in the Simulator Education Day. The Department of Anesthesia at the University of Toronto was the first in Canada to incorporate simulation into the curriculum. The simulation day includes instruction on airway management, intravenous cannulation and clinical scenarios involving resuscitation. This educational day is highly evaluated by our students. Our senior residents contribute immensely to the success of this day.

At the end of 2006, Dr. Pamela Morgan stepped down as Chair of Undergraduate Education. Dr. Morgan was the Anesthesia Clerkship Course Director since 1996 and became Chair of Undergraduate Education in 2002. Under her leadership, the Anesthesia Simulator Education Day for undergraduate students was developed.

With increasing enrollment in Medicine, one of our biggest challenges is incorporating the increased numbers while still providing an excellent educational experience. Over 200 students were enrolled in Year 4 during the 2006-2007 academic year. The Toronto East General Hospital has been added to the Wightman-Berris Anesthesia rotation to assist with the increase in student numbers. The feedback from all sites has been excellent.



A University of Toronto Medical Student Textbook is presently in progress, with faculty from all hospitals contributing to this project. The support that this project received from all departments demonstrates the tremendous commitment of our faculty to Undergraduate Education. The textbook was announced at the ACUDA meeting June 2007 and many undergraduate departments across Canada are awaiting its publication.

Our focus for the next academic year is the development of instructional videos for intravenous cannulation and airway management, that can be accessed through our website. As well, the development of web-based educational tools will be a priority, focusing on pre-operative evaluation skills, resuscitation, pain management, technical skills, team centered care and other essential skills necessary for all physicians.

We are pleased to have the following faculty members participate in the Undergraduate Education Program, and thank them for their numerous and ongoing contributions to the program and the University:

UGE Chair and Clerkship Course Director:

Dr. Pamela Morgan Sunnybrook/Women's College Hospital
(June – December 2006)

Interim UGE Chair and Pre-Clerkship Coordinator:

Dr. Isabella Devito UHN/Mount Sinai Hospital
(January – June 2007)

Undergraduate Education Committee Members:

Dr. D. Chandra	St. Michael's Hospital
Dr. I. Devito (Chair)	UHN/Mount Sinai Hospital
Dr. H. El-Beheiry	UHN/Toronto Western Hospital
Dr. P. Houston	Vice-Chair, Education, UT Department of Anesthesia/SMH
Dr. D. Irwin	UHN/Mount Sinai Hospital
Dr. G. Kanellakos	UHN/Toronto General Hospital
Dr. B. Kavanagh	Chair, UT Department of Anesthesia/Hospital for Sick Children
Dr. R. Mai	St. Michael's Hospital
Dr. P. Mark	Toronto East General
Dr. P. Morgan	Sunnybrook/Women's College Hospital
Mr. I. Randall	Student Representative, Year 4
Dr. J. Robertson	Hospital for Sick Children: Electives Committee Representative
Dr. A. Sarmah	Sunnybrook
Mr. R. Sunder	Student Representative, Year 3
Dr. M. van der Vyver	Women's College Hospital

Our Education Mission

Pre-Clerkship

Members of each hospital department are involved in teaching courses in first and second year. We also thank them for their on-going contributions and excellence.

Pre-Clerkship Lectures

Dr. S. Belo	Sunnybrook
Dr. D. Chandra	St. Michael's Hospital
Dr. R. Chen	St. Michael's Hospital
Dr. A. Ho	St. Michael's Hospital
Dr. J. Wasserman	St. Michael's Hospital

ASCM I Tutors

Dr. D. Chandra	St. Michael's Hospital
Dr. E. Goldszmidt	UHN/Mount Sinai Hospital
Dr. V. Hughes	St. Michael's Hospital
Dr. L. Mathieson	St. Michael's Hospital
Dr. A. van Rensburg	UHN/Toronto General Hospital
Dr. E. You-Ten	UHN/Mount Sinai Hospital

ASCM II Tutors

Dr. M. Chochinov	Sunnybrook
Dr. M. Jariani	UHN/Toronto General Hospital
Dr. G. Kanellakos	UHN/Toronto General Hospital

DOCH II (Determinants of Community Health II)

Dr. S. Brown	Hospital for Sick Children
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Problem Based Learning Tutors, Year 1: Metabolism and Nutrition

Dr. M. van der Vyver	Women's College Hospital
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Problem Based Learning Tutors, Year 2: Foundations of Medical Practice

Dr. S. Abrahamson	St. Michael's Hospital
Dr. R. Barlow	Hospital for Sick Children
Dr. R. Crago	UHN/Toronto Western Hospital
Dr. K. Lin	St. Michael's Hospital
Dr. W. Middleton	UHN/Toronto Western Hospital
Dr. J. Robertson	Hospital for Sick Children
Dr. J. Rucker	UHN/Mount Sinai Hospital

Problem Based Learning Tutors: Brain and Behavior

Dr. A. Prabhu	UHN/Toronto Western Hospital
Dr. L. V. Raghavan	UHN/Toronto Western Hospital

Foundations of Medical Practice Seminar Leaders, Year 2

Dr. D. Chandra	St. Michael's Hospital
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Simulator Training Sessions

Dr. R. Chen	St. Michael's Hospital
Dr. M. Chochinov	Sunnybrook
Dr. R. Cooper	UHN/Toronto General Hospital
Dr. R. Crago	UHN/Toronto Western Hospital
Dr. R. Katznelson	UHN/Toronto General Hospital
Dr. R. Mai	St. Michael's Hospital
Dr. W. Middleton	UHN/Toronto Western Hospital
Dr. A. Morgan	Women's College Hospital
Dr. V. Naik	St. Michael's Hospital
Dr. J. Rucker	UHN/Mount Sinai Hospital
Dr. E. You-Ten	UHN/Mount Sinai Hospital

Bruce Tovee Lecture Series, Year 4

Dr. V. Naik	St. Michael's Hospital
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Clerkship Seminar Leaders

Dr. P. Angle	Dr. I. Awad	Dr. L. Bahrey
Dr. M. Balki	Dr. D. Chandra	Dr. M. Chochinov
Dr. M. Davallou	Dr. I. Devito	Dr. D. Djordjevic
Dr. H. Fischer	Dr. Z. Friedman	Dr. S. Halpern
Dr. K. Hussain	Dr. C. Idestrup	Dr. D. Irwin
Dr. M. Jariani	Dr. G. Kanellakos	Dr. J. Kay
Dr. R. Ko	Dr. R. Mai	Dr. C. McCartney
Dr. B. Morningstar	Dr. D. Riegert	Dr. J. Rucker
Dr. A. Sarmah	Dr. B. Safa	Dr. A. Salman
Dr. J. Tarshis	Dr. J. Teresi	Dr. P. Tumber
Dr. M. van der Vyver	Dr. E. You-Ten	

Clerkship Simulator Teaching

Dr. M. Choi	Dr. D. Chandra	Dr. I. Devito	Dr. R. Ko
Dr. R. Mai	Dr. P. Morgan	Dr. J. Robertson	Dr. J. Rucker
Dr. A. Salman	Dr. J. Tarshis	Dr. P. Tumber	Dr. M. van der Vyver



Postgraduate Education Dr. Mark Levine, Director Postgraduate Education Program



The Department of Anesthesia at the University of Toronto is the largest and most productive academic department in Canada. Our residents rotate through 7 different hospital sites and are therefore exposed to every aspect of clinical anesthesia, having the opportunity to work with over 230 faculty members. The experience that residents obtain, with respect to volume and variety of clinical material and complexity of patients and procedures, is unparalleled. Regional anesthesia has become a major focus at a number of sites. All residents now have the opportunity to complete a one-month rotation in regional anesthesia and many opportunities exist for research in this field – particularly in the area of ultrasound guided regional anesthesia.

The Postgraduate Education Committee of the Department of Anesthesia is composed of the Chair of the Department, Program Coordinators in charge of the teaching program at each hospital, Resident Counselors, the Director of Education from the University Health Network, Chair of the Education Committee, the Director of the simulator centre, Chair of the Research Committee, one resident member from each of the PG year levels (elected by peers) and the Program Assistant. The committee is chaired by the Program Director, and meets monthly to oversee all aspects of the training program in anesthesia. Its responsibilities include selection, evaluation, and promotion of residents, and the design, operation, and evaluation of the teaching program.

The past academic year has been particularly busy for the Postgraduate Education Committee. The Postgraduate Training Program underwent a Royal College Survey in April 2007 and received full approval. A number of strengths were identified – these included use of the high-fidelity anesthesia simulator both to teach various CanMEDS roles to residents and to enhance their abilities to teach medical students and the regional anesthesia program. It was also noted that awareness of research opportunities has become heightened amongst the residents and there has been an increase in the number of residents participating in research projects. This is due, in part, to the annual PG1/PG2 Resident Research Day at which a number of prominent researchers within the department highlight their research interests and the benefits and drawbacks of a research career in anesthesia.

The number of trainees in the department has grown steadily over the past few years. This has been due to a slight increase in the number of Canadian Medical Graduates as well as an increase in the number of International Medical Graduates. A number of department members have been very involved in the evaluation and education of International Medical Graduates at all levels of training.

We were very happy with the results of the annual CaRMS Match. Two of the 15 available positions were assigned to the Clinician Investigator Program (CIP) Stream. We filled all 15 positions in the regular program with excellent applicants, some of whom had applied to the CIP stream. We also enrolled four Ontario International Medical Graduate Program residents – three at a PG1 level and one at a PG2 level. In addition, one IMG successfully completed the Assessment Program for International Medical Graduates and has entered practice in a community setting.

The Fellowship Program continues to be very active. There were 88 fellows from 24 countries in 2006-2007.

A number of awards were presented at the 2007 Shields Day. They are listed on page 11 of this report.

- The RJ Byrick Award for best Fellows' research presentation: Dr. Michelle White for her presentation: *"Effect Of Anesthetic Agents on Electrically Evoked Auditory Responses in Pediatric Cochlear Implant Surgery."*
- The Hynek Rothbart Award for the best resident paper was awarded to Dr. Dov Weiss for his presentation: *"Sleep Deprivation and Anesthesiologists' Technical Skills."*
- The AC Bryan Award for the best presentation by a graduate student: Albert Tsui (Masters student): *nNOS contributes to protective cardiovascular mechanisms during acute hemodilutional anemia in mice.*
- The Thomas Donald Hammell Award – in recognition of outstanding contributions to the residency program: Dr. Timothy Welke
- The Dr. John Desmond Award – Undergraduate Teaching: Dr. Robert Chen
- Dr. Naik also received The John Bradley Young Educator award at the Canadian Anesthesiologists' Society Meeting in Calgary, in June 2007.
- Dr. Dov Weiss was awarded the residents' prize for best presentation at this meeting.



In addition, Dr. Greg Silverman (PGY3) and Kyle Kirkham (PGY1) were selected by the Canadian Space Agency to participate in one month electives in Aerospace Medicine at NASA.

In 2007, all but one of the residents from our program were successful at the Royal College oral examinations. Congratulations to these residents who are now certified as specialists in anesthesia.

Program Coordinators:	Dr. J. Lai	UHN/Toronto Western Hospital
	Dr. S. Halpern	Women's College Hospital
	Dr. H. Fischer	UHN/Mount Sinai Hospital
	Dr. H. Lee	Toronto East General Hospital
	Dr. E. Ng	Hospital for Sick Children
	Dr. M. Graham	Sunnybrook
	Dr. R. Ko/ Dr. K. Dattilo	UHN/Toronto General Hospital
	Dr. J. Wassermann	St. Michael's Hospital

Anesthesia Simulator:	Dr. V. Naik	St. Michael's Hospital
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Education Committee UHN:	Dr. I. Devito	Mount Sinai Hospital
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Resident Counselors:	Dr. B. Morningstar	Sunnybrook
	Dr. D. Riegert	Sunnybrook

Residents:	PG1	Dr. Darlene Weekes	PG2	Dr. John Hanlon
	PG3	Dr. Collan Simmons	PG4	Dr. Hance Clarke
	PG5	Drs. Tim Welke and Diana Tamir		

Continuing Education (CE) Dr. Peter Slinger, Chair CE Committee

The Continuing Education Committee for the Department of Anesthesia is comprised of representatives from each of the teaching hospitals as well as directors of CME courses and community hospital representatives. It meets quarterly to discuss, plan and organize a number of continuing education initiatives. The committee endeavors to ensure that most CE activities qualify for University of Toronto sponsorship and are accredited learning activities.



Course Development

Each year the committee supervises the Anesthesia Practice Meeting (under the co-direction of Drs. Martin van der Vyver and Pamela Angle in 2007). This three-day course provides a combination of lectures, workshops and small group sessions for both Fellows and GP Anesthetists. Over the past three years, the meeting has been extremely successful with unprecedented numbers of participants.

Course Sponsorship

The CME Committee aids in the development and accreditation of the following ongoing CME courses produced by the University of Toronto Department of Anesthesia. In 2006-2007, these courses included:

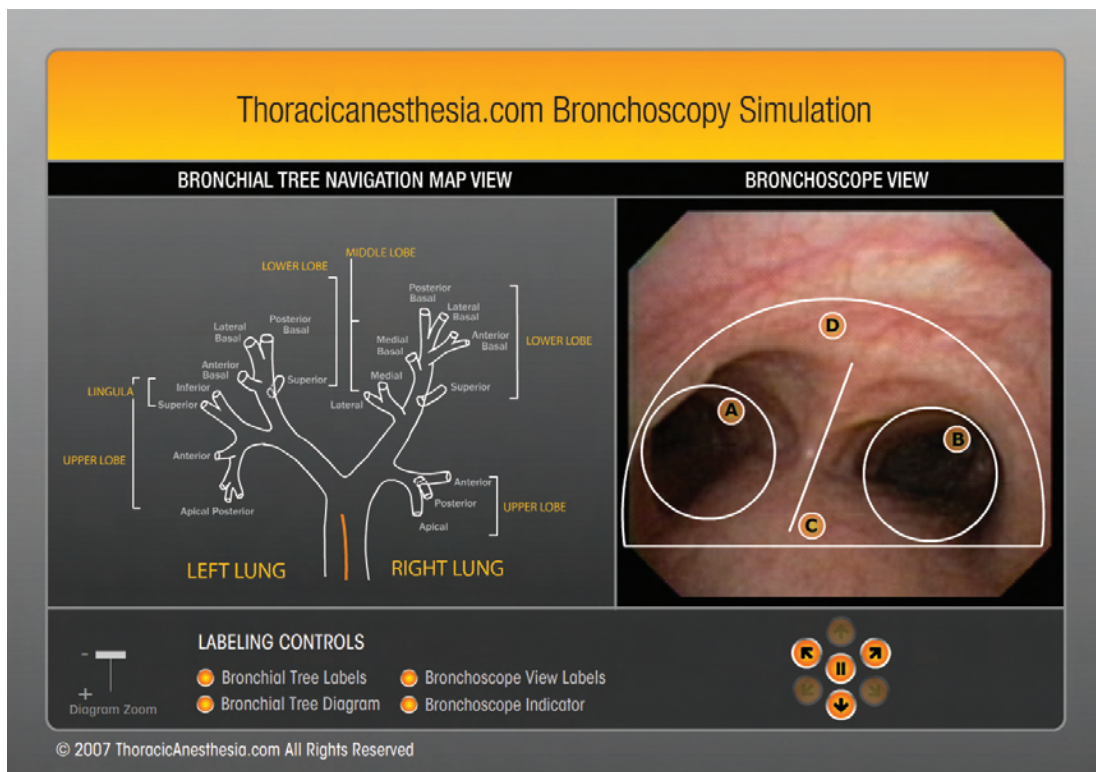
1. Regional Anesthesia and Pain Medicine, September 29-October 1, 2006, Sutton Place Hotel, Toronto (vincent.chan@uhn.on.ca)
2. Toronto Hyperbaric Medicine Symposium, September 29, 2006, University Health Network/Toronto General Hospital (wayne.evans@uhn.on.ca)
3. Toronto Critical Care Symposium, October 25-27, 2006, Metro Toronto Convention Centre (brian.kavanagh@sickkids.ca)
4. Obstetric Anesthesia, October 28, 2006, Mount Sinai Hospital (jose.carvalho@uhn.on.ca)
5. Perioperative Transesophageal Echocardiography Symposium, November 4-5, 2006, Renaissance Toronto Hotel (julie.nigro@uhn.on.ca)
6. Anesthesia Faculty Development Day, November 10, 2006, St. Michael's Hospital, Toronto (houstonp@smh.toronto.on.ca)
7. Toronto Anesthesia Practice, November 24-26, 2006, Delta Chelsea Hotel (pamela.angle@sw.ca)
8. Emerging Practices in Pain Management, February 27, 2007, University of Toronto (peggy.wood@uhn.on.ca)
9. Tremblant Anesthesia Meeting, February 2007, Fairmont Hotel, Mt. Tremblant (jordan.tarshis@sw.ca)
10. Toronto Anesthesia Symposium, March 31-April 1, 2007, Toronto Marriott Eaton Centre (peter.slinger@uhn.on.ca)
11. 28th Annual Shields Research Day, May 3, 2007, Metro Toronto Convention Centre (guy.petroz@sickkids.ca)
12. Controversies in Perioperative Medicine, May 13-19, 2007, San Martino, Italy (mark.friedlander@rogers.com)

City Wide Rounds

City-Wide Webcast Anesthesia Rounds are organized by Dr. Joseph Kay (Sunnybrook Health Sciences Centre).

Web-Based Learning

1. CME Online Anesthesia Rounds: This program, developed by Dr. Sharon Davies (UHN/Mount Sinai Hospital) has been enlarged to ten educational modules. These modules have been accredited by the University of Toronto for MainCert Category I credits and can be accessed through the UT Anesthesia department's website www.anesthesia.utoronto.ca (Education/Continuing Medical Education).
2. Web-based Bronchoscopy Simulator: The Thoracic Anesthesia group of the University Health Network/Toronto General Hospital has created an online bronchoscopy simulator to improve Anesthesiologists' skills in providing lung isolation for thoracic anesthesia by learning bronchial anatomy. The simulator operates with real-time video and the user navigates through the tracheo-bronchial tree with mouse clicks on the lighted directional arrows. The user is guided by a simultaneous macro view on the left panel, the "Bronchial Tree Navigational Map" and a micro view on the right panel, the "Bronchoscopic View" (see attached photo of the simulator). Clicking on the alphabetic labels in the bronchoscopic view gives further details of the anatomy (see picture below):



Prior to using the simulator the user is required to take a 16-question Bronchoscopy Pre-Quiz. After taking the quiz, the user has unlimited access to the simulator. After using the simulator, the user is asked to take a Bronchoscopy Post-Quiz, following which he or she is given the correct answers and can anonymously compare their results to those of others who have taken the quiz. The simulator and quiz can be accessed on the website www.ThoracicAnesthesia.com.

Report from the Vice-Chair, Research Dr. David Mazer

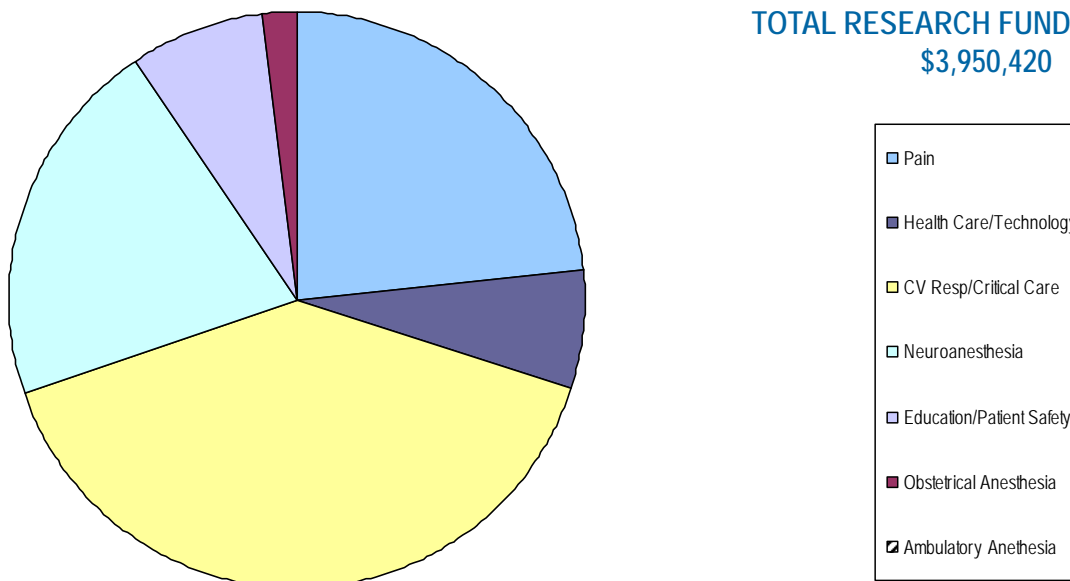
This past year was another very successful one for the Department of Anesthesia in terms of research. Our department continues to be the leading Anesthesia research department in Canada, and among the top in publicly funded Universities in the world. There were many noteworthy accomplishments and achievements, and several 'firsts'.



- Dr. Bev Orser's article entitled "Lifting the Fog around Anesthesia" was one of the cover stories in the June issue of *Scientific American*. It eloquently outlines the current state of knowledge about how our anesthetic drugs actually work, and the quest to make them better.
- Dr. Frances Chung was the winner of the Canadian Anesthesiologists' Society Research Recognition Award, the highest honor granted nationally to a senior investigator who has sustained major contributions in anesthesia research in Canada. The award was given in recognition of her outstanding contributions to the knowledge base of our specialty through her research into perioperative care and outcomes in ambulatory anesthesia. This marks the fifth time a University of Toronto researcher has won this award.
- Dr. Duminda Wijesundera and colleagues from TGH published an article in Journal of the American Medical Association (JAMA) on renal failure in cardiac surgery, and his grant was the highest ranked in his category in the last Heart and Stroke Foundation Grant competition.
- Several members of the department (Drs. Scott Beattie, Mark Crawford, Hwan Joo, Keyvan Karkouti, Pam Morgan, Viren Naik, Bev Orser, Guy Petroz, Duminda Wijesundera) had articles published in *Anesthesiology*, the leading journal of our specialty. The importance of these studies is underscored by the accompanying editorials and the impact they have on our understanding of the mechanisms and approaches to the perioperative management of our patients. The number of high quality publications in peer reviewed journals, and presentations of scientific work at national and international meetings by members of our department is impressive, and competitive with other leading Departments of Anesthesia in North America (please refer to list starting on page 32).
- Funding support for research remains an academic priority for our department. The total amount of research dollars received by our department remains near its highest level ever, and the wide range of agencies who provide peer-review grants to members of our department is testimony to the strength, breadth and depth of our research endeavor. This support is essential to achieving our goal of creating and disseminating new knowledge related to our specialty. The list of research grants is remarkable, and a few representative examples of recent grants are listed below:
- Dr. Pam Angle received a Physicians Services Incorporated Foundation grant for her study: "Randomized controlled trial examining the impact of large traditional vs. small epidural needles on the incidence of postdural puncture headache in parturients."
- Dr. Andrew Baker received a grant from the Ontario Neurotrauma Foundation: "Calpain inhibition as a white matter neuroprotective therapy after TBI: Proof of principle for functional, histopathical and behavioral improvements by targeting white matter following traumatic brain injury."

- Dr. Joe Fisher received a grant from the US Marine Corps for the "Development of a Mobile Critical Care Unit."
- Dr. Zeev Friedman received grants from the Education Development Fund for Innovation in Education, the Canadian Anesthesiologists' Society, the Physicians Services Incorporated Foundation, and the American Society of Regional Anesthesia for his projects on Simulation in Anesthesia.
- Dr. Greg Hare was awarded grants from The Society of Cardiovascular Anesthesiologists: "The threshold hematocrit for cerebral hypoxia is maintained by protective cardiovascular mechanisms: the role for neuronal nitric oxide synthase (nNOS)," and the Canadian Anesthesiologists' Society Wynands Research Award: "Does beta-1 adrenergic antagonism increase tissue hypoxia following acute hemodilution?"
- Drs. Pam Morgan and Jordan Tarshis received a grant from the Canadian Patient Safety Institute to study "Determination of the psychometric properties of a behavioral marking system for obstetrical team training using high-fidelity simulation."
- Dr. Haibo Zhang was awarded a grant from the Ontario Thoracic Society for his work on "The role of stem cells in the repair of lung injury."

The following chart demonstrates the distribution of research projects across different areas in 2006-07.



The Clinician-Scientist Stream

The Department of Anesthesia at the University of Toronto is recognized for its excellent postgraduate clinical training program. The teachers in the department are committed to training residents towards a broad range of career goals in both academic and community practice. These objectives are achieved through the strong commitment to education, excellent research training opportunities and exposure to a wide variety of clinical practice. The education of future academic anesthesiologists is an important mission of the department and the clinician-scientist stream has been established as an opportunity to further this goal in the residency.

Goals

- Provide a small group of residents with fundamental training in research methodology;
- Foster critical thinking in a research environment of the highest quality;
- Prepare anesthesia trainees for careers as independent investigators in academic departments;
- Provide an opportunity for residents to contribute to the expansion of the fundamental understanding of anesthesia; and,
- Attain the above objectives in the context of excellent clinical training.

The clinician-scientist stream is a component of the postgraduate training program in Anesthesia. Potential participants are identified and recruited into the program during their PGY1 or PGY2 years of training. Residents commit at the outset to a minimum of two years of research during their residency. The trainee is registered in the University of Toronto Institute of Medical Sciences (or equivalent) in an MSc or PhD program. One year of this research training counts toward the Royal College requirements in Anesthesia.

The laboratory or area of interest in which the resident will work is selected during the PGY2 clinical year, after discussion with investigators from various disciplines. Residents in the Clinician-Scientist stream can start their research experience after the PGY2 year and complete clinical training following the research period.

Research Programs

Research interests of residents undertaking graduate research can include any of the following:

- Molecular basis of anesthesia
- Clinical pharmacology
- Clinical epidemiology/outcomes research
- Neurophysiology
- Cardiovascular and cardiopulmonary physiology
- Pain research
- Research in education

Application to the Clinician-Scientist Stream

Residents in the anesthesia program who wish to prepare for an academic research career are invited to apply for the Clinician-Scientist stream through the office of the Program Director. Each year funding is available for a maximum of two residents to participate in the Clinician-Scientist stream through the Alan K. Laws Clinician Scientist Fellowship.

28TH Annual Shields Research Day

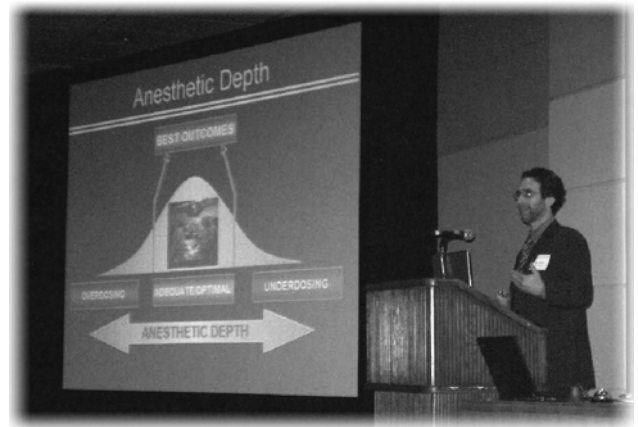
The 28th Annual Shields Research-in-Progress Day was held at the Metro Convention Centre on Friday, May 3, 2007. Over 230 clinicians and trainees from the University of Toronto, our affiliated teaching hospitals, and community hospitals attended this very successful event to share ideas, display posters (43) and present research. This year, the Annual Shields lectureship was given by Dr. Daniel Sessler from the Outcomes Research Institute at the University of Louisville on *"Outcomes research: Moving from physiology to large-scale outcomes."* Dr. Sessler's talk was followed by a very stimulating and thought-provoking open forum on anesthesia practice in Toronto, featuring Mr. Hugh MacLeod, Assistant Deputy Minister, Ministry of Health and Long-Term Care and Dr. Stephen Brown from the Ontario Medical Association (Section of Anesthesia). Finally, we were very pleased to be joined by Mrs. Frances Lang and her family. Mrs. Lang provided us with some very heartfelt (and entertaining) comments on her father, the late Dr. Harry Shields, the first Chair of the UT Department of Anesthesia. The program highlights for this event are included below.

THE SHIELDS LECTURE:

"OUTCOMES RESEARCH – Moving from Physiology to Large Scale Outcomes"

Daniel I. Sessler, MD, PhD

Dr. Sessler attended medical school at Columbia University, and subsequently completed pediatric and anesthesia residencies at the University of California, Los Angeles. He is currently Chair, Department of OUTCOMES RESEARCH at the Cleveland Clinic Foundation; he is also the Lolita & Samuel Weakley Professor of Anesthesiology and Director of the OUTCOMES RESEARCH Institute at the University of Louisville.



Dr. Daniel Sessler, Shield Day 2008

Dr. Sessler's administrative work includes two stints as acting-chair of the Department of Anesthesiology at the University of Louisville. He was also Vice-dean and Associate Vice President for Health Affairs at the University of Louisville, giving him responsibility for research throughout the Health Sciences Campus. During his five years at the University of Louisville, NIH funding to the Schools of Medicine, Dentistry, and Nursing more than quadrupled.

The Outcomes Research group, which Dr. Sessler founded, is a collaboration of 75 investigators in ten countries currently involved in more than 90 studies, including half-a-dozen large, multi-centre outcome trials. Dr. Sessler has published a book on therapeutic hypothermia and more than 325 full research papers on various aspects of anesthesia, surgery, and perioperative outcomes; about 140 of his papers are in anesthesiology, and more than half-a-dozen are in Lancet or the New England Journal of Medicine.

Dr. Sessler has trained more than 50 research fellows, four of whom subsequently chaired anesthesia departments. He has given invited lectures at more than 200 institutions and has grant support totaling exceeding \$14 million, more than \$11 million of which is from NIH and other peer-reviewed sources. Dr. Sessler has received numerous prizes, including the 2002 American Society of Anesthesiology Excellence in Research award.

POSTER SESSION A:

- A1** Gabapentin within a multimodal analgesic regimen reduces opioid consumption after hip arthroplasty under spinal anesthesia: A randomized, single-blind, placebo-controlled pilot study, *Hance Clarke*, Sunnybrook Health Sciences Centre
- A2** Anesthesia for laparoscopic peritoneal dialysis catheter insertion, *Arun Prasad*, UHN/Toronto Western Hospital
- A3** Probing the identity of GABA_A receptors that underlie amnesic properties of anesthetics, *Angelina Guzzo*, Sunnybrook Health Sciences Centre, Hospital for Sick Children
- A4** Study of epidural space depth detected by ultrasonography in parturients undergoing elective Cesarean section: A comparison between sitting and lateral positions, *Ahmed Soliman*, Sunnybrook Health Science Centre, Women's College Hospital
- A5** Temperature measurement modalities comparison, *Anton Marinov*, Sunnybrook Health Sciences Centre
- A6** Ultrasound-guided brachial plexus blockade in a patient with multiple glomangiomas: A case report, *Edel Duggan*, UHN/Toronto Western Hospital
- A7** Determination of the minimum local anesthetic volume of 0.125% bupivacaine in labor epidurals, *Hisham Ibrahim*, UHN/ Mount Sinai Hospital
- A8** ED95 of phenylephrine to prevent hypotension and nausea/vomiting after spinal anesthesia for Cesarean section, *Motoshi Tanaka*, UHN/Mount Sinai Hospital
- A9** Internal jugular vein and carotid artery anatomic relation as determined by ultrasonography in obstetric patients, *Naveed Tahir Siddiqui*, UHN/Mount Sinai Hospital
- A10** The evolution of ultrasound-guided axillary brachial plexus blockade, UHN/Toronto Western Hospital, *Nick Lo*, UHN/ Toronto Western Hospital
- A11** A cost analysis study in anesthesia: Drugs, disposables and volatile agents, *Naveen Eipe*, Sunnybrook Health Sciences Centre
- A12** Impact of normothermia and antimicrobial prophylaxis timing on surgical site infections in colorectal surgery Patients: An anesthesia approach, *Ewen Chen*, Sunnybrook Health Sciences Centre
- A13** Sleep deprivation and anesthesiologists' technical skills, *Dov Weiss*, St. Michael's Anesthesia Research into Teaching (SMART) Group, St. Michael's Hospital
- A14** Can the Tsui test be used to test the placement of epidural catheters following the intrathecal component of a combined spinal-epidural technique used for labor analgesia?, *Rakhi Khemka*, UHN/Mount Sinai Hospital
- A15** Fiberoptic intubation training: Correlation of simulator performance to clinical performance, *Nicholas Crabtree*, St. Michael's Hospital

POSTER SESSION B:

- B1** Perioperative gabapentin administration decreases morphine consumption and improves active knee flexion using a multimodal analgesic regimen for total knee arthroplasty: A randomized, single blind, placebo-controlled pilot study, *Hance Clarke*, Sunnybrook Health Sciences Centre
- B2** Alfentanil induced electrocorticographic activation: A promising tool for pre-surgical evaluation of temporal lobe epilepsy (TLE) patients, *Andrea Rigamonti*, UHN/Toronto Western Hospital
- B3** Persistent amnesia induced by a therapeutically-relevant dose of the inhaled anesthetic isoflurane, *Bechara J. Saab*, Sunnybrook Health Sciences Centre
- B4** Systematic review: RCTs examining intravenous remifentanyl vs. other pharmacologic modalities for labor analgesia, *Ahmed Soliman*, Women's College Hospital
- B5** Continuous cell saver reduces cognitive decline after CABG surgery, *Coimbatore Srinivas*, UHN/Toronto General Hospital
- B6** Does the presence of a subarachnoid hemorrhage influence analgesic requirements after treatment with surgical clipping or endovascular coiling in patients with intracranial aneurysms? *Dhuleep Sanjay Wijayatilake*, UHN/Toronto Western Hospital

- B7** A qualitative systematic review of the use of clonidine as an analgesic adjuvant for peripheral nerve blocks, *Emma Apatu*, UHN/Toronto Western Hospital
- B8** A clinical comparison of three designs of bronchial blockers with double-lumen tubes for lung isolation, *Manu NarayanaSwamy*, UHN/Toronto General Hospital
- B9** Learning curve for intubations with the Glidescope, *Elizabeth Mathieson*, St. Michael's Hospital
- B10** Effect of anesthetic agents on electrically evoked auditory responses in pediatric cochlear implant surgery, *Michelle White*, Hospital for Sick Children
- B11** A system of classification for the clinical uses of capnography, *Naveen Eipe*, Sunnybrook Health Sciences Centre
- B12** Development and validation of the STOP Questionnaire – an Obstructive Sleep Apnea (OSA) screening tool, *Pu Liao*, UHN/Toronto Western Hospital
- B13** Predictive factors for postoperative hypertension in craniotomies for tumor, *Raman Diddee*, UHN/Toronto Western Hospital
- B14** Accelerating the washout of inhalational anesthetics from the Dräger Fabius GS Premium anesthetic workstation, *Robert J. Whitty*, Hospital for Sick Children

POSTER SESSION C

- C1** nNOS contributes to protective cardiovascular mechanisms during acute hemodilutional anemia in mice, *Albert Tsui*, St. Michael's Hospital
- C2** Storage of autologous rat blood limits cerebral tissue oxygen delivery during acute fluid resuscitation, *Andrea Rigamonti*, St. Michael's Hospital
- C3** Interventions in the preoperative clinic for long term smoking cessation: Use of a teachable moment, *Amna Zaki*, UHN/Toronto Western Hospital
- C4** Carotid artery angioplasty and stenting: Anesthetic implications, *Sucharita Chakravarti*, UHN/Toronto Western Hospital
- C5** Pre-warming in regional anesthesia, *Anton Marinov*, Sunnybrook Health Sciences Centre
- C6** A randomized, double-blind controlled study comparing dual endpoint nerve stimulation with ultrasound-guided infraclavicular block for hand surgery, *Edel Duggan*, UHN/Toronto Western Hospital
- C7** An update on the beta blocker meta analysis: Heart rate control reduces post-operative MI, *Farhan Husain*, UHN/Toronto General Hospital
- C8** Postoperative MI after non-cardiac surgery in patients with previous PCI, *Finola Naughton*, UHN/Toronto General Hospital
- C9** Risk factor identification and outcomes of myocardial ischemia associated with pregnancy: A Canadian study, *Mital Joshi*, UHN/Mount Sinai Hospital
- C10** Effect of CPB and anemia on rat renal tissue pO₂ and eNOS expression, *Peter J. Darby*, St. Michael's Hospital
- C11** Wireless monitoring in the perioperative period: A concept for the future?, *Naveen Eipe*, Sunnybrook Health Sciences Centre
- C12** Pre-warming of colorectal and hepatobiliary surgery patients: Pre-operative prevention of hypothermia, *Ewen Chen*, Sunnybrook Health Sciences Centre
- C13** Comparison of three screening tools for Obstructive Sleep Apnea in surgical patients, *Ali Khajehdehi*, UHN/Toronto Western Hospital
- C14** Cell saver use during CPB and transfusion rates after CABG surgery, *Nasr Hegazy*, UHN/Toronto General Hospital

OPEN FORUM:

"The Transformation Story so Far"

Hugh MacLeod, MA

Mr. Hugh MacLeod joined the Ministry of Health and Long-Term Care in January 2003 as Assistant Deputy Ministry, Acute Services Division. Currently, Hugh is the Assistant Deputy Minister, Accountability and Performance Division. He has considerable experience in the health sector having previously served in several senior executive level positions in the Province of British Columbia.

Mr. MacLeod has a strong connection to leadership development, and has served as Associate Faculty in the Masters of Arts Leadership Program at Royal Roads University, Associate Faculty in the Master of Public Safety Program at the Justice Institute of British Columbia, and Adjunct Professor at the University of British Columbia, Faculty of Medicine.

"Anesthesia Practice in Ontario: Threats and Opportunities"

Stephen Brown, MD, FRCPC

Dr. Brown is the Chief of the Department of Anesthesia at North York General Hospital and the Chair of the Ontario Medical Association Section on Anesthesiology. After his undergraduate degree in Biophysics at the University of Western Ontario, Medical School at McMaster, he completed his Anesthesia Residency at the University of Toronto in 1999. At every level of his training Dr. Brown has served as an advocate and an organizer. As a member of the OMA/MOHLTC Operative Anesthesia Committee and the Co-Chair of the Anesthesia Care Team Implementation Committee, he continues to be actively involved in addressing the Anesthesia resource crisis and engaging the interprofessional care movement.



Mrs. Frances Lang, daughter of Dr. Harry Shields, delivering her talk at Shields Day 2007

University of Toronto Clinical Fellowship Research Seminar Series

The Research Committee places a high priority on research education in the University of Toronto fellowship training program. To this end, a series of graduate level seminars on statistics, research design and research related computer skills were organized. The Research Committee is particularly grateful to the following individuals for teaching the following subjects. The seminars take place on Wednesday evenings at the Hospital for Sick Children.

Date	Topic	Teacher
November 8	Computer Literature Search 1*	Ms. Elizabeth Uleryk
November 15	Computer Literature Search 2*	Ms. Elizabeth Uleryk
November 22	Bibliographic Software Management Systems	Ms. T. Adams-Webber
November 29	Critical Appraisal	Dr. Stephen Halpern
December 6	Slide Making (Powerpoint)	Dr. Annette Vegas
December 13	Issues in Informed Consent	Dr. David McKnight
January 10	Scientific Misconduct	Dr. David McKnight
January 17	Randomized Clinical Trials, Hypothesis Testing	Dr. Patricia McGrath
January 24	Systematic Reviews	Dr. Patricia McGrath
January 31	Databases, Handling Data	Dr. Guy Petroz
February 7	Statistics 1: Measurement Scales, Types of Data	Dr. Guy Petroz
February 14	Statistics 2: Tests for Parametric data: Two Groups	Dr. Mark Crawford
February 21	Statistics 3: Sample Size and Power Analysis	Dr. Mark Crawford
February 28	Statistics 4: Confidence Intervals	Dr. Mark Crawford
March 7	Statistics 5: Tests for Nominal Data	Dr. Mark Crawford
March 21	Statistics 6: ANOVA 1	Dr. Hossam El-Beheiry
March 28	Statistics 7: ANOVA 2	Dr. Hossam El-Beheiry
April 11	Statistics 8: Linear Regression, Correlation	Dr. Hossam El-Beheiry
April 18	How to get your Paper Published	Dr. Frances Chung
April 25	Statistics 9: Logistic Regression, Multivariate Analysis	Dr. Hossam El-Beheiry
May 2	Statistics 10: Tests for Ordinal Data	Dr. Mark Crawford
May 9	Statistics 11: Statistical Software	Dr. Guy Petroz
May 16	Authorship	Dr. Bruno Bissonnette
May 23	Writing Successful Research Proposals	Dr. Beverley Orser
May 30	Relationships with Pharmaceutical Companies	Dr. Robert Byrick
June 6	Setting up a Research Laboratory	Dr. Daisy Joo

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Canadian Association for Health Services and Policy Research Conference (CAHSPR), Oral Presentation, "The Anesthesia Human Resource Crisis: Impact on Provision of Maternity Anesthesia Services in Community, Rural and Rural Remote Hospitals in Ontario." Toronto, Ontario, June 2007

Obstetric Anesthesia Workshop Anesthetic Practice Meeting Workshops, "The case of a woman with postpartum headache," and "Using Combined Spinal Epidurals for Labor." Toronto, Ontario, November 2006

Anesthetic Practice Meeting, Presentation, "Labour analgesia – Getting it right?" Toronto, Ontario, November 2006

American Society of Anesthesiology Annual Meeting, SOAP Special Session, Oral Presentation, "The New Labour Pain Scale (LPS): Description and Properties." Chicago, Illinois, October 2006

Ontario Medical Association Meeting, Anesthesiologists' Section, "Epidural Blood Patch in the Age of Evidenced-Based Medicine: Gold Standard Therapy for PDPH or Quackery." Burlington, Ontario, September 2006

Baker, AJ

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William Osler Health Centre ICU Day: Decision making at the end of life, "Donation in 2007 and donation after cardiac death (DCD)." Peel Memorial Hospital, Brampton, Ontario, March 2007

American Society of Anesthesiologists Annual Meeting, "Transcranial Doppler and the detection of vasospasm after subarachnoid hemorrhage." Chicago, Illinois, October 2006

American Society of Anesthesiologists Annual Meeting, "Why anesthesiologists should be involved in donation after cardiocirculatory death" Chicago, Illinois, October 2006

Toronto Blast and IED Health Effects and Injury Mitigations, "Traumatic brain injury and white matter pathophysiology." Toronto, Ontario, November 2006

Balki, M

39th Annual Meeting of the Society for Obstetric Anesthesia and Perinatology, "Regional workshop in Obstetric Anesthesia." Banff, Alberta, May 2007

48th Annual McGill Anesthesia Update Workshop (Speaker and Instructor), "The use of ultrasound to aid in epidural/spinal localization." Montreal, Quebec, May 2007

Obstetric and Pediatric ultrasound-guided blocks Workshop, Anesthesia Course, "Peripheral nerve." Chicago, Illinois, June 2007

4th Annual Mount Sinai Hospital Obstetric Anesthesia Conference, "Ultrasound-guided labor epidurals & spinals: Making your technique less blind." Toronto, Ontario, October 2006

Anesthetic Practice. Obstetric Anesthesia Workshop Leader, "Learn to use ultrasound for epidurals – live models." Toronto, Ontario, November 2006

Brown, SC

The Hospital for Sick Children. National Pediatric Conference, "Neuropathic Pain in Children." Toronto, Ontario, April 2007

The Hospital for Sick Children, Epidermolysis Bullosa Retreat, "Treatment of Pain and Pruritus in the Child with EB." Toronto, Ontario, May 2007

European Society of Anaesthesiology, "Effectiveness of a new paediatric sedation device." Munich, Germany, June 2007

Canadian Broadcasting Corporation – G Binks, Interview for program on headaches in pediatrics. Toronto, Ontario, July 2007

Peripheral Nerve, Obstetric and Pediatric Ultrasound-Guided Blocks (POP), sponsored by Sonosite (Lecturer and Workshop Instructor), "Ultrasound facilitated spinals and epidurals in obstetrics." Chicago, Illinois, June 2007

Chen YY

Toronto Anesthesia Symposium 2007, "Airway and the uncleared cervical spine." Toronto, March 2007

Trillium Gift of Life Conference 2007, "Pre-approach planning (organ donation)." With Isenor, Deveau, Thompson, et al. Toronto, Ontario, May 2007

Cooper, RM

Columbia University Medical Center, Visiting Professor. New York, New York, July 2006

Society for Airway Management, Annual Scientific Meeting, "Managing the unanticipated difficult intubation," and "Airway Workshop: Extubation of the high-risk airway." La Jolla, California, September 2006

Human Factors and Ergonomics Society Annual Meeting, "Human factors evaluation of automated external defibrillators in a hospital setting." Presented by Munira Jessa. San Francisco, California, October 2006

American Society of Anesthesiologists Annual Meeting, Extubation of the Difficult Airway Panel, "Difficult extubation: Who's at risk?" Chicago, October 2006

Anesthetic Practice 2006: Pearls of Practice Workshop "ACLS Update." Toronto, Ontario, November 2006

Caribbean Anesthesia Meeting, University of Chicago. St. John, US Virgin Islands, January 2007

The Toronto Airway Symposium, Airway Workshop, "Is direct laryngoscopy obsolete?" University of Toronto, Toronto, April 2007

European Society of Anesthesia Annual Scientific Meeting, Euroanesthesia 2007, "Visualized vs. blind intubation techniques in the difficult airway: what makes the difference?" Munich, Germany, June 2007

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Anesthesia Practice 2006, Pearls of Practice, "Current concerns with Propofol in the pediatric patient." Delta Chelsea Hotel, Toronto, November 2006.

University of Toronto, Department of Pediatric Laboratory Medicine, City-wide Clinical Biochemistry Rounds, "Propofol infusion syndrome." Toronto, Ontario, April 2007

Canadian Anesthesiologists' Society Annual Meeting, "Pediatric publications that have changed my practice." Calgary, Alberta, June 2007

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Anesthesia Practice, Obstetric Anesthesia Workshop, "Management of difficult airway in obstetric patients," and "Management of difficult airway using Glidoscope." Toronto, Ontario, November 2006

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Ontario Medical Association, Department of Anesthesia, "When your epidural doesn't work." Toronto, September 2006

4th Annual Mount Sinai Hospital Obstetric Anesthesia Conference, "Aseptic technique in labor epidurals: Do's and don'ts." Toronto, Ontario, October 2006

University of Toronto, Anesthetic Practice, "The bleeding parturient." Toronto, Ontario, November 2006

Trillium Health Center, "Management of post partum hemorrhage." June 2007

Carvalho, J

XXXIV Jornadas Aniversario Dr. Gerardo Hernandez Munoz, "Patient-controlled analgesia in labor: Regional and intravenous." Caracas, Venezuela, July 2006

XXXIV Jornadas Aniversario Dr. Gerardo Hernandez Munoz, "Neurological complications in obstetric anesthesia." Caracas, Venezuela, July 2006

Regional Anesthesia and Pain Medicine 2006, "Recent advances in obstetrical analgesia and anesthesia." Toronto, Ontario, October 2006

Mount Sinai Hospital Combined Obstetrics and Anesthesia Grand Rounds (Moderator), "Perioperative hemodynamic management in severe pregnancy-induced hypertension." Toronto, Ontario, October 2006

Mount Sinai Hospital Obstetric Anesthesia Conference, "Accelerated recovery post-cesarean section." Toronto, Ontario, October 2006

53rd Brazilian Congress of Anesthesiology (Moderator, Panel), "Anesthesia for special situations in Obstetrics." Rio de Janeiro, Brazil, November 2006

53rd Brazilian Congress of Anesthesiology Pro-Con Debate, "Best anesthesia for cesarean section is spinal." Rio de Janeiro, Brazil, November 2006

53rd Brazilian Congress of Anesthesiology Panel, "Anesthesia for special situations in obstetric anesthesia, pre-eclampsia." Rio de Janeiro, Brazil, November 2006

53rd Brazilian Congress of Anesthesiology, "New perspectives in regional anesthesia for obstetrics." Rio de Janeiro, Brazil, November 2006

25th Ontario Continuing Medical Education, Ontario Society of Obstetricians and Gynecologists, "Anesthesia in pregnancy, what is left?" Toronto, Ontario, December 2006

Academic Day for Materno-Fetal Medicine, Cardiology and Obstetric Anesthesia Fellows, Cardiology and Obstetric Anesthesia Fellows, "Anesthetic issues in women with heart disease." Toronto General Hospital, Toronto, Ontario, February 2007

33rd Annual Virginia Apgar Seminar, "Ultrasound-facilitated epidurals and spinals in obstetrics." Orlando, Florida, March 2007

33rd Annual Virginia Apgar Seminar, "Advances in the prevention and treatment of postpartum hemorrhage." Orlando, Florida, March 2007

33rd Annual Virginia Apgar Seminar, "Intra-operative nausea and vomiting during cesarean delivery." Orlando, Florida, March 2007

2007 Spring Meeting of the Michigan Association of Nurse Anesthetists, "Making epidurals less blind." Las Vegas, Nevada, April 2007

2007 Spring Meeting of the Michigan Association of Nurse Anesthetists, "Taking the headache out of dural punctures." Las Vegas, Nevada, April 2007

2007 National Update in Primary Maternity Care Workshop, "BMI issues in labor." Victoria College, Toronto, Ontario, May 2007

39th Annual Meeting of the Society for Obstetric Anesthesia and Perinatology (Panelist), "Breakfast with experts, Anesthesia for the obese obstetric patient." Banff, Alberta, May 2007

39th Annual Meeting of the Society for Obstetric Anesthesia and Perinatology, "Ultrasound-facilitated spinals and epidurals in obstetrics." Banff, Alberta, May 2007

39th Annual Meeting of the Society for Obstetric Anesthesia and Perinatology (Workshop Director), "Regional Anesthesia in Obstetrics, including stations of glass spine model, CSE model, Tsui test demonstration and spine ultrasound." Banff, Alberta, May 2007

Detroit Medical Center, Wayne State University, "Ultrasound-facilitated spinals and epidurals." Detroit, Michigan, June 2007

Detroit Medical Center, Wayne State University, "Pharmacology of spinal and epidural analgesics: reshaping our practice based on minimum local anesthetic concentration studies." Detroit, Michigan, June 2007

Canadian Anesthesiologists' Society 2007 Annual Meeting (Workshop Instructor), "Ultrasound guided spinals and epidurals." Calgary, Alberta, June 2007

Devito, I

4th Annual Mount Sinai Hospital Obstetric Anesthesia Conference, "Cardiac arrest associated with pregnancy: The new ACLS guidelines." Toronto, Ontario, October 2006.

Anesthetic Practice, Obstetrical Trouble Rounds, "Cardiac arrest in pregnancy." University of Toronto, Toronto, Ontario, November 2006

El-Beheiry, H

63rd Annual Meeting of the Canadian Anesthesiologists' Society (Co-Chair), "Neuroanesthesia poster discussion session." Calgary, Alberta, June 2007

63rd Annual Meeting of the Canadian Anesthesiologists' Society (Speaker, Case Discussion), "Cerebral hyperperfusion syndrome following carotid end arterectomy." Calgary, Alberta, June 2007

Toronto Anesthesia Symposium Workshop, "Airway Adjuncts." Toronto, Ontario, April 2007

Fisher, J

University of Colorado High Altitude Research Center, "Precise end tidal gas control to elicit R-R interval power spectra during acute hypoxic stress." Aurora, Colorado, July 2006

Presbyterian Hospital of Dallas Institute for Exercise and Environmental Medicine, "Precise end tidal gas control." Dallas, Texas, September 2006

University of Nottingham, Peter Mansfield Magnetic Imaging Center, "Precise end tidal gas control for MRI imaging." Nottingham, United Kingdom, November 2006

American Association of Respiratory Care, "Viral containment in respiratory failure," and "First responder management of CO poisoning: New approaches." Las Vegas, Nevada, December 2006

Gardner-Nix, J

Canadian Pain Society Conference Workshop, "Mindfulness-based chronic pain management courses (based on Mindfulness-based stress reduction): Strategies and outcomes." With Costin-Hall L. Edmonton, Alberta, 2006

Michael G DeGroote Institute for Pain Research and Care Pain Day, "Update on chronic pain management." Hamilton, Ontario, October 2006

Women's Clubs of Canada, "Using the mind to heal the body," London, Ontario, October 2006

Canadian Hemophilia Society's National Workshop for Adults with an Inhibitor, "Dealing with pain: Using the mind to heal the body." Toronto, Ontario, November 2006

Ontario Pain Day, "Pain management: Alternative therapies", Barrie, Ontario, November 2006

Baycrest Centre for Geriatric Care, Aging Well Starts Now Forum, "Getting past the pain." Toronto, Ontario, November 2006

5th Annual Conference for Clinicians, Researchers, and Educators, Integrating mindfulness-based approaches and interventions into medicine, health care, and society: Workshop, "Mindfulness-based chronic pain management courses (based on Mindfulness-based Stress Reduction): Strategies and outcomes." With Costin-Hall, L. Worcester, Massachusetts, April 2007

Five Chiefs' Family Practice Update Day, Scarborough and Durham Region, "Chronic pain management: What's new?" Toronto, Ontario, April 2007

Pharmacy Rounds, St Michael's Hospital, "What's new in chronic pain management?" Toronto, Ontario April 2007

Sunnybrook Health Sciences Centre Changing the Face of Pain Conference, Plenary, "I can't take the pain anymore: using the mind to help heal the body: Mindfulness-based 'Medication' therapy." Toronto, Ontario, May 2007

Providence Healthcare Grand Rounds, "Methadone use in pain management." Scarborough, Ontario, June 2007

Gofeld, M

Regional Anesthesia and Pain Management, "Interventional treatment of chronic lumbar spine pain." With Greher M. Toronto, Ontario, October 2006

Israeli Pain Society Annual Meeting, "Ultrasonography in pain management." Jerusalem, Israel, November 2006

13th Annual Conference of the University of Toronto Oncology Continuing Education, The Science & Art of Pain and Symptom Management, "Interventional approaches to refractory pain." With Myers J and Selby D. Toronto, Ontario, November 2006

SpineMark Institute's RF Lesioning Techniques, "Discogenic pain: anatomy, pathology and heating mechanisms." Dallas, Texas, May 2007

Canadian Pain Society Annual Meeting, "Interventional approach to visceral cancer pain in the palliative setting." With Myers J and Selby D. Ottawa, Ontario, May 2007

13th Pain International Course, Fundacion Dolor, "Acute pain management in orthopedic surgery," "Acute pain management in trauma," "Acute pain management in general surgery," "Acute pain management in chronic pain," "Requirements to setting up a pain center." Buenos Aires, Argentina, June 2007

McGill University Medical Skills Centre, Interventional Cadaver Course, "Sacroiliac joint radiofrequency denervation." Montreal, Quebec, June 2007

3rd International Forum of Pain Medicine, "Oxycontin under the magnifying glass," "Lumbar medial branches, dorsal roots and intervertebral discs lesioning." Montreal, Quebec, June/July 2007

Goldszmidt, E

4th Annual Mount Sinai Hospital Obstetric Anesthesia Conference, "Troubleshooting epidurals." Toronto, Ontario, October 2006

University Health Network, Mount Sinai Hospital, Surgical Oncology Fellows' Rounds, "Perioperative cardiac assessment and risk reduction." Toronto, Ontario, September 2006.

Mount Sinai Department of Nursing: Operating Rooms and Endoscopy, "Cardiac arrest in the O.R." Toronto, Ontario, July 2006

Graham, M

Toronto Anesthetic Practice Conference, "Obstructive sleep apnea – Nothing to snore at." Toronto, Ontario, November 2006

Guest, C

Anesthesia Grand Rounds, Trillium Health Centre, "Organ donation." Mississauga, Ontario, 2006

Hamilton Health Sciences Corporation, "Organ donation after cardiac death." Hamilton, Ontario, 2006

Kingston General Hospital, "Organ donation after cardiac death." Kingston, Ontario, 2006

Lecture to Gynecologic Oncology Fellows, University of Toronto, "Principles of critical care medicine." Toronto, Ontario, 2006

Lecture at Scarborough General Hospital, "Organ donor identification and management." Scarborough, Ontario, 2006

South Muskoka Memorial Hospital, "Organ donor identification and management." Bracebridge, Ontario, 2006

Sudbury Regional Hospital, "Organ donation after cardiac death." Sudbury, Ontario, 2006

Sunnybrook Health Sciences Centre, Division of Nephrology, "Donation for transplantation." Toronto, Ontario, 2006

Sunnybrook and Women's College Health Sciences Centre, Department of Critical Care Medicine Grand Rounds and Emergency Medicine Grand Rounds, "Organ donation after cardiac death." Toronto, Ontario 2006

Sunnybrook Health Sciences Centre, Lecture to Internal Medicine Residents, "Appropriate use of life support." Toronto, Ontario, 2006.

University of Toronto Joint Centre for Bioethics, "Organ donation after cardiac death: A panel discussion of the ethical issues." Toronto, Ontario, 2006

Sunnybrook Health Sciences Centre, Lecture to Internal Medicine Residents, "Appropriate use of life support." Toronto, Ontario, 2007

Sunnybrook Health Sciences Centre, "Sedation and analgesia during withdrawal of life support." Toronto, Ontario, 2007

Toronto-Sunnybrook Regional Cancer Centre, "Organ donation from people with brain tumors: A case based discussion of medical and ethical issues." Toronto, Ontario, 2007

University of Toronto Critical Care Medicine Residency Training Program, "Nutrition." Toronto, Ontario, 2007

Hamilton Regional Critical Care Rounds, "Organ donation after cardiac death." Hamilton, Ontario, 2007

University of Toronto Anesthesia Residency Training Program, "Renal failure." Toronto, Ontario, 2006 and 2007

University of Toronto Critical Care Medicine Residency Training Program, "Organ donation after cardiac death: The Intensivist's perspective." Toronto, Ontario, 2007

Halpern, S

Anaesthetic Practice 2006 (Satellite symposium on Obstetrical Anaesthesia), "The use of ultrasound for the placement of epidural blocks." Women's College Hospital, Toronto, Ontario, 2006

Canadian Society of Anesthesiologists Annual Meeting (Chairman), "Poster-Discussion Obstetrical Anesthesia Research." Calgary, Alberta, June 2006

Women's College Hospital, Department of Family Medicine Consultant Rounds, "Preoperative assessment." Toronto, Ontario, November 2006

Society of Obstetrical Anesthesiologists and Perinatologists, "Breakfast with the Experts, Obstetrical Anesthesia." Banff, Alberta, May 2007

Women's College Hospital, "Airway management workshop for Emergency Room Physicians." Toronto, Ontario, May 2007

Hare, G

University of Ottawa Department of Anesthesia, David Power Memorial Lecture, "Genomics, Proteomics and Informatics in the Management of Peri-operative Patients: What can we learn and what can't we learn." Ottawa, Ontario, October 2006

Hayes, J

Canadian Pediatric Anesthesia Society, "Rapid sequence induction is contraindicated in children." Vancouver, British Columbia, November 2006

Holtby, H

International Congress of Cardiothoracic and Vascular Anesthesia (ICCVA), "Transition of care in congenital heart disease: The role of the Anesthesiologist." Prague, Czechoslovakia, August 2006

Congenital Cardiac Anesthesia Society Pediatric Cardiac Anesthesia Conference at Pediatric Anesthesiology (CCAS/SPA), Moderator and Presenter of a session on pulmonary hypertension, "Dangerous times in out-of-the-way places: MRI and pulmonary hypertension." Phoenix, Arizona, February 2007

Cardiovascular Rounds Texas Children's Hospital, "Physiological Considerations for the Hybrid Procedure for HLHS." Houston, Texas, September 2006

Houston, P

Canadian Anesthesiologist Society Meeting, "Community vs. academic anesthesia – Career choices for anesthesia residents." Calgary, Alberta, June 2007

Jadad, A

US National Citizen Information Center, Agency for Healthcare Research and Quality, and the US Department of Health and Human Services, "A view from the Internet age: Will we TRIPP for our children?" [Keynote] "Translating Research into Practice and Policy." Washington DC, July 2006

2006 International Union Against Cancer (UICC) World Cancer Congress, [Plenary] "Supporting each other in the age of the Internet." Washington DC, July 2006

"eCancer: towards a patient-centred approach to care in the age of the Web 2.0." Tom Baker Cancer Centre, Calgary, Alberta, August 2006.

McGill University Department of Anesthesia 46th Wesley Bourne Lecture, "Anesthesia in the age of the Internet: Will we be needed in the 21st century?" Montreal, Quebec, September 2006

McGill University Surgery and Anesthesia Joint Grand Rounds, "Pain management in the age of the Internet." Montreal, Quebec, September 2006

International Symposium on Clinical Trial Methodology, "Bias and manipulation in clinical trials." Dublin, Ireland, September 2006

Princess Margaret Hospital Seminars, Palliative Care Seminar, "Palliative and supportive care delivery in the age of the web 2.0." Toronto, Ontario, September 2006

Consumers United for Evidence-based Healthcare (CUE) Annual Conference, "Consumers, evidence and the health system: a view from the age of the Internet and Web 2.0." Washington DC, September 2006

"Building the society of the future, today: The role of science, technology and enterprise in the 21st century." en-Code, I International Conference on Knowledge and Democracy, Malaga, Spain, October 2007

"Hospitals in the age of the Internet." 25th Anniversary Lecture, Ramon y Cajal Hospital, Madrid, Spain, October 2006

Spanish Congress on Hospital Engineering, "Engineering and health: a needed synergy in the 21st century." Valencia, Spain, October 2006

The Annual Health Canada Science Forum, "I' is for imagination and interdependence: Accelerating the inevitable transformation of the health system in the age of the Internet." Ottawa, Ontario, October 2006

9th International Conference on the Mechanism and Treatment of Neuropathic Pain, "Is evidence-based interventional treatment of neuropathic pain possible?" Bermuda, November 2006

Annual Conference on Health and Management [Videoconference], "Networked Medicine." Barcelona, Spain, November 2006

XI Congress of the Andalusian Society of Quality of Health Services, "Quality of health services: a view from the age of the Web 2.0." Jaen, Spain, November 2006

University of Toronto, Healthcare, Technology and Place Collaborative Doctoral Program, "The challenges of assessing the impact of health technology – benefits and limitations of quantitative approaches." Toronto, Ontario, January 2007

2007 Canadian Nursing Student Association National Conference, "Technology and global e-Health: Nursing in the age of the Internet." Toronto, Ontario, January 2007

Inaugural Launch – Global Health Care Webinar, "The Health system of the 21st century: transcending our limits in the age of global social networks." Toronto, Ontario, February 2007

Society of General Internal Medicine's 30th Annual Meeting and 1st International Symposium on Global Health, "Chronic disease management: building global economies of scale in the age of the Internet and social networks." Toronto, Ontario, April 2007

1st Annual Schneiderman Lecture of the Toronto Rehabilitation Institute, "Rehabilitation in the 21st century: toward a person-centred approach in the age of the humanode." Toronto, Ontario, May 2007

Health Canada's Annual Learning Event, "Change and its impact on organizations and people." Ottawa, Ontario, May 2007

18th Conference of the Canadian Bioethics Society Conference and 3rd International Conference of Clinical Ethics and Consultation, "Toward a person-centered health system in the age of humanodes and demographic tsunamis." Toronto, Ontario, June 2007

2007 Ontario Research and Education Summit, "Humanodes in the global superorganism: How technology can help us reach optimum health and wellbeing in the 21st Century." Toronto, Ontario, June 2007

John, J

The Children's Hospital at St. Peters University Hospital, Pediatric Grand Rounds Lecture, "Pediatric pain management." New Brunswick, New Jersey, October 2006

Kavanagh, B

American Thoracic Society (organizer, co-chair), "Reducing mortality from sepsis," and "Atelectasis and lung injury." San Diego, California, May 2006

European Society of intensive Care Medicine (Invited Speaker), "Permissive and therapeutic hypercapnia." Barcelona, Spain, September 2006

Summer SMART Conference (Anesthesiology and Critical Care), "Evidence-based medicine in critical care." Sardinia, Italy, September 2006

American Society of Anesthesiologists Annual Meeting, (Invited Speaker), "Pulmonary Hypertension - Mechanisms and Management." Chicago, Illinois, October 2006

7th Mexican National Pediatric Intensive Care Congress (Invited Speaker), "Mechanisms of Ventilator-Induced Lung injury." Ixtapa, Mexico, November 2006

Anesthesia Practice, "Optimal ventilation during anesthesia." Toronto, Ontario, November 2006

27th International Symposium on Intensive Care Medicine, "Acute Lung Injury in ICU," and "Hypercapnia and Lung Injury." Brussels, Belgium, March 2007

40th Anniversary Celebration of the Nagoya City University Graduate School of Medical Sciences, Department of Anesthesiology & Medical Crisis Management. Nagoya, Japan, June 2007

Canadian Anesthesiologists' Society Symposium, "Sepsis in critical care." Calgary, Alberta, June 2007

5th World Congress of Pediatric Intensive Care Medicine, Course Coordinator and Invited Speaker, "Mechanisms of Ventilator-Induced Lung Injury," and "Controlling Glucose in the PICU." Geneva, Switzerland, June 2007

Loke, J

Queens University Visiting Professor Lecture, "Malignant hyperthermia – New tools for an old problem." Kingston, Ontario, November 2006.

Toronto General Hospital, Lecture to Operating Room Nurses, "Malignant hyperthermia In-service." Toronto, Ontario, February 2007

Rouge Valley Health System Centenary Health Centre, "Malignant hyperthermia – New tools for an old problem." Scarborough, Ontario, May 2007

Rouge Valley Health System, Centenary Health Centre, "Mock Malignant hyperthermia." Scarborough, Ontario, May 2007

39th Annual Meeting of the Society for Obstetric Anesthesia and Perinatology, "Transcatheter electrical stimulation test." Banff, Alberta, May 2007.

Macarthur, A

Society for Obstetric Anesthesia and Perinatology and Obstetric Anaesthetists' Association (SOAP-OAA) Joint Meeting, "What's new in the management of postpartum hemorrhage?" Dublin, Ireland, August 2006

4th Annual Mount Sinai Hospital Obstetric Anesthesia Conference, "Options for post-vaginal delivery analgesia in parturients with epidurals," Toronto, Ontario, October 2006

Ostheimer Lecture at the 39th Annual SOAP meeting, "What's new in obstetric anesthesia 2006?" Banff, Alberta, May 2007

Mazer, CD

51st Annual Ontario Anesthesia Meeting, "The last minute cardiac work-up." Hamilton, Ontario, September 2006

12th Annual Society of Cardiovascular Anesthesiologists (SCA) Update on Cardiopulmonary Bypass Meeting, "Antifibrinolytic therapy: The real risk/benefit ratio." Whistler, British Columbia, March 2007

12th Annual Society of Cardiovascular Anesthesiologists (SCA) Update on Cardiopulmonary Bypass Meeting, "How to develop your program for blood conservation: What works." Whistler, British Columbia, March 2007

29th Annual Meeting of the Society of Cardiovascular Anesthesiologists, "Blood conservation in cardiac surgery." Montreal, Canada, April 2007

11th Annual Outcomes in Cardiac and Vascular Surgery Meeting, "Vascular injury and thrombotic potential: A note of caution." Barbados, WI, May 2007

11th Annual Outcomes in Cardiac and Vascular Surgery Meeting, "BART trial in progress: Prospective assessment of safety and efficacy of antifibrinolytic therapy." Barbados, WI, May 2007

University of Manitoba Department of Anesthesia, Visiting Professor, "Cardiovascular Anesthesia Research: Have all the questions already been answered?" Winnipeg, Manitoba, November 2006

University of Western Ontario Department of Anesthesia and Perioperative Medicine, Fellows Research Day 2007, "The Future of Cardiovascular Anesthesia Research." London, Ontario, May 2007

McCluskey, SA

Ontario Medical Association Meeting of the Anesthesia Section, "Problems with protocols." Burlington, Ontario, September 2006

Toronto Western Hospital, "Perioperative blood conservation for total joint arthroplasty and spine surgery; Current statistics and future plan." Toronto, Ontario, November 2006

University Health Network, Department of Cardiovascular Surgery Grand Rounds, "Current issues in transfusion medicine for CV surgery." Toronto, Ontario, February 2007

University Health Network, Department of Urology Grand Rounds, "Current issues in transfusion medicine for urology." Toronto, Ontario, March 2007

Canadian Anesthesiologists' Society (CAS) Annual Meeting, "Lessons learned from liver transplantation," (Session Co-Chair and Presenter) "Hepatopulmonary Syndrome and Portopulmonary Hypertension." Calgary, Alberta, June 2007

McGrath, PA

Conference on Chronic Abdominal Pain in Children (Keynote Speaker), "Children with chronic pain – vulnerability factors that affect onset and treatment." Massachusetts General Hospital, Boston, Massachusetts, October 2006

2007 UTCSP Interfaculty Pain Curriculum (Workshop Presenter), "Pain genetics and sex: Children with chronic pain." Toronto, Ontario, March 2007

2007 Pediatric Update (Invited Workshop Speaker with Stephen C. Brown), "Neuropathic pain: Pharmacology and psychological aspects of management." Toronto, Ontario, April 2007

Headache and Pain Conference (Invited Keynote Speaker), "Pediatric/adolescent pain: Family dynamics and school issues." Dearborn, Michigan, May 2007

McKnight, D

University of Toronto, Teaching the Teachers Bioethics, "Royal College accreditation of bioethics in residency: What do they expect? What can we do?" Toronto, Ontario, December 2006

University of Toronto Clinical Ethics Day for Residents, "The Ethics of Teaching in Medicine." With D. Tamir. Toronto, Ontario, June 2007

University of Toronto Anesthesia Faculty Development Day. "Incorporating ethics into your teaching program." Toronto, Ontario, November 2007

Meineri, M

Stellenbosch University's First Hands-on perioperative TEE course, Visiting Professor. Cape Town, Republic of South Africa, September/October 2006

University of Torino Department of Anesthesia Departmental Round, "Update on Cardiac Anesthesia: Fast track Cardiac anesthesia, can we make it faster?" Italy, June 2007

Morgan, P

Women's College Hospital Department Rounds. "Medication safety." Toronto, Ontario, January 2007

Canadian Anesthesiologists' Society Annual Meeting, "Simulation based education: What it can and can't do." Calgary, Alberta, June 2007

Continuing Medical Education lecture to William Osler Department of Anesthesia, "Anesthesia for cesarean section." Toronto, Ontario, June 2007

Women's College Hospital Combined Obstetrics/Anesthesia/Nursing Rounds, "Turning a team of OB experts into an expert OB team." Toronto, Ontario, June 2007

Murphy, P

Annual Meeting of American Society of Anesthesiologists, "Factor VIIa is not ready for routine use in bleeding after cardiac surgery." Chicago, Illinois, October 2006

Alberta Society of Intensive Care Physicians, "Journey to the bottom of the world, testing physiologic limits in Antarctica." Lake Louise, Alberta, January 2007

Making Your Mark, National Anesthesia Review Course, "Thoracic anesthesia" and "Non-cardiac applications of TEE." Banff, Alberta, February 2007

Visiting Professor of the Royal College of Physicians and Surgeons of Canada, Continuing Medical Education Program, University of Calgary, "Journey to the bottom of the world, testing physiologic limits in Antarctica." Calgary, Alberta, March 2007

Society of Cardiovascular Anesthesiologists Annual Update in Cardiopulmonary Bypass, "Protecting organ function during cardiopulmonary bypass," "Recombinant activated factor VIIa applications in cardiac surgery," and "Get With The Guidelines." Whistler, British Columbia, March 2007

Society of Cardiovascular Anesthesiologists Plenary Session, "Functional anatomy and surgically relevant echocardiographic assessment of the aortic valve and root." Montreal, Quebec, April 2007

Memorial University Department of Anesthesia, Annual Anesthesia Residents Research Day (Keynote Speaker), "Journey to the bottom of the world, testing physiologic limits in Antarctica." St. John, Newfoundland, May 2007

Canadian Anesthesiologists' Society Annual Meeting, Cardiovascular Thoracic Section Echo Symposium. "Tricuspid valve, new insights on repair and replacement." Toronto, Ontario, June 2007

Naik, V

Bruce Tovee Memorial Medical Council of Canada Qualifying Examination (MCCQE) Lecture Series, "Anesthesia and perioperative medicine." Toronto, Ontario, March 2007

Anesthetic Practice 2006, "Difficult airway simulator." With Joo HS, Chandra DB, Chow R. Toronto, Ontario, November 2006

Toronto Airway Symposium 2007, "Difficult airway simulator." With Joo HS, Chandra DB, Chow R. Toronto, Ontario, March 2007

Canadian Anesthesiologists' Society Annual Meeting, "Update from the Royal College – changes to the written exam." Calgary, Alberta, June 2007

O'Leary, G

The University Health Network Interdisciplinary Pain Conference: Emerging Practices in Pain Management. (Session Chair), "Organizational Leadership: Achieving and Sustaining Interdisciplinary Best Practices in Pain Management," and "Achieving Best Practices in Pain Management in Critical Care." Toronto, Ontario, February 2007

University Health Network, Surgical Services Planning Session, "Anesthesia where are we going and who cares?" Toronto, Ontario, May 2007

University Health Network, Surgical Services Planning Session. "HR Issues - Anesthesia our biggest risk in clinical surgery." Toronto, Ontario, June 2007

Orser, B

The Association of Canadian University Departments of Anesthesia (ACUDA), "Medication safety." Toronto, Ontario, June 2006

Canadian Anesthesiologists' Society Meeting, Patient Safety Symposium, "Frontiers in patient safety: Making anesthesia safe, medical-legal challenges and medication error." Toronto, Ontario, June 2006

European Congress of Neuropsychopharmacology, "Extrasynaptic GABAA receptors." Paris, France, September 2006

Australia Anesthesia Society National Scientific Congress (Keynote Address), "Unraveling the mysteries of anesthetics: From molecular substrates to behavior." Coolum, Australia, October 2006

Australian Anesthesia Society Scientific Congress, "Drug safety: Engineering out the hazards." Coolum, Australia, October 2006.

Australian Anesthesia Society Scientific Congress, "Airway management in the traumatized patient." Coolum, Australia, October 2006

Australian Anesthesia Society Scientific Congress, "Grow your own: Strategies to develop anesthesia researchers." Coolum, Australia, October 2006

Royal Darwin Hospital, "Mechanisms of anesthesia." Darwin Australia, October 2006

Royal Darwin Hospital, "Anesthesia patient safety." Darwin Australia, October 2006

University of Alberta Department of Pharmacology, "Anesthetics and memory." Edmonton, Alberta, January 2007

Queen's University Whistler Anesthesia Meeting, "New insights into how anesthetics work: Implications for clinicians." Whistler, British Columbia, February 2007

Queen's University, Whistler Anesthesia Meeting, "Improving drug safety in your anesthetic practice." British Columbia, February 2007

Scientific Day Department of Anesthesia, Royal College Lecturer. Queen's University, Kingston, Ontario, March 2007

Sunnybrook Health Sciences Grand Medical Rounds, "Anesthesia, amnesia and postoperative cognitive dysfunction." Toronto, Ontario, April 2007

Institute for Safe Medication Practices (ISMP) Conference on Patient Safety, "Operating room safety strategies." Richmond Hill, Ontario, April 2007

Slinger, P

International Congress of Cardiovascular Anesthesia, "Does routine anesthetic ventilation injure the lungs?" Prague, Czech Republic, August 2006

Hawaii Anesthesiology Update. "One-lung anesthesia, difficult airway, preoperative pulmonary assessment, respiratory physiology, lung injury and lung protection." Kohala, Hawaii, August 2006

Annual Meeting of the Association of Cardio-Thoracic Anaesthetists. "Lung isolation and re-expansion in thoracic aortic surgery." Bournemouth, England, September 2006

Annual Meeting of the Ontario Medical Association's Anesthesia Section, "Thoracic anesthesia update." Burlington, Ontario, September 2006

Annual Meeting of the American Society of Anesthesiologists, "Transesophageal echocardiography in thoracic anesthesia." Chicago, Illinois, October 2006

Asian Australasian Congress of Anaesthesiologists. "Preoperative assessment for pulmonary resection; management of the patient with an anterior mediastinal mass; post-VATS analgesia." Singapore, November 2006

Tarshis, J

University of Toronto Department of Anesthesia Faculty Development Day. Small Group Session, "Teaching and evaluating professionalism: fantasy or reality?" November 2006

Ontario Hospital Association Meeting, "Patient safety: teamwork & communication." Toronto, Ontario, January 2007

7th Annual Tremblant Perioperative Medicine Conference, "Update on ACLS: What's new in 2007?" Mt. Tremblant, Quebec, February 2007

Vegas, A

Tygerburg Hospital, Transesophageal Echocardiography (TEE) Practical intraoperative demonstration and didactic talks, "TEE indications and role," "TEE Doppler," and "TEE advanced cases." Capetown, South Africa, September/October 2006

University Health Network Transesophageal Echocardiography (TEE) Symposium Lecture, "TEE for cardiac masses," Workshop: "Hemodynamics". Toronto General Hospital, Toronto, Ontario, November 2006

Wasowicz, M

European Foundation for Continuous Education in Anesthesia Course (FEEA), "Anesthesia for lung transplantation," and "Air-blood barrier and its significance for anesthesiologists." Poland, May 2007

John Paul II Hospital, "Cardiac assessment in patient with heart disease undergoing non-cardiac surgery" and "Heparin induced thrombocytopenia and its importance in anesthesia and critical care." Krakow, Poland, December 2006

Silesian Heart Center, "Lung transplantation: Anesthesia and perioperative care; Heparin induced thrombocytopenia and its importance in anesthesia and critical care." Zabrze, Poland, May 2007

Zhang, H

Federation of Clinical Immunology Societies Annual Meeting, "Molecular mechanisms of α -defensins in immune modulation." San Francisco, California, July 2006

International Meeting on pathological mechanisms of H5N1 influenza and virally induced respiratory human diseases, "Mechanisms of acute lung injury and ARDS." Hong Kong, July 2006

Hong Kong University Department of Microbiology, Visiting Professorships. Hong Kong, July 2006

21st Annual Meeting of the International Symposium on Critical Care Medicine, "Molecular biology and genetics in respiratory system." Venice, Italy, November 2006

University of Toronto Department of Physiology, "Lung defense." Toronto, Ontario February 2007

2007 American Thoracic Society International Conference, Thematic Poster Session (Facilitator), "Critical care infections, shock/multiorgan failure." San Francisco, California, May 2007

2007 American Thoracic Society International Conference, Thematic Poster Session (Facilitator), "Molecular mechanisms of critical illness." San Francisco, California, May 2007

The 13th International Congress of Mucosal Immunology (ICMI2007), "Mucosa innate immune mechanisms: Antimicrobial peptides." Tokyo, Japan, July 2007

PEER-REVIEWED GRANTS

Angle, P

"Randomized controlled trial examining the impact of large traditional vs. small epidural needles on the incidence of postdural puncture headache in parturients," (PI). Halpern S, Kronberg J, Kiss A, Gawel M (Co-Investigators). Physician Services Incorporated Foundation Grant. \$149,500, 2007

Baker, AJ

"Calpain inhibition as a white matter neuroprotective therapy after TBI: proof of principle for functional, histopathical and behavioral improvements by targeting white matter following traumatic brain injury," (PI). Ontario Neurotrauma Foundation Personnel and Operating Grant. \$75,000, 2006-2007

"Understanding the influence of pain management in the acute care of traumatic injury and its role in patients' health outcomes: Development of a multi-disciplinary research team," Canadian Institutes of Health Research. Topopovec-Vranic J, Baker AJ, (Co-Investigator) Canzian S, Cullen N, Cusimano M, Innis J, McFarlan A. \$99,652, 2006-2007

"From bench to bedside to curbside," Department of Health and Human Services Public Health Services, Slutsky AS, Dorian P, Morrison L, Spence J, Baker AJ (Co-investigator), Lavery J, Rotstein O, Fowler R, Black S, Sibbald W, Redelmeir. Personnel and Operating Grant. \$238,646 per year, 2004-2009

Balki, M

"Impact of uterotonic agents on isolated human myometrium." Co-investigators: Kingdom J, Carvalho, J. University of Toronto Dean's Fund Research Award. \$10,000, 2007-2012

Briet, F

"Development of a new non-invasive nutritional assessment test based on gene expression." Innovation foundation NSERC IPM Research Award. PI: Jeejeebhoy KN (Co-applicant). \$50,000 per year, 2004-2007

"Does nutrient supplementation influence cardiac function, structure and survival by altering energy metabolism?" Canadian Institutes of Health Research (CIHR) Principal Investigator. Co-PI: Keith M. Co-applicants: Mazer D, Stewart D. \$155,800 per year, 2005-2007

"Impact of cardiopulmonary bypass and cardiac surgery on lymphocyte energetics and immune function in patients with non insulin dependent diabetes mellitus," (Principal Investigator) Society of Cardiovascular Anaesthesiologists Young Investigator Support Award. Co-applicants: Keith M, Errett L, Mazer D. \$50,000 per year, 2005-2007

Brown, SC

"Pain in child health: An innovative transdisciplinary, cross-country research training consortium," CIHR (Co-PI). Principal investigators: McGrath PJ, Finley A, Johnston C, Stevens B, von Baeyer C, Craig K. \$1,800,000, 2002-2008

"Gender differences in child development: Vulnerability to chronic pain," CIHR (Primary Co-PI). New emerging team includes: McGrath PA, Brown S, Davis K, Geist R, Katz J, VanDenKerkhof E, 2003-2008

"The effectiveness of the children's sedation device." Brown S, McGrath P, Schneeweiss S, Chastain D (PI), Hart G. NIH SBIR Grant. \$220,000, 2003

El-Beheiry, H

"Hypoglycemic seizures: mechanisms and role in hypoglycemic brain damage," Juvenile Diabetes Research Foundation. Carlen P, El-Beheiry H, Del Campo M, Shanon P. \$163,810, 2006-2007

Fisher, J

"Development of mobile critical care module," US Marine Corps Systems Command, The US Navy, and the US Congress. \$4,700,000, 2005-2010

"Multi-modal imaging studies of the relationship between age, physical activity level, cerebral physiology, and cognitive performance," Hoge R, Lesage F, Bherer L, Pike B, Boas D, Fisher J. CIHR. \$100,372 per year, 2007-2011

Friedman, Z

"Teaching emergency life-saving skills through simulation – high-fidelity simulation vs. traditional bench models for teaching residents cricothyrotomy." Co-investigators: Naik V, You-Ten E, Education Development Fund for Innovation in Education. \$15,320, 2007-2008

"Clinical impact of cricothyrotomy simulation on manual skill acquisition: High fidelity vs. low fidelity model training." Co-investigators: V. Naik, E. You-Ten. Canadian Anesthesiologists' Society Research Grant. \$20,000, 2007-2008

"Clinical impact of epidural anesthesia simulation on short and long term learning curve and complication rate: High fidelity vs. low fidelity model training." Co-investigators: Naik V, Devito I, The Physicians Services Incorporated Foundation. \$37,500, 2006-2008

"Epidural Anesthesia Simulation Training for Second Year Anesthesia Residents – Impact on Learning Curve and Complication Rate." Co-Investigators: V. Naik, I. Devito. American Society of Regional Anesthesia – Carl Koller Memorial Research Award. \$42,500, 2006-2008

Hare, G

"Mechanisms of cerebral protection and injury during acute hemodilutional anemia," Bristol-Myers Squibb-CAS Career Scientist Award in Anesthesia and Perioperative Medicine. \$90,000 per year, 2005-2008

"The threshold hematocrit for cerebral hypoxia is maintained by protective cardiovascular mechanisms: The role for neuronal nitric oxide synthase (nNOS)," The Society of Cardiovascular Anesthesiologists (Principal Investigator). \$20,000 per year, 2007-2009

"Does beta-1 adrenergic antagonism increase tissue hypoxia following acute hemodilution?" Canadian Anesthesiologists' Society Wynands Research Award (Principal Investigator). \$30,000, 2007

Joo, H

"High fidelity simulation versus traditional didactic seminars for teaching trainees Separation from cardiopulmonary bypass." Physician's Services Incorporated Foundation Grant, Principal Investigator: Joo HS, Co-Investigators: Naik VN, Savoldelli GL, LeBlanc VR, Latter DA, Mazer CD. \$55,000 per year, 2006-2007

Kavanagh, B

"Lung development," CIHR Group Grant, co-applicant with AK Tanswell (PI). \$1,260,000, 2004-2009

"Investigation of communication modalities for pediatric patients during transient voicelessness," co-applicant with Lau T (PI), NSERC. \$112,000, 2003-2006

"Neural assisted ventilation in pre-term infants," NIH. Co-Applicant with Sniderby C (PI). \$150,000, 2003-2006

"Preclinical assessment of therapeutic hypercapnia," CIHR (sole PI). \$535,000, 2004-2009

"Therapeutic hypercapnia," CIHR (career award). \$250,000, 2002-2007

"Ventilator-induced lung injury: Linking gene activation, physiology and outcome," CIHR Operating Grant. \$330,000, 2003-2006

Mazer, CD

"Computer program to evaluate patients with emergencies in the fluid, electrolyte and acid-base area," (Co-investigator) Keenan Collaborative Research Award. St. Michael's Hospital, Toronto, Canada. \$25,000, 2006-2007

"High fidelity simulation versus traditional didactic seminars for teaching trainees separation from cardiopulmonary bypass," (Co-investigator) Physicians' Services Inc. \$58,869 per year, 2006-2008

"Renal gene expression following cardiopulmonary bypass and anemia in the rat." (Supervisor/Co-investigator). Canadian Anesthesiologists Society. \$5,000, 2006-2007

"Unraveling the black box of adverse events in cardiac surgery," (Co-investigator) Heart and Stroke Foundation of Ontario. \$271,050, 2006-2009

"Transfusion triggers in cardiac surgery," (Co-investigator). Canadian Blood Services. \$14,990, 2006-2007

"Impact of cardiopulmonary bypass and cardiac surgery on lymphocyte energetics and immune function in patients with non insulin dependent diabetes mellitus," (Co-Investigator) Society of Cardiovascular Anesthesiologists. \$40,000, 2005-2007

McGrath, P

"Understanding chronic pain following surgery in women," Operating Grant, CIHR. Van Denkerkhof EG, Goldstein, DH, Harrison, M, Hopman, W, Lam, Y, Towheed, T, Wilson, R, McGrath, PA \$100,000 per year (\$342,029 total), 2006-2009

Morgan, P

"The effect of high-fidelity simulation debriefing on the non-technical skills of practicing Anesthetists," Morgan PJ, Bertram S, Tarshis J. Continuing Education Research Award, University of Toronto. \$5,000, 2007

Naik, V

"Teaching emergency life-saving skills through simulation – high-fidelity simulation vs. traditional bench models for teaching residents cricothyrotomy," Friedman Z, Naik VN, You-Ten E. Educational Development Fund for Innovation in Education. \$40 000, 2007

Jadad, A

"Journey to our good health: A youth leadership program to promote healthy eating living in the age of the Internet," Rural Economic Development Fund, Ontario Ministry of Agriculture and Agricultural Adaptation Council of Canada. \$124,000, 2007

"The impact of Web 2.0 on credibility indicators in health care," Co-PI with O'Grady L. CIHR Interdisciplinary Capacity Enhancement Sub-grant. \$8,000, 2007

"Ethics and pandemic planning: Engaging the voices of the public," with Upshur R. CIHR. \$75,000, 2007

Orser, B

"The role of GABAA receptors in anesthetic-induced impairment of memory and consciousness," CIHR (PI). \$119,179, 2006-2011

"Canada Research Chair in Anesthesia, Tier 2: Anesthetic Drugs from Molecular Mechanisms to Patient Safety." \$500,000 per year, 2003-2008

"A multi-institutional evaluation of a checklist intervention to structure communication and promote patient safety in the operating room," CIHR (Collaborator). \$65,247 per year, 2004-2010

"Synaptic and extrasynaptic GABAA receptors: Distinct physiological and therapeutic roles," CIHR. \$128,160 per year, 2003-2008

Tarshis, J

"Determination of the psychometric properties of a behavioral marking system for obstetrical team training using high-fidelity simulation," Morgan PJ, Tregunno D, Pittini R, Regehr G, Milne K, Zwarenstein M, Tarshis J. Canadian Patient Safety Institute (CPSI). \$119,340, 2006

"C.R.E.W.: Crisis resources for emergency workers – interprofessional crisis resource management team training," Christopher Denny Glen Bandiera, Jordan Tarshis, Edward Etchells, Walter Heneghan, Education Development Fund for Innovation in Education, 2007

"The STRESS study: The effects of stress on residents' performance: An ICU simulation study," Piquette D, Leblanc V, Tarshis J, Fowler R, Sinuff T. Physician Services Incorporated Foundation. \$40,000, 2007

Vegas, A

"Development of a 3D imaging tool to aid in the visualization of transesophageal echocardiography images," (Co-Investigators) Meineri M, Beattie S, Tait G; Silversides C; Feindel C. Instructional Technology Courseware Development Fund. \$30,000, 2007

Zhang, H

"Critical role of bone marrow-derived mesenchymal stem cells in the repair of lung injury," Ontario Thoracic Society (OTS) Research-in-Aid Grant. \$50,000, 2007

"LPS internalization and ICAM-1 signaling in the pathogenesis of sepsis," CIHR Operating Grant. \$530,600, 2005-2010

"Targeting ICAM-1/LFA-1 interaction in reducing sepsis-induced lung injury," Premier's Research Excellence Award. \$159,000, 2005-2010

"Human neutrophil peptides in lung inflammation," CIHR New Investigator Award, 275,000. 2005-2007

"Regenerative stem cells in the repair of acute lung injury," Ontario Thoracic Society (OTS) Research-in-Aid Grant. \$45,000, 2006-2007

"Human neutrophil peptides in lung inflammation," CIHR Operating Grant. \$553,615, 2004-2009

NON-PEER REVIEWED GRANTS**Balki M**

"Impact of uterotonic agents on isolated human myometrium" Co-investigators: Kingdom J, Carvalho J. Department of Obstetrics and Gynecology, University of Toronto and Department of Anesthesia. \$10,000, 2007-2008

Morgan, P and Tarshis, J

"Educational benefit of Advanced Cardiac Life Support (ACLS) flash cards during simulated cardiac arrests," SHUTC Academic Trust Fund. Tarshis J, Morgan PJ, Fowler R. \$9,900, 2006

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