# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message from the Chair</td>
<td>1</td>
</tr>
<tr>
<td>Anesthesia Fellows (2005-2006)</td>
<td>3</td>
</tr>
<tr>
<td>Awards and Achievements</td>
<td>4</td>
</tr>
<tr>
<td>Department Council</td>
<td>7</td>
</tr>
<tr>
<td>Undergraduate Education Committee</td>
<td>8</td>
</tr>
<tr>
<td>Postgraduate Education Committee</td>
<td>12</td>
</tr>
<tr>
<td>Anesthesia Residents (2005-2006)</td>
<td>14</td>
</tr>
<tr>
<td>U of T Fellowship Research Seminar Series</td>
<td>15</td>
</tr>
<tr>
<td>The Clinician-Scientist Stream</td>
<td>16</td>
</tr>
<tr>
<td>Shields Anesthesia Research Day</td>
<td>18</td>
</tr>
<tr>
<td>Continuing Education Committee</td>
<td>21</td>
</tr>
<tr>
<td>Research Committee</td>
<td>24</td>
</tr>
<tr>
<td>Publications</td>
<td>26</td>
</tr>
<tr>
<td>Book Chapters</td>
<td>36</td>
</tr>
<tr>
<td>Abstracts</td>
<td>38</td>
</tr>
<tr>
<td>Invited Lectures</td>
<td>45</td>
</tr>
<tr>
<td>Grants: Peer Reviewed</td>
<td>72</td>
</tr>
<tr>
<td>Grants: Non-peer Reviewed</td>
<td>80</td>
</tr>
</tbody>
</table>
MESSAGE FROM THE CHAIR

It has been an honour to serve as the Chair of the Department of Anesthesia for the last three years and to have been a member of the Department of Anesthesia since 2000. Anesthesia is a young specialty, the first general anesthetic was given in Boston in 1842. Academic Departments are much younger. The first in Canada, at McGill was founded in 1945 under the first chair – Dr. Wesley Bourne. Toronto followed with the appointment of Dr. Harry Shields in 1952.

The last decade has seen major shifts in the emphasis of academic anesthesia which has emerged from a specialty-specific, introspective organization interested only in minor modifications to the technical and pharmaceutical role of the specialty to one influencing the whole of medicine with regard to Education, Research and Clinical Care. Academic Departments of Anesthesia are flourishing in Canada and nowhere is this more evident than in Toronto.

In Education, a revolution has taken place – Simulation. Anesthesia departments incorporate simulation into their programs. Anesthesiologists recognized the potential of simulation earlier than most other specialists not only for technical procedures such as tracheal intubation and vascular access but also in improving patient safety. Exposure to Crisis Management (led by Pamela Morgan, Hugh Devitt, Jordan Tarshis, Robert Byrick and colleagues at Sunnybrook and Viren Naik at St. Mike’s) in the simulated environment demonstrated the importance of personal interactions in clinical situations. The OR is analogous to the airplane cockpit and similar behaviour is necessary to avoid and manage unexpected events. Anesthesiologists have brought a new level of understanding to team care with a greater emphasis on Patient Safety (Beverley Orser). All faculties of medicine require access to a sophisticated simulation environment. Anesthesiologists are well placed to lead the field and exert a presence across all medical practice. Patients, quite naturally, are reluctant guinea-pigs for trainee medical personnel. Anesthesiologists must take the lead in the revolution.

In Research, pharmacological research is now more likely to be directed towards the identification of abnormal responders to existing compounds in collaboration with genetic investigators. Indeed, anesthesia was pivotal to the development of pharmacogenetics when Kalow, at Toronto, identified abnormal cholinesterase enzymes in the metabolism of succinylcholine and in the recognition and management of malignant hyperthermia. Abnormal reactions to anesthetic agents will continue to be investigated for possible genetic linkage. On a wider scale, genetic variants and their influence on intraoperative bleeding and thrombosis (continuing the work of David Mazer, Greg Hare and Keyvan Karkouti and colleagues) may be important components of pre-operative evaluation by the anesthesiologist.

Much of what we do in the peri-operative period is in treating and preventing organ dysfunction. Of particular importance have been our attempts to improve cardiac outcomes by preoperative -adrenergic blockade, calcium channel blockers, epidural anesthesia, etc. We know that the conduct of anesthesia influences patient outcome well after the end of surgery. Anesthesiologists, such as Scott Beattie and Duminda Wijeysundera, are involved in some of the most comprehensive outcome studies but these are difficult, time-consuming and require epidemiologists both within and outside anesthesia departments. Pre-operative preparation and risk evaluation have been and will remain the preserve of the anesthesiologist if we want it!

Changes in Clinical Care involve developments in Regional Anesthesia as led by Vincent Chan, Anahi Perlas, Obstetric Anesthesia (Stephen Halpern, Pamela Angle, Jose Carvalho), Chronic Pain (Joel Katz, Lucia Gagliese), Critical Care and Trauma (Andrew Baker, Brian Kavanagh) and Equipment Development (Joe Fisher). Equally important is the development of an alternative model of providing Anesthesia Care. This will likely be based on the Anesthesia Care Team in which anesthesiologists will direct a team of health professionals to assist them in the pre-, intra- and post-operative areas. The involvement of Toronto Anesthesia (Claire Middleton) in the new Anesthesia Assistants model at the Michener Institute will be the way to meet anesthesia shortages in the future.

Toronto has never been more influential in pointing the direction for Anesthesia. The department is endowed with some extraordinary young men and women (some of whom are mentioned above) who will make their mark in medicine.
Noteworthy events of 2005-2006

Undoubtedly, the premature death of John Bradley, Director of the Wightman Berris Academy, deprives us of a very gifted teacher who had won local regional and national recognition for his dedication to students. He will be missed not only as the best recruiter that the specialty ever had!

Robert Byrick appointed Associate Dean, Faculty of Medicine

Joe Fisher elected “Investigator of the Year at UHN”

Alex Jadad elected “Best of the Best” by the Top 40 under 40 in Canadian Health Care

Grants – PI

Canadian Anesthesia Research Foundation: D. Wijeysundera, C. McCartney
Canadian Blood Services: K. Karkouti
CAS Career Scientist Award: G. Hare
CIHR: S. Beattie, F. Briet, L. Gagliese, K. Karkouti, D. Wijeysundera, H. Zhang
Heart & Stroke Foundation Ontario: G. Djaiani
Ischemia Research Foundation: D. Mazer
Ontario Neurotrauma Foundation: A. Baker
Ontario Thoracic Society: H. Zhang
PSI: A. Baker, F. Chung, G. Hare, H. Joo, C. McCartney, P. Morgan, V. Naik
Premier Research Award: H. Zhang
Society of Cardiovascular Anesthesiologists: F. Briet

David R. Bevan
Professor and Chair
August, 2006
## ANESTHESIA FELLOWS 2005/2006

### The Hospital for Sick Children

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christiansen, Elaine</td>
<td>AUSTRIA</td>
<td>McDonnell, Conor</td>
<td>IRELAND</td>
</tr>
<tr>
<td>Engelhardt, Thomas</td>
<td>UNITED KINGDOM</td>
<td>O’Rourke, James</td>
<td>IRELAND</td>
</tr>
<tr>
<td>Espinal-Montoya, Victor</td>
<td>COLOMBIA</td>
<td>Ray, Neill</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>John, Justin</td>
<td>CANADA</td>
<td>Prinzhausen, Heike</td>
<td>UNITED KINGDOM</td>
</tr>
<tr>
<td>Khemka, Rakhi</td>
<td>INDIA</td>
<td>Walsh, Kenneth</td>
<td>IRELAND</td>
</tr>
<tr>
<td>Lau, Katherine</td>
<td>UNITED KINGDOM</td>
<td>Venclovas, Rasa</td>
<td>AUSTRIA</td>
</tr>
<tr>
<td>Lopez, Alejandra</td>
<td>COLOMBIA</td>
<td>Wong, Gail</td>
<td>AUSTRIA</td>
</tr>
<tr>
<td>McCheyne, Alan</td>
<td>UNITED KINGDOM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mount Sinai Hospital

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arzola, Cristian</td>
<td>CHILE</td>
<td>Moore, Michael</td>
<td>IRELAND</td>
</tr>
<tr>
<td>Dhumne, Sudhir</td>
<td>INDIA</td>
<td>Rofael, Ayman</td>
<td>EGYPT</td>
</tr>
<tr>
<td>Dochev, Atanas</td>
<td>BULGARIA</td>
<td>Siddiqui, Mughina</td>
<td>PAKISTAN</td>
</tr>
<tr>
<td>Habbi, Mehri</td>
<td>IRAN</td>
<td>Siddiqui, Naveed</td>
<td>PAKISTAN</td>
</tr>
<tr>
<td>Ibrahim, Hisham</td>
<td>EGYPT</td>
<td>Tanaka, Motoshi</td>
<td>JAPAN</td>
</tr>
<tr>
<td>Kasodekar, Shilpa</td>
<td>INDIA</td>
<td>Whitty, Robert</td>
<td>IRELAND</td>
</tr>
<tr>
<td>Li, Victor</td>
<td>CHINA</td>
<td>Yacoub, Ashraf</td>
<td>EGYPT</td>
</tr>
</tbody>
</table>

### St. Michael’s Hospital

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alam, Syed</td>
<td>CANADA</td>
<td>Novoshinov, Sergey</td>
<td>ISRAEL</td>
</tr>
<tr>
<td>Hamed, Hala</td>
<td>EGYPT</td>
<td>Rigamonti, Andrea</td>
<td>ITALY</td>
</tr>
<tr>
<td>McCheyne, Joanne</td>
<td>UNITED KINGDOM</td>
<td>Savoldelli, Georges</td>
<td>SWITZERLAND</td>
</tr>
<tr>
<td>McCloone, Mary</td>
<td>UNITED KINGDOM</td>
<td>Schupp, Michael</td>
<td>GERMANY</td>
</tr>
</tbody>
</table>

### Sunnybrook and Women’s College Health Sciences Centre

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angeles, Maria</td>
<td>PHILIPPINES</td>
<td>Kummer, Carmen</td>
<td>BRAZIL</td>
</tr>
<tr>
<td>Goldchtaub, Valerie</td>
<td>ISRAEL</td>
<td>Kaptoulski, Boris</td>
<td>ISRAEL</td>
</tr>
<tr>
<td>Gofeld, Michael</td>
<td>ISRAEL</td>
<td>Lim, Teddy</td>
<td>CANADA</td>
</tr>
</tbody>
</table>

### UHN/Toronto General Hospital

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbosa, Ruben</td>
<td>BRAZIL</td>
<td>Roscoe, Andrew</td>
<td>UNITED KINGDOM</td>
</tr>
<tr>
<td>Dattilo, Kathleen</td>
<td>CANADA</td>
<td>Schupp, Michael</td>
<td>UNITED KINGDOM</td>
</tr>
<tr>
<td>Dochev, Atanas</td>
<td>CANADA</td>
<td>Snyman, Adam</td>
<td>SOUTH AFRICA</td>
</tr>
<tr>
<td>Felton, Marie-Louise</td>
<td>FRANCE</td>
<td>Srinivas, Coimbatore</td>
<td>UNITED KINGDOM</td>
</tr>
<tr>
<td>Hirasaki, Yuji</td>
<td>JAPAN</td>
<td>Sun, Ruidong</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>MacDougall, Peter</td>
<td>CANADA</td>
<td>Syed, Summer</td>
<td>CANADA</td>
</tr>
<tr>
<td>Meineri, Massimiliano</td>
<td>ITALY</td>
<td>Vuckovic, Dejan</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>Minkovich, Leonid</td>
<td>ISRAEL</td>
<td>Wacker, Johannes</td>
<td>SWITZERLAND</td>
</tr>
<tr>
<td>Mukherjee, Chirojit</td>
<td>GERMANY</td>
<td>Wasowicz, Marcin</td>
<td>POLAND</td>
</tr>
<tr>
<td>O’Farrell, Rachel</td>
<td>IRELAND</td>
<td>Yu, Chunhua</td>
<td>CHINA</td>
</tr>
<tr>
<td>Pandurengan, Amaran</td>
<td>UNITED KINGDOM</td>
<td>Zhang, Huan</td>
<td>CHINA</td>
</tr>
</tbody>
</table>

### UHN/Toronto Western Hospital

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assmann, Nicole</td>
<td>UNITED KINGDOM</td>
<td>See, Jee Jian</td>
<td>SINAPORE</td>
</tr>
<tr>
<td>Hooshangi, Hedieh</td>
<td>IRAN</td>
<td>Shah, Bhadresh</td>
<td>INDIA</td>
</tr>
<tr>
<td>Lermite, Jeremy</td>
<td>UNITED KINGDOM</td>
<td>Shnaider, Ilia</td>
<td>ISRAEL</td>
</tr>
<tr>
<td>Li, Carina</td>
<td>HONG KONG</td>
<td>Soares, Luiz</td>
<td>BRAZIL</td>
</tr>
<tr>
<td>Moore, Michael</td>
<td>IRELAND</td>
<td>Tangwiwat, Suwimon</td>
<td>THAILAND</td>
</tr>
<tr>
<td>Morales, Eduardo</td>
<td>COLOMBIA</td>
<td>Wong, Daniel</td>
<td>AUSTRALIA</td>
</tr>
</tbody>
</table>
AWARDS AND ACHIEVEMENTS

DEPARTMENTAL AWARDS

The Thomas Donald Hammell Memorial Award in Anesthesia
For making the greatest contribution to the residency program (as chosen by the other residents).
1994  Basem Naser
1995  Chong Chow
1996  Cameron Guest
1997  Robert Chen
1998  Rassamee Ling
1999  Naseer Baig
2000  Brian Nishimura
2001  Elaine Ng
2002  Viren Naik
2003  Trisha Mark
2004  Shawn Mawhinney
2005  Susan French
2006  Randy Yue

The Dr. John Desmond Award
For excellence in undergraduate teaching.
1994  Christina Benedict
1995  Pam Morgan
1996  Isabella Devito
1997  Irene McGhee
1998  Ron Crago
1999  Susan Bertram
2000  John Bradley
2001  Carmencita Castro
2002  Hal Braden
2003  Beverly Morningstar
2004  Dragan Djordjevic
2005  Jordan Tarshis
2006  Gordon Urbach

The Dr. Gerald Edelist Award
For excellence in postgraduate teaching.
1995  Alan Laws (posthumous)
1996  Chiddam Ananthanarayan
1997  Patricia Houston
1998  Irene McGhee
1999  Robert Creighton
2000  Joseph Kay
2001  Ronald Crago
2002  Marianne Graham
2003  Mark Levine
2004  Mary Ellen Cooke
2005  David J. McKnight
2006  Patricia Murphy
The Hynek Rothbart Award
For presenting the best paper at the Shields Research Day.
1994  Karen McRae
1995  Brendan O’Hare
1996  Robert Chen
1997  Daisy Ip
1998  Frank Reinders
1999  John Laffey
2000  John Emery
2001  Viren Naik
2002  Anahi Perlas
2003  Not awarded
2004  Eric-You Ten
2005  Denis Rohan
2006  Peter Darby

Dr. Alan K. Laws Clinician Scientist Fellowship
To provide salary support for a resident who undertakes graduate level training in a related field.
2002  Duminda Wijeysundera
2003  Jens Tan
2004  Antoine Pronovost/Timothy Welke
2005  Dov Weiss

Dr. Alan K. Laws Travel Award
Awarded annually to provide support and encouragement for a senior resident in the Department of Anesthesia to further their academic interests by traveling to a foreign site to experience anesthesia as practiced elsewhere.
1996  Philip Peng
1997  Stephane Lambert
1998  Hwan Joo
1999  Rosaleen Chun
2000  Harald Bettger
2001  Carol Loffelmann
2002  Teddy Lim
2003  Trisha Mark
2004  Richard Brull
2005  Alan Chaput

Dr. Alan W. Conn Graduate Award
Awarded to a post-graduate trainee registered in a Master’s or Ph.D. degree program.
2005  Anton Marinov

Dr. Evelyn Bateman Award
For excellence in anesthesia at the undergraduate level.
1994  Desmond Lam
1995  Laura Hopkins
1996  Carol Loffelmann
1997  Ursula Jurt
1998  Shawn Mawhinney
1999  Jens Looser
2000  Gordon Buduhan
2001  Renee Allard
2002  Julie Lajoie
2003  Hance Clarke
2004  Nicholas Lo
2005  Kevin Lai
2006  Ben-Ari Fried/Cara Polson
FACULTY TEACHING AWARDS

Lisa Bahrey  Wightman-Berris Academy Undergraduate Teaching Award

HOSPITAL TEACHING AWARDS

Ken Lin  St. Michael's Dr.A.J. Dunn Award for Undergraduate Education

Brian Pollard and Jeffrey Wassermann  St. Michael's Dr.A.J. Dunn Award for Postgraduate Education

NATIONAL AND INTERNATIONAL AWARDS

Robert Byrick  Canadian Anesthesiologist’s Gold Medal 2006

Vincent Chan  Editorial Board, Anesthesia & Analgesia, April 2006

Treasurer, American Society of Regional Anesthesia and Pain Medicine

Greg Hare  Keenan Collaborative Research Award, May 2005

A.C. Bryan Award for best paper by a Graduate Student

Brian Kavanagh  Editorial Board, American Journal of Respiratory and Critical Care Medicine

Editorial Board, Intensive Care Medicine


Beverley Orser  Canadian Anesthesiologists’ Society Research Recognition Award 2006

Philip Peng  Treasurer of Canadian Neuromodulation Society

Wei-Yang Lu  NARSAD Essel Investigator 2005

STUDENT AWARDS AND ACHIEVEMENTS

Robert Bonin  NSERC, $17,000 (Supervisor: Dr. Beverley Orser)


Anya McLaren  Recipient of the A.C. Bryan Award for best paper by a graduate student. Increased HIF-1α and VEGF expression in rat cerebral cortex with acute hemodilution. May 5, 2006.

Peter Slinger  Elected Fellow, College of Anaesthetists, Royal College of Surgeons of Ireland, 2006.

Recipient of the Best Poster Award, Shields Research Day. nNOS contributes to protective mechanisms in rodents during acute hemodilutional anemia. May 5, 2006.
DEPARTMENT COUNCIL

The Department Council is chaired by the Chair, Department of Anesthesia. Membership comprises the Anesthetists-in-Chief of each affiliated hospital, and the Chairs of the Research, Postgraduate, Undergraduate and Continuing Education Committees. The terms of reference are to:

- Advise the Chair on departmental policies;
- Participate in long-range academic planning;
- Review issues of current concern to the department and the practice of anesthesia;
- Receive and implement reports from the committees on education and research.

Chair:
Dr. David Bevan

Anesthetists-in-Chief:
Dr. David Bevan UHN/ Mount Sinai Hospital
Dr. Gil Faclier Sunnybrook and Women’s College Health Sciences Centre
Dr. Patricia Houston St. Michael’s Hospital
Dr. Emily Mosher Toronto East General Hospital
Dr. Lawrence Roy Hospital for Sick Children

Deputy Chiefs:
Dr. Sue Belo Orthopaedic & Arthritic Hospital
Dr. Gordon Fox UHN/ Mount Sinai Hospital
Dr. Jean Kronberg Women’s College Site
Dr. Jacob Lai Toronto Western Hospital
Dr. Gerald O’Leary UHN/ Toronto General Hospital
Dr. Doreen Yee Sunnybrook and Women’s College Health Sciences Centre

Committee Chairs:
Dr. Gordon Fox Promotions Committee
Dr. Patricia Houston Awards
Dr. Patricia Houston Gender Issues Committee
Dr. Patricia Houston Education Committee
Dr. Mark Levine Postgraduate Education
Dr. David Mazer Research
Dr. Pamela Morgan Undergraduate Education
Dr. Peter Slinger Continuing Education
The Undergraduate Education Committee of the Department of Anesthesia is composed of the Chair, the Clerkship Course Director, representatives from each of the teaching hospitals, and a third and fourth year student representative. The Chair of the Department of Anesthesia and the Vice-Chair, Education are also committee members. The full committee meets monthly and manages all aspects of undergraduate teaching involving the University Department of Anesthesia.

Challenges we face are continuing decreases in the length of our rotation related to a 2-week break for CARMs interviews. This affects our already short rotation (of 2-weeks duration) causing the rotations after January to be shortened to 7-8 days. This provides challenges for both students and faculty. In addition, the anesthesia/emergency rotation is not offered in Block 1 of Phase II clerkship in order to allow students time to have electives prior to making their postgraduate course selections. This results in an increased number of medical students in the remaining blocks.

Pre-Clerkship
Members of each hospital department are involved in teaching courses in first and second year. This involvement includes tutoring in the Art and Science of Clinical Medicine years I and II, Metabolism and Nutrition, Foundations of Medical Practice, and Structure and Function courses.

Pre-Clerkship Lectures
Dr. S. Belo
Dr. R. Chen
Dr. V. Naik
Dr. J. Wasserman
ASCM I Course Director
Dr. J. Bradley  UHN/Toronto General Hospital

ASCM I Tutors
Dr. L. Bahrey  UHN/Toronto General Hospital
Dr. V. Hughes  St. Michael's Hospital
Dr. V. Naik  St. Michael's Hospital
Dr. G. Salvodelli  St. Michael's Hospital

Determinants of Community Health (DOCH) Year 2: Academy Course Supervisors
Dr. J. Bradley  UHN/Toronto General Hospital

Problem Based Learning Tutors, Year 1: Metabolism and Nutrition
Dr. M. van der Vyver  Sunnybrook & Women's College (Women's College Campus)

Problem Based Learning Tutors, Year 2: Structure and Function, Foundations of Medical Practice
Dr. S. Abrahmson  St. Michael's Hospital
Dr. R. Barlow  Hospital for Sick Children
Dr. M. Chochinov  Sunnybrook & Women's College (Sunnybrook Campus)
Dr. K. Cybulski  Hospital for Sick Children
Dr. I. Devito  UHN/Mount Sinai Hospital
Dr. A. Lee  UHN/Toronto General Hospital
Dr. K. Lin  St. Michael's Hospital
Dr. L. Roy  Hospital for Sick Children
Dr. S. Wong  Sunnybrook & Women's College (Sunnybrook Campus)

Foundations of Medical Practice Seminar Leaders, Year 2
Dr. R. Chen  St. Michael's Hospital
Dr. M. Chochinov  Sunnybrook & Women's College (Sunnybrook Campus)
Dr. R. Crago  UHN/Toronto Western Hospital
Dr. S. Davies  UHN/Mount Sinai Hospital
Dr. M. Graham  Sunnybrook & Women's College (Sunnybrook Campus)
Dr. K. Lin  St. Michael's Hospital
Dr. W. Middleton  UHN/Toronto Western Hospital
Dr. A. Morgan  Sunnybrook & Women's College (Women's College Campus)
Dr. V. Naik  St. Michael's Hospital
Dr. J. Wassermann  St. Michael's Hospital
Dr. E. You-Ten  UHN/Mount Sinai Hospital

Bruce Tovee Lecture Series, Year 4
Dr. I. Devito:
1. "Preoperative assessment of the Surgical Patient"
2. "Resuscitation"
Dr. L. Eisen  "Pain Management"

Wightman-Berris Academy Director
Dr. J. Bradley  UHN/Toronto General Hospital

The 9th Annual Anesthesia Information Evening for medical students was held in November 2005 under the leadership of Dr. I. Devito with the help of our third year medical student representative, Ian Randall. There were representatives from faculty involved in research, intensive care, regional anesthesia, pain management, and education. Representatives from the post-graduate years were present including those involved in research programs. This was a very successful evening - again!
Clerkship
Anesthesia and Emergency Medicine share a six-week block in the fourth year clerkship. There are three two-week anesthesia rotations within each six-week block (six blocks in total). The fourth year clinical clerks are evaluated both on their clinical performance and by a written on-line examination which occurs in the computer laboratory at the medical school. Two hospital coordinators mark the written examination centrally. Anesthesia staff at all teaching hospitals receive evaluations of their teaching in the operating room as well as their performance in seminars. Four seminars are given during each two-week rotation. Students complete on-line course and faculty evaluations immediately after their written examination.

Simulator Education Day
During the academic year, all final year medical students participated in the Simulator Educational Day at the Canadian Simulation Centre for Human Performance and Crisis Management Training at Sunnybrook & Women’s College Health Sciences Centre. The focus this year was on procedural skills training in response to a needs assessment. Students do not feel that they are receiving adequate procedural skills training and therefore we purchased 3 part-task simulators and set up a program with 5 stations. The stations included simulators to allow: 1) intravenous catheter insertion 2) LMA insertion 3) bag and mask ventilation, endotracheal intubation 4) monitoring including pulse oximetry and capnography and 5) high-fidelity patient scenario. All stations had associated learning objectives. Facilitators were present to assist students in achievement of the learning objectives.

In addition, for the first time this year, all PGY4 and 5 residents facilitated the simulator sessions. The focus for both the undergraduates and postgraduate trainees, was the achievement of CanMed goals for medical expert, communicator, and scholar.

Electives
Many first and second year University of Toronto medical students have arranged non-credited elective time with specific staff. Pre-clerkship medical students also arrange summer elective experiences in our departments, and many are involved in summer research projects.

CLERKSHIP SEMINAR LEADERS

Dr. L. Bahrey
Dr. M. Balki
Dr. H. Chan
Dr. V. Chan
Dr. M. Chochinov
Dr. S. Davies
Dr. I. Devito
Dr. D. Djordjevic
Dr. H. Fischer
Dr. Z. Friedman
Dr. S. Halpern
Dr. A. Ho
Dr. P. Houston  
Dr. V. Hughes
Dr. K. Hussain
Dr. D. Irwin
Dr. M. Jariani
Dr. G. Kanellakos
Dr. S. Kasodekar
Dr. J. Kay
Dr. R. Ko
Dr. A. Lee
Dr. M. Levene
Dr. K. Lin
Dr. A. Morgan
Dr. V. Naik
Dr. B. Pollard
Dr. D. Riegert
Dr. A. Sarmah
Dr. Y. Suntheralingam
Dr. J. Tarshis
Dr. J. Teresi
Dr. P. Tumber
Dr. M. van der Vyver
Dr. J. Wasserman
Dr. Z. Friedman
Dr. M. Srebnjak
Dr. E. You-Ten

CLERKSHIP SIMULATOR TEACHING

FACULTY

Dr. M. Choi
Dr. I. Devito
Dr. D. Djordjevic  
Dr. G. Kanellakos
Dr. K. Lin
Dr. P. Morgan
Dr. J. Robertson
Dr. A. Sarmah
Dr. P. Tumber
CLERKSHIP SEMINAR LEADERS

Dr. L. Bahrey          Dr. K. Hussain      Dr. B. Pollard
Dr. M. Balki          Dr. V. Hughes      Dr. D. Riegert
Dr. H. Chan           Dr. D. Irwin       Dr. A. Sarmah
Dr. V. Chan           Dr. M. Jariani     Dr. Y. Suntheralingam
Dr. M. Chochinov      Dr. G. Kanellakos  Dr. J. Tarshis
Dr. S. Davies         Dr. S. Kasodekar   Dr. J. Teresi
Dr. I. Devito         Dr. J. Kay        Dr. P. Tumber
Dr. D. Djordjevic    Dr. R. Ko          Dr. M. van der Vyver
Dr. H. Fischer        Dr. A. Lee        Dr. Z. Friedman
Dr. Z. Friedman       Dr. M. Levene      Dr. M. Srebnjak
Dr. S. Halpern       Dr. K. Lin         Dr. E. You-Ten
Dr. A. Ho            Dr. A. Morgan     Dr. I. Devito
Dr. P. Houston       Dr. V. Naik       Dr. K. Lin

CLERKSHIP SIMULATOR TEACHING

FACULTY

Dr. M. Choi          Dr. G. Kanellakos  Dr. J. Robertson
Dr. I. Devito        Dr. K. Lin        Dr. A. Sarmah
Dr. D. Djordjevic    Dr. P. Morgan     Dr. P. Tumber

RESIDENTS

PGY4
Dr. Ali Abbas
Dr. Nasser Al-Kemyani
Dr. Rashad Alquaim
Dr. Michael Bloom
Dr. David Chang
Dr. Meredith Ford
Dr. Jonathan Kong
Dr. Rohit Kumar
Dr. Hoi Kwan Lee
Dr. Paul McHardy
Dr. Diana Tamir
Dr. Anna Toptchieva
Dr. Timothy Welke

PGY5
Dr. Mark Yudin
Dr. Abdulaleem Al-Atassi
Dr. Juliana Tibbet
Dr. Jens Tan
Dr. Aliya Salman
Dr. Joshua Rucker
Dr. Antoine Pronovost
Dr. Nariman Malik
Dr. Alayne Kealey
Dr. Rachel Gislason
Dr. Kelly Chatterson
Dr. Alan Chaput
Dr. Randy Yue
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, the Resident Counselors, the Director of Education from the University Health Network, The Chair of the Education committee, the director of the simulator centre, the Chair of the Research Committee, one resident member from each of the PG year levels (elected by peers) and the Program Assistant. It is chaired by the Program Director. The Committee 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 department underwent a successful internal review in April 2006. Strengths of the program were noted to be the:

- Extensive didactic program and the protected time given to residents to attend;
- Large, enthusiastic group of expert teachers;
- Large volume and variety of teaching cases;
- Enthusiastic resident cadre.

The reviewers recognized that there was an increase in awareness and interest in research amongst junior residents but participation remains inadequate.
In October 2005, the Annual Research Day for junior residents was held to introduce the PG 1 and PG 2 residents to some of the prominent researchers in the department and to the scope of research carried out in the department. The presenters highlighted all aspects of a research career in anesthesia. The research day elevated the profile of research within the department and resulted in a greater interest in research amongst the junior residents.

In 2005-2006, two candidates were evaluated through the Assessment Program for International Medical Graduates (APIMG). Both of these candidates were found to be ready for immediate practice. Both passed the Royal College examinations in June 2006 and have entered practice in under-serviced areas in Ontario.

In the annual CaRMS Match, we received 88 applications. Two of the 15 available positions were assigned to the Clinician Investigator Program (CIP) Stream. These positions were not filled but we were able to fill all 15 positions in the regular program with good applicants some of whom had applied to the CIP stream. We also enrolled four Ontario International Medical Graduate Program residents – three at a PG 1 level and one at a PG 2 level.

The Fellowship Program continues to be very active. There were 75 fellows from 24 countries in 2004–2005.

The annual Shields Anesthesia Research Day was held on Friday, May 5, 2006 at the Metro Convention Centre. The Shields Lecture, “The Perfection of Man: Advances in Science, Medicine and Technology” was delivered by Dr. Peter G. Moore from the University of California, Davis.

The following awards were presented at the 2006 Shields Day:

- The R. J. Byrick Award for best presentation: Dr. Francesco Grasso for his presentation: Negative pressure ventilation – Better oxygenation and less lung injury.
- The Hynek Rothbart Award for the best resident paper was awarded to Dr. Peter Darby for his presentation: Effect of cardiopulmonary bypass on rat renal gene expression and blood flow.
- Best Poster Award: Albert Tsui (Masters student): nNOS contributes to protective role in rodents during acute hemodilutional anemia.
- The A.C. Bryan Award for best non-MD presentation: Anya McLaren (Masters student): Increased HIF-1α and VEGF expression in the rat cerebral cortex with acute hemodilution.
- The Thomas Donald Hammell Award: Dr. Randy Yue
- The Dr. John Desmond Award: Dr. Jordan Tarshis
- The Dr. Gerald Edelist Award: Dr. David McKnight

In 2006, all 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.
### ANESTHESIA RESIDENTS 2005-2006

<table>
<thead>
<tr>
<th>PGY1</th>
<th>PGY2</th>
<th>PGY3</th>
<th>PGY4</th>
<th>PGY5</th>
<th>FP Anesthesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ararat, Tim</td>
<td>Ahn, Richard</td>
<td>Al Ali, Raed</td>
<td>Abbass, Ali Akbar</td>
<td>Al Atassi, Abdulaleem</td>
<td>Hussein, Mohammed</td>
</tr>
<tr>
<td>D’Costa, Abelina</td>
<td>Chang, Alvin</td>
<td>Brunton, Jennifer</td>
<td>Alqasim, Rashad</td>
<td>Chatterton, Kelly</td>
<td>Ladak, Yasmin</td>
</tr>
<tr>
<td>Hayward, Diana</td>
<td>Fourie, Ockert</td>
<td>Darby, Peter</td>
<td>Ford, Meredith</td>
<td>Heier, Krista</td>
<td>Pietucha, Shamek</td>
</tr>
<tr>
<td>Kirkham, Kyle</td>
<td>Lo, Nicholas</td>
<td>Li, Alyssa</td>
<td>Kumar, Rohit</td>
<td>Pronovost, Antoine</td>
<td></td>
</tr>
<tr>
<td>Seib, Rachael</td>
<td>Simmons, Collan</td>
<td>Marinov, Anton</td>
<td>Tamir, Diana</td>
<td>Tan, Jens</td>
<td></td>
</tr>
<tr>
<td>Weekes, Darlene</td>
<td></td>
<td>Simms, Kathryn</td>
<td></td>
<td>Yue, Randy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caputo, Karen</td>
<td>Au-Yeung, Elizabeth</td>
<td>Al Sayegh, Yasser</td>
<td>Abbass, Ali Asghar</td>
<td>Bachler, Tony</td>
<td></td>
</tr>
<tr>
<td>Delbridge, Catherine</td>
<td>Coutinho, Christopher</td>
<td>Clarke, Hance</td>
<td>Bloom, Michael</td>
<td>Gislason, Rachel</td>
<td></td>
</tr>
<tr>
<td>Ip, Terence</td>
<td>Fuger, Jason</td>
<td>Hrdina, Josef</td>
<td>Grossi, Danny</td>
<td>Kealey, Alayne</td>
<td></td>
</tr>
<tr>
<td>Mehta, Bobby</td>
<td>Riazi, Shiela</td>
<td>Ko, Samuel</td>
<td>Lee, Hoi Kwan</td>
<td>Rucker, Joshua</td>
<td></td>
</tr>
<tr>
<td>Shastri, Uma</td>
<td>Steward, Andrew</td>
<td>Marwaha, Jasvir</td>
<td>Welke, Timothy</td>
<td>Tibbet, Juliana</td>
<td></td>
</tr>
<tr>
<td>Yaseen, Mohammad</td>
<td></td>
<td>Weiss, Dov</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chuang, Monica</td>
<td>Borden, Andrew</td>
<td>Bernstei, Steven</td>
<td>Al-Kemyani, Nasser</td>
<td>Chaput, Alan</td>
<td></td>
</tr>
<tr>
<td>Fried, Ben Ari</td>
<td>Donnelly, Thomas</td>
<td>Darani, Rosemin</td>
<td>Chang, David</td>
<td>Hakim, Sania</td>
<td></td>
</tr>
<tr>
<td>Kim, Han</td>
<td>Joshi, Mital</td>
<td>Kim, Catherine</td>
<td>Kong, Jonathan</td>
<td>Malik, Nariman</td>
<td></td>
</tr>
<tr>
<td>Meyer, Rachel</td>
<td>Ryan, Katharine</td>
<td>Ligori, Tania</td>
<td>McHardy, Paul</td>
<td>Salman, Aliya</td>
<td></td>
</tr>
<tr>
<td>Trang, Amy</td>
<td></td>
<td>Samuel, Daniella</td>
<td></td>
<td>Yudin, Mark</td>
<td></td>
</tr>
</tbody>
</table>

14
**UNIVERSITY OF TORONTO 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.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 9, 2005</td>
<td>Computer Literature Search 1</td>
<td>Ms. E. Uleryk</td>
</tr>
<tr>
<td>November 16, 2005</td>
<td>Computer Literature Search 2</td>
<td>Ms. E. Uleryk</td>
</tr>
<tr>
<td>November 23, 2005</td>
<td>Bibliographic Software Management Systems</td>
<td>Ms. T. Adams-Webber</td>
</tr>
<tr>
<td>November 30, 2005</td>
<td>Critical Appraisal</td>
<td>Dr. Stephen Halpern</td>
</tr>
<tr>
<td>December 7, 2005</td>
<td>Databases, Handling data</td>
<td>Dr. Guy Petroz</td>
</tr>
<tr>
<td>December 14, 2005</td>
<td>Issues in Informed Consent</td>
<td>Dr. David McKnight</td>
</tr>
<tr>
<td>January 11, 2006</td>
<td>Randomized Clinical Trials, Hypothesis Testing</td>
<td>Dr. Patricia McGrath</td>
</tr>
<tr>
<td>January 18, 2006</td>
<td>Systematic Reviews</td>
<td>Dr. Patricia McGrath</td>
</tr>
<tr>
<td>January 25, 2006</td>
<td>Statistics 1: Measurement scales, Types of Data</td>
<td>Dr. Guy Petroz</td>
</tr>
<tr>
<td>February 1, 2006</td>
<td>Statistics 2: Tests for Parametric data: two groups</td>
<td>Dr. Mark Crawford</td>
</tr>
<tr>
<td>February 8, 2006</td>
<td>Statistics 3: Sample Size and Power Analysis</td>
<td>Dr. Mark Crawford</td>
</tr>
<tr>
<td>February 15, 2006</td>
<td>Statistics 4: Confidence Intervals</td>
<td>Dr. Mark Crawford</td>
</tr>
<tr>
<td>February 22, 2006</td>
<td>Statistics 5: Tests for Nominal Data</td>
<td>Dr. Mark Crawford</td>
</tr>
<tr>
<td>March 1, 2006</td>
<td>Statistics 6: ANOVA 1</td>
<td>Dr. Hossam El-Beheiry</td>
</tr>
<tr>
<td>March 8, 2006</td>
<td>Statistics 7: ANOVA 2</td>
<td>Dr. Hossam El-Beheiry</td>
</tr>
<tr>
<td>March 22, 2006</td>
<td>Statistics 8: Linear Regression, Correlation</td>
<td>Dr. Hossam El-Beheiry</td>
</tr>
<tr>
<td>March 29, 2006</td>
<td>Statistics 9: Logistic regression, Multivariate Analysis</td>
<td>Dr. Hossam El-Beheiry</td>
</tr>
<tr>
<td>April 5, 2006</td>
<td>Statistics 10: Tests for Ordinal Data</td>
<td>Dr. Mark Crawford</td>
</tr>
<tr>
<td>April 12, 2006</td>
<td>Statistics 11: Statistical Software</td>
<td>Dr. Guy Petroz</td>
</tr>
<tr>
<td>April 19, 2006</td>
<td>Slide Making (Powerpoint)</td>
<td>Dr. Annette Vegas</td>
</tr>
<tr>
<td>April 26, 2006</td>
<td>Authorship</td>
<td>Dr. Bruno Bissonnette</td>
</tr>
<tr>
<td>May 3, 2006</td>
<td>Pitfalls in Writing Scientific Manuscripts</td>
<td>Dr. David Bevan</td>
</tr>
<tr>
<td>May 10, 2006</td>
<td>How to get your Paper Published</td>
<td>Dr. Frances Chung</td>
</tr>
<tr>
<td>May 17, 2006</td>
<td>Relationships with Pharmaceutical Companies</td>
<td>Dr. Robert Byrick</td>
</tr>
<tr>
<td>May 24, 2006</td>
<td>Scientific Misconduct</td>
<td>Dr. David McKnight</td>
</tr>
<tr>
<td>May 31, 2006</td>
<td>Writing Successful Research Proposals</td>
<td>Dr. Beverley Orser</td>
</tr>
<tr>
<td>June 7, 2006</td>
<td>Setting up a Research Laboratory</td>
<td>Dr. Daisy Joo</td>
</tr>
</tbody>
</table>
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 anesthetists 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; and,
- 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.
Dr. Alan K. Laws Clinician-Scientist Fellowship Award

The Laws Fellowship will provide salary support for graduate student training (1-2 years). The recipient, where appropriate, will be registered in the Clinician Investigator Program (CIP) of the Royal College of Physicians and Surgeons of Canada. He/she will be an anesthesia resident or junior fellow (1-2 years after completing postgraduate training in anesthesia).

Candidates for this fellowship will be clinical anesthetists enrolled in a graduate program at the University of Toronto. If the successful candidate holds a PhD prior to anesthesia training, enrolment in the CIP will be sufficient.

The candidate will have a faculty supervisor approved by the Chair of the Department of Anesthesia, and the Graduate School Program in which he/she is enrolled.

The successful applicant must be accepted into the graduate program prior to applying for the Laws Fellowship.

Part of holding the award will include travel outside Canada at least once during the fellowship. The purpose is to experience anesthesia/research relevant to their field of interest. The term of travel should not exceed four weeks and expenses will be reimbursed from the fellowship.

After completing the fellowship, the recipient will present his/her work to members of the Department.

Dr. Alan Laws was born in Warwick, Australia and graduated as the gold medalist from the University of Queensland in 1961.

He undertook anesthesia training in England and moved to Toronto in 1966 as a Research Fellow, working with Dr. Barrie Fairley, a clinical anesthetist at the Toronto General Hospital. As a clinician-scientist, he studied the effects of anesthesia on respiratory mechanics.

Alan had an intense interest in teaching, especially at the postgraduate level. He held morning trouble rounds that became a model for other hospitals. He became very involved in the examination process and was Chair of the Royal College Written Test Committee from 1977-88 and was Chief Examiner in Anesthesia from 1980-87. Under his leadership, the examinations became more clinically oriented, a process that has continued to this day.

Alan demonstrated an exceptional intellect and insight into clinical medicine, as well as the ability to impart relevant information to residents. He loved to travel and had an incredible breadth of experience. After his premature death (January 1995), over 120 of Alan’s friends, family and colleagues donated to a Memorial Trust Fund that provides an opportunity for a senior resident to travel and experience anesthesia practised elsewhere.

Dr. Alan Laws
SHIELDS ANESTHESIA RESEARCH DAY

The 27th Annual Shields Research Day was held at the Metro Convention Centre on May 5, 2006.

Shields Lecture

Peter G. Moore
Title: The Perfection of Man: Advances in Science, Medicine and Technology

Dr. Moore has served as Chair of the Department of Anesthesiology & Pain Medicine since 1996. He is a Fellow of the Royal Australian College of Surgeons (1992) and a Fellow of the Australian and New Zealand College of Anesthetists (1994). He is the Medical Director of the Center for Virtual Care, University of California, Davis, Health System (UCDHS).

Interests and Activities
Clinical: Critical care medicine with a special interest in trauma anesthesia/critical care; cardiothoracic anesthesia with a special interest in lung transplant anesthesia; pediatric anesthesia.

Educational: Educational technology and medical informatics; application of computer-based simulation for problem-solving learning.

Research: Regulation of coronary blood flow; myocardial function during ischemia and reperfusion; perioperative management of the trauma and high acuity patient.

Residents’ Session

Meredith Ford, Pamela Morgan (SWCHSC)
R1 Predictors of performance in Advanced Cardiac Life Support (ACLS) simulations

Timothy M. Welke, Viren N. Naik (SMH)
R2 Multimedia instruction for teaching crisis resource management

Diana Tamir, Anahi F. Perlas (UHN-TWH)
R3 A randomized-controlled, double-blind trial to determine the impact of ultrasound guidance on the success rate of popliteal fossa blocks

Hance Clarke, Joseph Kay (SWCHSC)
R4 The use of gabapentin for acute pain in total hip and total knee arthroplasty patients

Peter Darby, David Mazer (SMH)
R5 Effect of cardiopulmonary bypass on rat renal gene expression and blood flow

Fellows’ Session

Francesco A. Grasso, Brian P. Kavanagh (HSC)
M1 Negative pressure ventilation – Better oxygenation and less lung injury

Mauro Arrica, Mark W. Crawford (HSC)
M2 Extent and localization of changes in upper airway size and configuration with varying configurations of Sevoflurane in children
Andrew Roscoe, Peter Slinger (SMH)
M3 Pressures exerted by endobronchial devices: In-vitro model

Deven Chandra, Viren N. Naik (SMH)
M4 Management of simulated oxygen supply failure: Is there a gap in curriculum?

Alejandra Lopez, Jason Hayes (HSC)
M5 The minimum effective dose of remifentanil when co-administered with propofol in children: A dose-finding study

Cristian Arzola, Jose Carvalho (UHN-MSH)
A1 The transverse approach of lumbar spine ultrasound provides reliable landmarks for labour epidurals

Robert. J. Whitty, Jose Carvalho (UHN-MSH)
A2 Intrathecal bupivacaine for labour analgesia: A dose-finding study

Kasodekar Shilpa Vaibhav, Jose Carvalho (UHN-MSH)
A3 Patient-controlled analgesia with background remifentanil infusion for labour pain

Johannes Wacker, Scott Beattie (UHN-TGH)
A4 Withdrawal of beta blockers and the risks of perioperative MI

Anya McLaren, Gregory Hare (SMH)
A5 increased HIF-1a and VEGF expression in the rat cerebral cortex with acute hemodilution

Poster Session

Albert Tsui, Gregory Hare, Philip A. Marsden (SMH)
P01 nNOS contributes to protective role in rodents during acute hemodilutional anemia

Marie Felten, Peter Slinger (UHN-TGH)
P02 TEE assessment of mitral secondary chordal cutting and ring annuloplasty

Summer Syed, Dumindra Wijeysundera (UHN-TGH)
P03 Does staging bilateral knee surgery decrease cardiac morbidity?

Massimiliano Meineri, Keyvan Karkouti (UHN-TGH)
P04 Impact of a treatment protocol for excessive blood loss in cardiac surgery

Carmen Kummer, Claude Laflamme (SWCHSC)
P05 Is HbA1c a marker for poor outcome after CARG in undiagnosed diabetics?

Carmen Kummer, Doreen Yee (SWCHSC)
P06 A review of traumatic airway injuries: Implications in airway management

Georges L. Savoldelli, Viren N. Naik (SMH)
P07 The value of debriefing in simulation-based education: Oral versus video-assisted feedback

Jessica E. Burjorjee, Pamela J. Morgan (SWCHSC)
P08 The use of simulation for anesthesia residents to practice teaching medical students

Ken Walsh, Colin McCartney (UHN-TWH)
P09 Identifying an anesthetic curriculum for medical undergraduates. A Delphi study.
Sudhir Dhumne, Jose Carvalho (UHN-MSH)
P10 Prophylactic granisetron does not prevent nausea and vomiting during elective cesarean section under spinal anesthesia

Naveed Tahir Siddiqui, Gordon Fox (UHN-MSH)
P11 Hypoxemia on arrival to PACU: An observation audit

P. C. MacDougall, A. Jadad (UHN-TGH)
P12 Optimizing patterns of community referral to tertiary level specialists for management of chronic post-operative pain syndromes: A pilot study

Alan J. McCheyne, Bruno Bissonnette (HSC)
P13 Transient hyperemic response test differences during propofol and halothane in paediatric anesthesia

Alan J. McCheyne, Bruno Bissonnette (HSC)
P14 The effect of halothane and propofol on acute changes in cerebral blood volume in young children

Katherine Lau, Bruno Bissonnette (HSC)
P15 Effect of propofol concentration changes on electroencephalogram and bispectral index in children

Katherine Lau, Bruno Bissonnette (HSC)
P16 Can cerebral blood flow velocity and BIS detect changes in depth of anesthesia in children

Thomas Engelhardt, Bruno Bissonnette (HSC)
P17 Awareness during paediatric anesthesia – Myth or true concern?

Thomas Engelhardt, Bruno Bissonnette (HSC)
P18 The effect of propofol infusion on plasma cyclic GMP concentrations in anesthetized children

Cristian Arzola, Jose Carvalho (UHN-MSH)
P19 Lumbar dural sac width determined by ultrasound does not correlate with sensory levels of spinal anesthesia for elective cesarean section

Yamini Murthy, Pamela Angle (SWCHSC)
P20 Building a labour pain scale

Suwimon Tangwiwat, Pirjo Manninen (UHN-TWH)
P21 Post procedure pain management in patients following treatment for intracranial aneurysm

Michael Gofeld, Gil Faclier (SWCHSC)
P22 Ultrasound guided ilioinguinal nerve block in adults?

Ayman Rofaeel, Philip Peng (UHN-TWH)
P23 Feasibility of real-time ultrasound for pudendal nerve block in patients with chronic perineal pain

William Ju, Beverley Orser (SWCHSC)
P24 Characterization of tonically conducting GABA(A) receptors in the spinal cord

Justin M. John, Bruno Bissonnette (HSC)
P25 Paediatric airway management: Comparing the glidescope video laryngoscope with direct laryngoscopy

Maria Carmen M. Angeles, Arsenio Avila (SWCHSC)
P26 Assessment of a new technique of glidescope intubation in mediastinal mass resection
CONTINUING EDUCATION COMMITTEE

CME Chair: Dr. Peter Slinger

Committee Members:

- Dr. Pamela Angle Sunnybrook & Women’s College (Women’s College Campus)
- Dr. Karen Cybulski Hospital for Sick Children
- Dr. Sharon Davies UHN/Mount Sinai Hospital
- Dr. Len Eisen UHN/Mount Sinai Hospital
- Dr. Mark Freidlander North York General Hospital
- Dr. Charles Knapp North York General Hospital
- Dr. Carol Loffelmann St. Michael’s Hospital
- Dr. Joe Kay Sunnybrook & Women’s College (Sunnybrook Campus)
- Dr. Jordan Tarshis Sunnybrook & Women’s College (Sunnybrook Campus)
- Dr. Martin van der Vyver Sunnybrook & Women’s College (Women’s College Campus)
- Dr. Jean Wong UHN/Toronto Western Hospital

The Continuing Education Committee for the Department of Anesthesia is comprised of representatives from each of the teaching hospitals as well as community based anesthesiologists. It meets regularly 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 direction of Dr. Pamela Angle in 2005. This two-day course provided a combination of lectures, workshops and small group sessions. 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 U of T Department of Anesthesia:

1. Obstetric Anesthesia, September 10, 2005, Mount Sinai Hospital, Contact: J. Carvalho (Jose.Carvalho@uhn.on.ca)
2. Regional Anesthesia and Pain Medicine, September 30-October 2, 2005, Contact: V. Chan (Vincent.chan@uhn.on.ca)
3. Transesophageal Echocardiography, November 5-6, 2005, Contact: A. Vegas (Annette.Vegas@uhn.on.ca)
4. Pediatric Anesthesia, November 11-13, 2005, Contact: L. Roy (Lawrence.roy@sickkids.ca)
5. Anesthesia Faculty Development Day, November 11, 2005, Contact: P. Houston (houstonp@smh.toronto.on.ca)
6. Toronto Anesthesia Practice, November 25-27, 2005, Delta-Chelsea Hotel, Contact: P. Angle (Pamela.Angle@sunnybrook.ca)
7. Tremblant Anesthesia Meeting, February 17-20, 2006, Fairmont Hotel Mt. Tremblant; Contact: J. Tarshis (jordan.tarshis@sunnybrook.ca)
8. Toronto Anesthesia Symposium: “Update on Airway Management”. April 1-2, 2006, Contact: P. Slinger (peter.slinger@uhn.on.ca)
9. 3rd Annual International Symposium on Ultrasound and Regional Anesthesia, April 22-4, 2006, Contact: C. Drane (Christine.Drane@uhn.on.ca)
City Wide Rounds
University of Toronto Anesthesia Video-Conference Rounds were held 3 times in 2005-2006:

- September 30, 2005: “Inflammatory Mediators of Surgery: Pain and Outcome Measures as it Relates to Anesthesia”, Dr. Asokumar Buvanendran
- December 9, 2005: “Ambulatory Perineural Analgesia”, Dr. Xavier Capdevila
- January 6, 2006: “Recombinant Factor VIIa”, Dr. Keyvan Karkouti
- March 3, 2006: “Mechanisms of Cerebral Protection and Injury During Acute Anemia”, Dr. Greg Hare
- April 28, 2006: “The Present and Future of Pain Research”, Dr. Mike Salter

Web-Based Learning
CME Online Anesthesia Rounds
This program has been enlarged to eight educational modules. This program has been developed by Sharon Davies (Mt. Sinai). These modules have been accredited by the University of Toronto for MainCert Category I credits and can be accessed through the U of T Anesthesia Department Website www.anesthesia.utoronto.ca under: Education/ Continuing Medical Education.

Continuing Professional Development
The CME Committee plans to develop a grant program using funds generated by the University of Toronto Department of Anesthesia continuing medical education (CME) courses to enable the U of T Anesthesia faculty to pursue further education or projects related to CPD.
City Wide Rounds
University of Toronto Anesthesia Video-Conference Rounds were held 3 times in 2005-2006:

- September 30, 2005: “Inflammatory Mediators of Surgery: Pain and Outcome Measures as it Relates to Anesthesia”, Dr. Asokumar Buvanendran
- December 9, 2005: “Ambulatory Perineural Analgesia”, Dr. Xavier Capdevila
- January 6, 2006: “Recombinant Factor VIII”, Dr. Keyvan Karkouri
- March 3, 2006: “Mechanisms of Cerebral Protection and Injury During Acute Anemia”, Dr. Greg Hare
- April 28, 2006: “The Present and Future of Pain Research”, Dr. Mike Salter

Web-Based Learning
CME Online Anesthesia Rounds
This program has been enlarged to eight educational modules. This program has been developed by Sharon Davies (Mt. Sinai). These modules have been accredited by the University of Toronto for MainCert Category I credits and can be accessed through the U of T Anesthesia Department Website www.anesthesia.utoronto.ca under: Education/ Continuing Medical Education.

Continuing Professional Development
The CME Committee plans to develop a grant program using funds generated by the University of Toronto Department of Anesthesia continuing medical education (CME) courses to enable the U of T Anesthesia faculty to pursue further education or projects related to CPD.
RESEARCH COMMITTEE

Research Chair: Dr. David Mazer

Committee Members:

- Dr. Pamela Angle, SWCHSC (Women’s College Campus)
- Dr. Andrew Baker, St. Michael’s Hospital
- Dr. Scott Beattie, UHN/Toronto General Hospital
- Dr. Alan Chaput, Trainee Representative
- Dr. Mark Crawford, Hospital for Sick Children
- Dr. Brian Kavanagh, Hospital for Sick Children
- Dr. Mark Levine, Residency Program Director
- Dr. Alison MacArthur, UHN/Mount Sinai Hospital
- Dr. Peter Mak, UHN/Toronto Western Hospital
- Dr. David Mazer, St. Michael’s Hospital
- Dr. David McKnight, Ethics, St. Michael’s Hospital
- Dr. Beverley Orser, SWCHSC (Sunnybrook Campus)

Research Productivity and Funding Support

2005–2006 was another very successful year for the Department of Anesthesia. Research funding increased for the 6th consecutive year and now exceeds $9 million. Peer-review funding continues to be the major source of research support, increasing by more than 5 fold in the last 5 years. In keeping with the department’s priorities, research in neuroanesthesia, cardiorespiratory, critical care, pain, technology, education, patient safety, ambulatory and obstetrical anesthesia continue to be well supported.

Our productivity remains very competitive with other leading Departments of Anesthesia in North America, with 172 publications, 171 abstracts and 30 book chapters published this year (please refer to the list of publications on page 26).

At the 2005 Canadian Anesthesiologists’ Society meeting, the following department members received prominent research awards:

- Dr. Gregory Hare – the Richard Knill Award and the Bristol-Myers Squibb Canada/CAS Career Scientist Award in Anesthesia and Peri-operative Medicine for “Mechanisms of cerebral protection and injury during acute hemodilutional anemia”.
- Dr. Duminda Wijeysundera – Canadian Anesthesiologists’ Society Research Award for “The EPIC (Evaluating Peri-operative Ischemia reduction by Clonidine) Study: A randomized double-blinded trial of clonidine for reducing cardiac morbidity and mortality following non-cardiac surgery”.

![Graph showing research funding trends from 1995-06 to 2004-05]
Selected Grants and Awards

- Dr. Scott Beattie was awarded a CIHR grant for “The perioperative epidural trial (POET): A pilot trial assessing the use of perioperative epidural anesthesia and analgesia in the reduction of major postoperative cardiopulmonary morbidity”.
- Dr. Frances Chung received funding from the Physicians’ Services Incorporated Foundation for a study of the “Elimination of preoperative testing in low-risk day surgery”.
- Dr. Joe Fisher received grants from the U.S. government to study “Testing for highly mobile oxygen supplementation system and investigation of feasibility of integrating with battlefield ventilation device”.
- Drs. Viren Naik, Hwan Joo, and Patricia Houston received grants from The Canadian Anesthesiologists’ Society, the Dean’s Excellence Fund for Medical Education, and the Physicians’ Services Incorporated Foundation to study simulation-based training and performance for anesthesia residents.
- Dr. Keyvan Karkouti was awarded a CIHR grant for his study entitled “Development and validation of a clinical prediction rule for massive blood loss in cardiac surgery”.
- Dr. Brian Kavanagh was awarded a CIHR grant for “Therapeutic hypercapnia”.
- Dr. Wei-Yang Lu received funding from CIHR to study “Acetylcholinesterase in brain aging”.
- Dr. Haibo Zhang was awarded a CIHR grant for his study on “Human neutrophil peptides in lung inflammation.”


Arrica M, Crawford MW. Complete upper airway obstruction after induction of anesthesia in a child with undiagnosed lingual tonsil hypertrophy. Pediatric Anesthesia 2006; 16:584-7

Atkins RF, Wong DT. The LMA is a critical rescue device in airway emergencies. Anesth Analg 2005; 101:1888-9


Bell JH, Duffin J. Rapid increases in ventilation accompany the transition from passive to active movement. Respir Physiol Neurobiol. 2006; 152(2):128-42


Bohn D. Diaphragmatic hernia – pre and postnatal. Paediatric Respiratory Reviews 2006; 7S:S249-S250


Cheng VY, Martin LJ, Elliott EM, Kim JH, Mount HTJ, Taverna FA, Roder JC, MacDonald JF, Bhambru A, Collinson N, Wafford KA, Orser BA a5GABAA receptors mediate the amnestic but not sedative-hypnotic effects of the general anesthetic etomidate. *J Neurosci,* 2006; 26:3713-3720


Crawford MW, Rohan D, Macgowan C, Yoo SJ, Macpherson B. Effect of propofol anesthesia and continuous positive airway pressure on upper airway size and configuration in infants. *Anesthesiology* 2006; 105:45-50


Duffin J. Supraspinal locomotor centers do/do not contribute significantly to the hyperpnea of dynamic exercise in humans. *J Appl Physiol*. 2006; 100(4):1418


Haj RM, Cinco JE, Mazer CD. Treatment of Pulmonary Hypertension with Selective Pulmonary Vasodilators. Current Opinion in Anesthesiology 2006; 19(1):88-95


Jadad AR. What will it take to bring the Internet to the consulting room? We cannot remain oblivious to our patients’ expectations. *Journal of General Internal Medicine* 2005; 20:786-7


Macdonald DS, Weerapura M, Beazely MA, Martin L, Czerwinski W, Roder JC, Orser BA, MacDonald JF. Modulation of NMDA receptors by pituitary adenylate cyclase activating peptide in CA1 neurons requires Galphaq, protein kinase C, and activation of Src. J Neurosci 2005; 7; 25(49):11374-84


Orser, BA, Caraiscos VB, Elliott E, Cheng VY, Newell JG, MacDonald JF. Anesthetic sensitivity is reduced in hippocampal pyramidal neurons from GABAa receptor a5 subunit null mutant mice. *International Congress Series* 2005; 1283:38-42


Orser, BA. Extrasynaptic GABAA receptors as critical targets for sedative-hypnotic drugs. *The Journal for Clinical Sleep Medicine* 2006; 2:S12-S18 (invited review)


Randolph, Adrienne G. MB, BS, MS MSc; Forbes, Peter W. MA; Gedeit, Rainer G. MD; Arnold, John H. MD; Wetzel, Randall C. MB, BS, MS; Luckett, Peter M. MD; O’Neil, Mary E. MPH; Venkataraman, Shekhar T. MD; Meert, Kathleen L. MD; Cheifetz, Ira M. MD, FCCM, FAARC; Cox, Peter N. MBChB; Hanson, James H. MD; for the Pediatric Acute Lung Injury & Sepsis Investigators (PALISI) Network. Cumulative fluid intake minus output is not associated with ventilator weaning duration or extubation outcomes in children. *Pediatric Critical Care Medicine* 2005; 6:642-7


Savoldelli GL, Naik VN, Joo HS, Houston PL, Graham M, Yee B, Hamstra SJ. Evaluation of patient simulator performance as an adjunct to the oral examination for senior anesthesia residents. *Anesthesiology* 2006; 104(3):475-81


Taddio A, Katz J. The Effects of Early Pain Experience in Pre-Term and Full-Term Neonates on Subsequent Pain Responses later in Infancy and Childhood. *Pediatric Drugs* 2005; 7:254-257


Tumber PS, Louis I. Botulinum toxin type A and human serum albumin. *Anesthesiology* 2006; 104:1108


**ANNUAL REPORT 2005 – 2006**


**Xiang YY, Dong H, Wan Y, Li J; Yee A, Yang BB and Lu W-Y.** Versican G3 domain regulates neurite growth and synaptic transmission of hippocampal neurons by activation of epidermal growth factor receptor. *Journal of Biological Chemistry* 2006 Apr; 28


CHAPTERS IN BOOKS


Hare GMT, Mazer CD. Hemoglobin Based Oxygen Carriers. In: Perioperative Transfusion Medicine, Spiess BD, Spence R and Shander A (Eds.) Williams & Wilkins, Baltimore 2005.


ABSTRACTS


Angeles MCM, Wong D, Peng P, Chung F, Yeo E. Managing surgical patients on anticoagulants by using thrombosis risk score. Anesthesiology 2005; 103:A639


Arzola C, Balki M, Carvalho JCA. Lumbar dural sac width determined by ultrasound does not correlate with sensory level of spinal anesthesia for elective cesarean section. Anesthesiology 2006; 104(1):SOAP A7.


Bonin RP, Wafford KA, MacDonald JF, Orser BA. Regulation of neuronal excitability and sensitivity to GABA by ?5 subunit-containing GABAA receptors. Society for Neuroscience 2005; 955.13


Carvalho J, Arzola C, Davies S, Rofaeel A. The transverse approach of lumbar spine ultrasound provides reliable landmarks for labor epidurals. Anesthesiology 2006; 104 Supp 1:A44


El-Beheiry H, Mak PHK, Wallace MC. Pre-operative co-morbidities are predictors of death in young but not elderly patients with intracranial aneurismal rupture. EJA 2006; 23:A357


Gagliese L, Weizblit N, Ellis E, Chan V. A comparison of pain intensity scales in younger and older surgical patients. 11th World Congress on Pain, Sydney, Australia. Abstracts of the 11th World Congress of Pain, 2005; 343


Ioscovich A, Goldszmidt E, Fadeev A, Halpem S. Peripartum anesthetic management of patients with aortic stenosis. Anesthesiology 2006; 104 Supp 1,A65.


John J, Karsli C, Luginbuehl I, Bissonnette B. Pediatric Airway Management: Comparing the GlideScope® Video Laryngoscope with Direct Laryngoscopy. Anesthesiology 2006;A1151

 Kasodekar S, Dhumne S, Balki M, Carvalho JCA. Prophylactic granisetron does not prevent nausea and vomiting during elective cesarean section under spinal anesthesia. Anesthesiology 2006; 104: Supp 1 SOAP A5.


Lilker S, Balki M, Rofaeel A, Fallah S, Carvalho JCA. Fentanyl and sufentanil as adjuncts to bupivacaine for labor epidural analgesia: an equivalence study. Anesthesiology 2006;104: Supp 1 A53.


Lu W-Y, Xiang Y-Y, Ju W, Liu M, Orser BA. A-type gamma-aminobutyric acid receptor (GABAAR) and glutamic acid decarboxylase (GAD) in type ii pneumocytes  *Can J Anesth* Supplement Jun 2006 #26167


Martin L, Bonin R, Oh G, Orser BA. Alpha5-GABAARS are not required for memory impairment by ethanol in mice  *Can J Anesth* Supplement June 2006 #26384

Martin LJ, Cheng VY, MacDonald JF, Wafford KA, Orser BA. Learning and memory impairment by the general anesthetic, etomidate is mediated by 15 GABAA receptors.  *Society for Neuroscience* 2005; 611.11


McCheyne Alan J., M.B. Ch.B., Engelhardt Thomas , M.D., Ph.D., Karsli Cengiz , M.D., Luginbuehl Igor, M.D., Bissonnette Bruno, M.D. Cerebrovascular Hemodynamic Changes with Different Propofol Plasma Concentrations in Young Children.  *Anesthesiology* 2006; A1728.

McLaren A, Stewart DJ, Mazer CD, Hare GMT. Hemodilutional Anemia Increases HIF-1α Protein in Rat Cerebral Cortex Keystone Symposium - Hypoxia. Breckenridge CO January 2006

McLaren A, Stewart DJ, Mazer CD, Hare GMT. Hemodilutional Anemia Increases HIF-1α Protein in Rat Cerebral Cortex. CAS 62nd Annual Meeting, Toronto, Ontario. June 2006.


Miller AL, Tousignant CP, Bowry R. Effect of Heart Rate on Tricuspid Annular Velocities in Cardiac Surgical Patients with Atrial Fibrillation. SCA Update on Cardiopulmonary Bypass, Whistler, British Columbia, March 2006.


Orser BA, Martin L, Cheng V, MacDonald JF. The amnestic and sedative-hypnotic properties of etomidate in mice can be dissociated based on GABA(A) receptor subtype pharmacology Can J Anesth Supplement June 2006: 26485


Rofaeel A, Lilker S, Goldszmidt E, Carvalho JCA. Combined spinal epidural analgesia in active labor: Effects of baricity of the intrathecal solution on block characteristics and maternal and fetal side effects. Anesthesiology 2005; 103:A592


Tousignant CP. TEE symposium at CAS on advances in TEE in anesthesia. Tissue doppler and perioperative applications.


INVITED LECTURES

Angeles MCM


Angle P


Awad I


Baker


Balki M

**Beattie WS**  

Visiting Professor. University of Calgary, Department of Anesthesia, Calgary, AB. April 2006.


Day in Anesthesia. The Use or Disuse of Pre-operative Stress Testing to Delineate Peri-operative Risk. April 2006.


**Bevan DR**  

**Bissonnette B**  


Curso Internacional De Anestesia, En Alta Especialidad. Proteccion Cerebral: Que es nuevo, que es no. (Cerebral protection: What’s new, what’s not?) Centro Medico Nacional ‘20 de Noviembre’ University of Mexico, Mexico City, Mexico. 2005.


Centre Hospitalier Universitaire Vaudois. Anesthésie Pédiatrique (Pediatric anesthesia). University of Lausanne, Lausanne, Switzerland. 2005.

Centre Hospitalier Universitaire Vaudois. TCC et protection cérébrale chez l’enfant. (Head trauma and cerebral protection in children). University of Lausanne, Lausanne, Switzerland. 2005.


Bohn D


Canadian Pediatric Society 83rd Annual Conference. Myths and Realities of Paediatric IV Fluid Management (Co-speaker). St. John’s, NF. June 2006.

2nd Annual Toronto Symposium. Are We Ventilating the Lungs or the Right Heart? Contemporary Questions in Congenital Heart Disease. Toronto, ON. June 2006.


Bradley JW
Workshop on Clinical Skills Teaching (by tele-conference). Northern Ontario School of Medicine, ON. September 2005.

Workshop: Teaching On-Line -- Challenges and Motivators in Developing an On-Line Education Tool. Centre for Faculty Development, Faculty of Medicine, University of Toronto, Toronto, ON. November 2005.

Brull R


**Burjorjee J**


**Campbell FA**


**Carvalho J**


Brazilian Congress of Anesthesiology. PCA for Labor Analgesia, Epidural and Intravenous. Goiania, Brazil. November 2005.


MCP Rounds. Anesthesia in high risk obstetrics, Part II. Department of Obstetrics and Gynecology, Mount Sinai Hospital, Toronto, ON. December 2005.


**Chan V**


Visiting Professor. Purpose Driven Regional Anesthesia: The Role of Ultrasound Imaging. Brigham and Women’s Hospital, Department of Anesthesia, Boston, MA. June 2006.


Visiting Professor. Purpose Driven Regional Anesthesia – The Role of Ultrasound Imaging. Vanderbilt University Medical Center, Department of Anesthesiology, Nashville, TN. May 2006.
Workshop Leader. Regional Anesthesia and Acupuncture - Ultrasound Guided Peripheral Nerve Blocks. Vanderbilt University Medical Center, Department of Anesthesiology, Nashville, TN. May 2006.

Ultrasound Guided Nerve Blocks. Vanderbilt University Medical Center, Department of Anesthesiology, Nashville, TN. May 2006.


Visiting Professor. Ultrasound Guided Nerve Blocks. Rush University Medical Center, Department of Anesthesiology, Chicago, IL. May 2006.


Workshop leader: Queen Mary Hospital, Queen Elizabeth Hospital, United Christian Hospital, Kwong Wah Hospital, Caritas Medical Centre, Tuen Mun Hospital, Alice Ho Miu Ling Nethersole Hospital, Prince of Wales Hospital, North District Hospital. January 2006.


Visiting Professor. Does Ultrasound Guided Nerve Block Improve Patient Outcome? Department of Anesthesiology, University of Alabama, Birmingham, AL. January 2006.


Workshop Leader. Challenging Cases in Regional Anesthesia. Department of Anesthesia, Queen’s University, Kingston, ON. December 2005.


56th American Society of Anesthesiologists Annual Meeting. Workshop Leader, Continuous Nerve Blocks for Pain Control: In the Hospital and Beyond. Atlanta, GA. October 2005.


**Chung F**


Difficult Intubation and Obstructive Sleep Apnea. St. Joseph’s Hospital, Toronto, ON. March 2006.


Cooper RM


Cox P

7th National Congress on Pediatric Critical Care. High Frequency Oscillatory Ventilation – applied physics; Surviving Sepsis (Plenary); Guidelines, Putting Evidence into Practice; Difficulties in Establishing Brain Death (Is My Patient Dead?) (Symposium); Ventilator Strategies for Optimizing Oxygenation. Pune, India. October 2005.

The 8th UAE International Pediatric Congress. Medical Error and quality management in the CCU; HFO and Lung recruitment. Dubai, UAE. January 2006.


Dattilo K

_Davies S_

_Devito I_

_Djaiani G_
Invited Lecture. Anesthesia Update. Diastolic dysfunction in the cardiac operating room; why should we care? Mount Sinai Hospital, St. Thomas, NY. 2006.

_Engelhardt T_
Research in Progress Meeting. The effect of propofol infusion on plasma cyclic GMP concentrations in anesthetized children. Department of Anesthesia, University of Toronto, Presented as well at The Surgical Services Grand Rounds 2006 Laboratory and Clinical Science Research Competition, Sick Kids Hospital. Toronto, ON. May 2006.

_Evans AW_


_Ford MK_

_Gagliese L_


Gardner-Nix J


Women’s Health Matters Forum and Expo. I can’t take it! Dealing with pain: using the mind to heal the body. Toronto, ON. January 2006.

Update on Chronic Pain Management at Update 2006 Conference for Pharmacists. Ottawa Civic Hospital, Ottawa, ON. February 2006.


Gofeld M


Radiofrequency Denervation of Lumbar Zygopophysial Joints - Targeting the Best Practice, Edmonton, AB. June 2006.

Goldszmidt E

Halpern S


Is Regional Anesthesia safer than General Anesthesia for cesarean section? New York School of Medicine, New York, NY. January 2006.

Hare GMT


Hayes J

Holtby HM
Difficult Pediatric Cases. Detroit Children’s Hospital, Detroit, MI. September 2005.


Visiting Professor. Dept of Anesthesiology, University of Michigan, Ann Arbor, MI. May 2006.

Houston P

Idestrup C

Jadad AR

La eSalud: que sera? (eHealth: what will happen?). Universidad Internacional de Andalucía, Malaga. July 2005.


Accelerating the transformation of the health system in the age of the Internet. Centre for Health Informatics, University of New South Wales. New South Wales, Australia. August 2005.


What is knowledge management? (Que es la gestion del conocimiento?). Valencia, Spain, March 2006.

**John J**

**Joo HS**


**Kanellakos G**


**Karkouti K**


Visiting Professor. St. Paul's Hospital, University of British Columbia. 1. Significance of Massive Blood Transfusion as a Complication of Cardiac Surgery. 2. Use of rFVIIa in Cardiac Surgery. 2006.


**Karski J**


**Karsli C**


**Katz J**
Guest Lecturer for Health Psychology Seminar. Psychology Department, York University. Transition of Acute Postoperative Pain to Chronic Pain I. Toronto, ON. February 2006.

Guest Lecturer for Health Psychology Seminar. Psychology Department, York University. Transition of Acute Postoperative Pain to Chronic Pain II. Toronto, ON. February 2006.

**Kavanagh B**


University of BC and Vancouver Children’s Hospital, Vancouver, BC. (Visiting professor to the Department of Pediatrics, University of British Columbia, and the British Columbia Pediatric Society). February 2006.


**Kummer C**


**Lau K**

Can cerebral blood flow velocity and BIS detect changes in depth of anesthesia in children? Research in Progress Meeting, Department of Anesthesia, University of Toronto, Presented as well at The Surgical Services Grand Rounds 2006 Laboratory and Clinical Science Research Competition, Sick Kids Hospital. Toronto, ON. May 2006.
The effect of propofol concentration changes on electroencephalogram and bispectral index in children. Research in Progress Meeting, Department of Anesthesia, University of Toronto, Toronto, ON. May 2006.

**Macarthur A**

3rd Annual Mount Sinai Hospital Obstetric Anesthesia Conference. Fever in labor: Possible Causes, Possible Consequences and need to Treat. Toronto, ON. September 2005.


**Mak P**


**Manninen P**


**Mazer CD**


My patient recently had a coronary stent: What should I know and do? Toronto Anesthesia Symposium, Toronto, ON. April 2006.

Is the anesthesiologist responsible for post-operative blindness? Toronto Anesthesia Symposium, Toronto, ON. April 2006


Cardiovascular Anesthesia Research: Have all the questions already been answered? Visiting Professor, University of Ottawa, Department of Anesthesia, Gary Johnson Research Day. Ottawa, ON. May 2006.


McCartney C JL


Speaker, Sacral Plexus, 3rd Annual International Symposium on Ultrasound and Regional Anesthesia, Toronto, ON. April 2006.


Workshop, Use of stimulation techniques in regional anesthesia, University of Toronto Hands-On Regional Anesthesia Workshop, Toronto, ON. February 2006.

Visiting Professor, Use of ultrasound for regional anesthesia, Eastern Maine Medical Centre, Bangor, ME. February 2006.

Speaker, Getting the best bang for your analgesic buck: Best strategies for perioperative pain management, Okanogan Anesthesia Conference, Silver Star Resort, January 2006.

Speaker, Defining the use of ultrasound in regional anesthesia, Okanogan Anesthesia Conference, Silver Star Resort, January 2006.


Visiting Professor, Use of ultrasound in regional anesthesia. National Naval Medical Centre, Maryland. September 2005.

Visiting Professor, Use of ultrasound in regional anesthesia. Walter Reed Army Medical Centre, Washington DC. September 2005.

McCheyne AJ

McCluskey SA


McKnight D


McRae K

Morgan PJ


Simulation in Anesthesia: where we have been, where we are and where we are going. Simulation Symposium. McMaster University. Hamilton, ON. November 2005.

What’s new in Obstetric Anesthesia. CME lecture to Lakeridge District anesthetists, Keynote lecture, local audience. February 2006.

Simulation in Anesthesia: where we have been, where we are and where we are going. Simulation Symposium. Hospital for Sick Children. Toronto, ON. March 2006.


Simulation in Canada: are we addressing patient safety? Association of Canadian University Departments of Anesthesia (ACUDA). Toronto, ON. June 2006.


**Murphy P**  


**Naik, VN**  


Naik VN, Tarshis JT. Debriefing in Patient Simulation. Simulation Centre, McGill University, Montreal, PQ. June 2006.


**Orser B**  
Department of Pharmacology, University of Dundee, Scotland, UK. August 2005.


Special meeting on solutions to labeling and packaging issues of pharmaceutical and IV solutions. Canadian Patient Safety Institute and ISMP-Canada, Sheraton Hotel, Toronto, ON. September 2005.


Medication Safety. Department of Anesthesia, Laval University, Quebec City, QC. February 2006.

Medication Safety. The Association of Canadian University Departments of Anesthesia (ACUDA), Toronto, ON. June 2006.


Perioperative Drug Safety, Nursing Department, Sunnybrook and Women’s College HSC, Toronto, ON. February 2006.

Visiting Professor. Department of Anesthesia. Laval University, Quebec City, PQ. February 2006.
**Peng P**

Speaker, Coping with Neuropathic Pain. Workshop for family physicians and specialists. Intercontinental Hotel, Toronto, ON. August 2005.

Speaker, Coping with Neuropathic Pain. Workshop for family physicians and specialists. Vaughan Estate, Sunnybrook Hospital, Toronto, ON. August 2005.


Speaker, Peri-operative management of patients on methadone therapy. CME round, Southlake Regional Health Center, Newmarket, ON. November 2005.


Speaker, Post-operative pain management with Cox-2 inhibitors. Association of Private Orthopedic Surgeons Hong Kong. Hong Kong, China. March 2006.


Multi-modal Pain Management. CME meeting, Department of Orthopedic Surgery and Anesthesiology, Mississauga General Hospital, Mississauga, ON. May 2006.

Multi-modal Pain Management. CME meeting, Department of Orthopedic Surgery and Anesthesiology, Mississauga General Hospital, Mississauga, ON. May 2006.


Multi-modal Pain Management. CME meeting, Department of Orthopedic Surgery and Anesthesiology, St. Joseph Hospital, Toronto, ON. June 2006.

**Perlas A**


Prabhu A


Slinger P

Visiting Professor. Wuxi Fifth People’s Hospital, Wuxi, China. July 2005.


Visiting Professor, Department of Anesthesia, Duke University Medical School, Durham, NC. January 2006

University of Utah Annual Postgraduate Course in Anesthesia. Post-thoracotomy Analgesia; Preoperative Assessment for Pulmonary Resection; Update on One-lung Ventilation; Mediastinal Masses. Park City, UT. February 2006.


Sulaiman I

Tarshis J


Tumber P


Chronic Pain and Opioids, Inaugural Spine Day, Trillium Hospital, Mississauga ON. April 2006.

Van der Vyver M
Workshop: Interesting Cases in Obstetrical Anesthesia, Toronto Anesthetic Practice Meeting, University of Toronto, Toronto, ON. November 2005.

Van Rensburg A


**Vegas A**


**Wijeysundera D**
Anaesthetic Practice 2005. Pro-Con Debate: Every Patient with Coronary Artery Disease Needs a Perioperative Beta Blocker. Faculty of Medicine, University of Toronto, Toronto, ON. November 2005.

Nephrology Rounds. Renal Dysfunction Following Cardiac Surgery: The Multi-Disciplinary Research Experience at UHN. Division of Nephrology, University Health Network, Toronto, ON. January 2006.


**Wong D**
Alternative airway techniques. West China Hospital, Sichuan University, Chengdu, China. July 2005.

Perioperative cardiac risk reduction. West China Anesthesiology annual meeting, Chengdu, China. August 2005.


**Yogendran S**
Yee D

Zhang H


PEER REVIEWED GRANTS


Brown SC., (Co-investigator for this grant), Principal investigators include Dalhousie/IWK Health Centre (Drs. P. J. McGrath, A. Finley), McGill University (Dr C. Johnston), The University of Toronto (Dr B. Stevens), University of Saskatchewan (Dr C. von Baeyer) and University of British Columbia (Dr K. Craig) Canadian Institutes of Health Research (CIHR Grant). $1.8 Million CDN awarded. Pain in child health: An innovative transdisciplinary, cross-country research training consortium. 2002, 6-year duration.

Brown SC., (Primary co-investigator for this grant), Our new emerging team includes scientists based at The University of Toronto (Drs. P. A. McGrath, S. Brown, K. Davis, R. Geist), York University (Dr J. Katz), and Queens University (Dr E. VanDenKerkhof). Canadian Institutes of Health Research (CIHR Grant). $1.5 Million CDN awarded. Gender Differences in Child Development: Vulnerability to Chronic Pain. 2003, 5-year duration.

Brown SC., (Project Director for this grant), Our research team includes scientists based at The University of Toronto (Drs S. Brown, P. McGrath and S. Schneeweiss), biomedical engineers at Design Continuum of West Newton, Massachusetts (David Chastain PI), and Floating Hospital for Children, Tufts-New England Medical Center (Dr Geoff Hart). NIH, SBIR Grant, $220,000 CDN awarded. The Effectiveness of the Children’s Sedation Device. 2003-2006.


Djaiani G. Dean’s Fund. $2,000/yr. (5 years). The impact of specific gene polymorphism on neurocognitive decline after cardiac surgery. 2002-2007


Gagliese L. Canadian Institutes of Health Research New Investigator Award. $250,000 (5 years) 2004-2009.


Hawker GA, Gagliese L. Canadian Institutes of Health Research – New Emerging Team. (CIHR) $295,354 (Year 1) $1,495,170 (4 years total). Determinants and consequences of pain and fatigue in osteoarthritis using a biopsychosocial approach. 2004-2008

Hudson C, Devenyi, Flanagan R, Lam, Fisher J. BCA. $86,924/year (5 years). Sight-Threatening Retinal Complications in Type 2 Diabetes.

Jadad AR, Goel et al. Canadian Foundation for Innovation (CFI) and Ontario Innovation Trust (OIT) $5.6 million (3 years) [40% CFI, 40% OIT]. The Centre for Global eHealth Innovation [Infrastructure support]. 2002-2005.


Jadad AR. Toronto Academic Health Sciences Network (TAHSN) through its IT Steering Committee. $57,938. A feasibility study for a common results view fro the TAHSN. 2005.


Joo H, Naik VN, Joo HS, Houston PL, Yee B, Savoldelli GL, Hamstra SJ. Dean’s Excellence Fund for Medical Education. $37,400/yr. The Effect of Extraoperative Bench Model Fidelity on Training Fiberoptic Orotracheal Intubation Skills for Intraoperative Performance. 2004-2006.


Karkouti K. CIHR/CBS New Investigator Award. $250,000 (5 years). Determining the safety and efficacy of modalities that prevent or treat perioperative anemia to improve perioperative transfusion practice. 2002–2007.


Katz J. Canadian Institutes of Health Research.- Canada Research Chairs- Tier I. $200,000/yr (5 years) CRC in Health Psychology at York University. 2002-2009.


Librach L, Stern A, Jadad AR. Ontario Ministry of Health and Long-Term Care, through the Primary Care Transition Fund. $1,406,900,000 (3 years) Tele-homecare in Palliation Study (T.I.P.S.): A Randomized Controlled Trial Comparing the Effectiveness of Tele-homecare for Palliative Oncology Patients. 2004-2007.


Naik VN, Savoldelli GL, Park J, Joo HS, Chow R, Hamstra SJ. Dean’s Fund. $10,000. The Effect of Videotape Feedback on Anesthesia Trainees’ Performance During Simulation-based Education. 2004-2005


Orser B. Canadian Institutes of Health Research (CIHR): $119,179/yr. The role of GABAa receptors in anesthetic-induced impairment of memory and consciousness. 2006-2011.
Orser B. Merck Sharp Dohme Ltd., ($40,000 for animal costs). GABAA receptors containing the β5 subunit are plausible targets for the development of cognitive-enhancing drugs. 2005.


Orser B. Canada Research Chair in Anesthesia, Tier 2. $100,000/yr. Anesthetic Drugs from Molecular Mechanisms to Patient Safety. 2003-2008.


Wijeysundera DN. Canadian Institutes of Health Research. $172,500 (3 years). Canadian Institutes of Health Research Clinician Scientist Award – Phase I. 2006-2009.

Wijeysundera DN. Canadian Institutes of Health Research. $82,500 (2 years). Canadian Institutes of Health Research Fellowship. 2004-2006.

Wijeysundera DN. Canadian Institutes for Health Research Fellowship (CIHR). $55,000/yr (2 years). 2004-2006.


Yang H, Beattie WS. Canadian Institutes of Health Research. $6,000,000 to McMaster University (CCC) (5 years). POISE Study. Peri-Operative Ischemic Evaluation Study. CIHR funded study assessing the effect of perioperative metoprolol of post operative cardiac outcomes. 2002-2007.


Zhang H. (Principal Investigator) Canadian Institutes of Health Research (CIHR), operating Grant, New Investigator Award. $275,000. Human neutrophil peptides in lung inflammation. 2005-2010.


NON PEER REVIEWED GRANTS

Chan VW, McCartney C. Delex Therapeutics. $50,000. A Phase II, 2-part, multi-center, placebo-controlled, randomized study with open-label lead-in of the safety and efficacy of AeroLEF versus inhaled placebo for the treatment of post-operative pain. 2006.

Chung F, Wong D. GlaxoSmithKline. $70,000. Multicenter, Randomized, Double-blind, Placebo-controlled, Dose-ranging, Parallel Group Phase II Study to Evaluate the Safety, Efficacy, and Pharmacokinetics of the Oral Neurokinin-1 Receptor Antagonist, GW679769, When Administered with Intravenous Ondansetron Hydrochloride for the Prevention of operative Nausea and Vomiting (PONV) and Post-discharge Nausea and Vomiting (PDNV) in Female Subjects with Known Risk Factors for PONV Who are Undergoing Surgical Procedures Associated with an Increased Emetogenic Risk. 2005-2006.


Faclier, G. Neurogesy X Incorporated, San Carlo, USA: $58,000.00 (Pending). Multicenter Randomized, Double-Blind, Controlled Study of NGX-4010 for the Treatment of Post-Herpetic Neuralgia.


Jadad AR, Hohenadel J, et. al. Private donor. $1,000,000 (3 years). The Virtual Clinic: Bridging the High-Tech and the High-Touch to Enhance the Patient-Health Professional Relationship. 2002-2005.


