

McGill Anesthesia Newsletter



Drs. Caroline Goyer & Paul Wieczorek

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- In Memoriam Dr. M. Gertel

5TH JOHN WESTWOOD SANDISON AWARD FOR OUTSTANDING RESIDENT

The John Westwood Sandison Award for Professionalism was established in 2001 to recognize a McGill Anesthesia resident who, by virtue of his / her professionalism provides excellent, compassionate patient care, embodies enthusiasm for both learning and teaching, and is a role model in terms of character and leadership qualities.

This year at the Harold Griffith Memorial Lecture and Dinner,

Paul Wieczorek was honored with the Sandison Award. The resident chosen must exemplify high standards of clinical care as well as commitment to their patients, fellow residents and the program.

Dr. Paul Wieczorek obtained his MD from McGill in 2002 and entered the McGill Anesthesia Residency Program that same year. During his residency training, Paul has proven to be a highly energetic person with an insatiable curiosity. He is a dedicated, mature and hardworking physician, who not only demonstrates high standards of professionalism, but who always remains a pleasure to work with.

The award was presented by Residency Program Director, Dr. Caroline Goyer, at the 21st Annual Harold Griffith Memorial Lecture and Dinner held April 5th, 2006.

John Pereira & Raul Sanoja Winners of the 4th Kresimir Krnjevic Anesthesia Research Award for Trainees

In 1981, Dr. Kresimir Krnjevic was called one of the 1,000 most cited contemporary scientists by the publication "Current Contents", which named three of his papers "citation classics". Chief Editor of the Canadian Journal of Physiology and Pharmacology, Dr. Krnjevic has also published over 200 scientific articles and 100 book chapters. Thanks to his research, we now know that neural chemicals glutamate and gamma-amniobutyric acid (GABA) play important roles in determining how information travels through the brain. His research also revealed that the amount of calcium in the nerve cells influences how active a nerve cell will be and that too much calcium leads to cell death. He arrived at McGill in 1964 where he served as Chair of his department until 1987. Dr. Krnjevic was Director of the Anesthesia Research Unit from 1964 to 1999. This year, at the 21st Annual Harold Griffith Memorial Lecture and Dinner held April 5th, 2006, Dr. Krnjevic had the honor of presenting the award to both Dr. John Pereira and Dr. Raul Sanoja. (To read more about Dr. Pereira & Dr. Sanoja's research projects turn to page 12).



Dr. Kresimir Krnjevic

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FROM THE CHAIRMAN

The 2005/2006 academic year has indeed been an interesting time. Full Royal College accreditation for our residency program was a wonderful achievement. Dr. Anne Moore, Dr. Caroline Goyer, and Ms. Donna MacFarlane are to be congratulated for their tireless work to achieve this success. This achievement also reflects the dedication with which our entire faculty approaches the vital task of resident teaching and development. Of note, following Royal College review of the various programs at McGill, two generalized concerns were expressed: the negative consequences of the PEM on resident recruitment to staff positions at university hospitals, and the poor physical condition of the MUHC hospitals. These concerns must be addressed in a timely fashion so that we can achieve an acceptable (let alone excellent!) standard of patient care and ensure the survival of the various programs at McGill University.

I am delighted with the successes of the 47th McGill Anesthesia Update, the 5th John Westwood Sandison Residents' Education Day, the Philip R. Bromage Anesthesia Research Day, and of the 10th Annual McGill Pain Day, the details of which are highlighted in this newsletter. The Continuing Medical Education lecture series continued to achieve a high standard of excellence, and I anticipate an equally stimulating set of lectures from Dr. Alejandro Jadad (Wesley Bourne Visiting Professor), Susan Garwood (Hyman Brock Visiting Professor), and Medge Owen (Harold Griffith Visiting Professor) during the 2006/2007 academic year. The CME program, managed so competently by Dr. Sally Weeks, is to be directed by Dr. Andrew Owen following Dr. Weeks' retirement.

New ventures for our Department during the 2006/2007 year include: The McGill Anesthesia/CAS Rwanda Initiative, with Drs. Franco Carli and Catherine Paquet visiting Rwanda this autumn to reveal the secrets of anesthesia; the opening of the McGill Medical Simulation Centre this coming September and the formation of the Simulator Interest Group in our Department under the supervision of Dr. Francesco Ramadori; the inauguration of the McGill Cardiac Fellowship program with co-directors Drs Surita Sidhu and François Beique; the establishment of the Clinical/Research Fellowship in Anesthesia for Minimally Invasive Surgery at the MUHC; the establishment of the endowed Edwards Chair in Clinical Pain early this autumn to support the Director of

Dr. Steven B. Backman

the MUHC Pain Center; the inauguration of a Clinical Investigator Track in the anesthesia residency program; the recruitment of an individual to a CRC Chair concerned with basic mechanisms of anesthetic action.

In keeping with the increased involvement of anesthesia in perioperative medicine, Drs. Vincent Collard and Edgar Hockmann are embarking on combined training programs in anesthesia and intensive care medicine, and Dr. Roupen Hatzakorzian is actually taking a leave of absence from our Department to complete fellowship training in intensive care medicine at



McGill. Closer ties with the ICU should be encouraged at every opportunity and can have a major impact on patient care, resident teaching and provide important research potential.

As part of the evolving administration of our Department, I would like to welcome Dr. Pierre Fiset as the new Chief of Anesthesia at the Montreal Children's Hospital. Dr. Fiset brings his formidable administrative experience to this position, gleaned from his years of service at the CAS and AAQ. One of his first achievements was to help rearrange the PEM so that Dr. Nathalie Buu could be added to the Department's roster (Welcome to McGill, Nathalie!). I would also like to welcome Ms. Christine Steinmeyer who is the new Administrative Assistant to the Chairman. She has been extremely active during the last few months in helping to get our house in order, and I am sure that she will be greatly appreciated by all.

I would like to welcome the new fellows and residents to our Department and look forward to meeting you. I hope everyone experienced a healthy and happy summer, and anticipate an exciting and productive year ahead.

Kudos!

Many congratulations are in order to our staff, faculty and residents for their excellent achievements this past year:

Drs. René Allard, Sally Bird, Andrew Nice, Lori Olivieri, Faisal Siddiqui, and Michael Szeto for their FRCPC certifications.

Dr. Gary Bennett was promoted to Full Professor, Faculty of Medicine, and is the recipient of five research grants and contracts this year.

Drs. George Carvalho, Vincent Collard and Anil Kuchinad won the Philip R. Bromage Anesthesia Research Day Awards.

Dr. Fernando Cervero who has just published the *Handbook of Clinical Neurology:* Volume 81; 3rd series. Elsevier, 2006. He has also won the honor of holding the International Association for the Study of Pain Conference in Montreal in 2011.

Dr. Terence Coderre who received both Pfizer and NSERCC research grants.

Dr. Thomas Hemmerling is the recipient of the 2006 BMS/CAS Career Scientist Award in Anesthesia and Peri-operative Medicine. Welcome to McGill, Thomas!

Dr. Catherine Paquet who is the Loretta Carli Memorial Award Winner for the Rwanda Initiative.

Drs. John Pereira and Raul Sanoja who are the winners of the 4th Kresimir Krnjevic Anesthesia Research Award for Trainees.

Dr. **Thomas Schricker** is the recipient of a CIHR Operating Grant.

Dr. Mark Ware was awarded the FRSQ Chercheur Boursier Clinicien Junior 2 (2006-2010)

Dr. Sally Weeks who presented the first J. Earl Wynands Royal College Lecture at the 47th McGill Anesthesia Update ("The Dark Side—Maternal Mortality").

Dr. Paul Wieczorek who received the 5th John. W. Sandison Award for Outstanding Resident.

Dr. Davinia Withington who was awarded the Club Lions de Buckingham in Memory of Robert Champagne Award of excellence in Clinical Research.

Dr. Gerald Zavorsky is the recipient of two FRSQ grants.

Residents' Corner

FROM THE PROGRAM DIRECTOR'S DESK

2005-2006 has been an extremely positive year for the McGill Anesthesia Residency Program.

Royal College Accreditation: Gold Medal! Thanks to the dedication in teaching of all staff and the different initiatives in education taken at the various sites, the residency program has been fully accredited by the Royal College...Congratulations to all!

CaRMS Match: Welcome to our New Team! 2006-2007 looks very promising with the arrival of 8 recruits: Rachel Fisher, Edvig Mvilongo, Juraj Istvan, Simon Pagé, Andrew Suess, Majed Al Turkistani, Gérard Huni and José Aragon have enthusiastically started as active players in the McGill Anesthesia Residency league...Welcome and good luck to all!

2006-2007 is forecasting a year of further initiatives and development:

Simulator Centre: Finally arriving in Ottawa, the Simulator Centre is officially opening September 14th, 2006. These installations will offer a whole new set of opportunities for teaching and evaluation. Under the wing of Dr. Francesco Ramadori, a Simulator Interest Group has been formed to help develop and run the program for our residents. Anyone who would like to be involved should contact

Royal College Exams: Full Success! Congratulations to Sally Bird, Lori Olivieri, Andrew Nice, Faisal Siddiqui, Renée Allard, and Michael Szeto. We wish them all the best in their new careers!

CanMEDS Celebration: The Sequel. Celebrating our role models for the different CanMEDS competencies, here are the recipients of the Can-MEDS celebration awards 2006: Communicator: Dr. Faisal Siddiqui; Collaborator: Dr. Catherine Paquet; Health advocate: Dr. Janius Tsang; Scholar: Dr. Edgar Hockmann; Professional: Dr. René Allard; Manager: Dr. Paul Wieczorek; Medical Expert: Dr. Trevor Hennessey. Congratulations!

Dr. Ramadori at extension 43261.

Clinical Investigator Track: For the first time since it has been offered, an anesthesia resident is undergoing the clinical investigator track. Dr. Abulhasan is going to develop his research skills in pain pathways under the direction of Dr. Fernando Cervero. We wish him best of luck and success in this new challenging pathway.

Anesthesia-Plus: Developing fully their different interests, Drs. Vincent Collard and

Edgar Hockmann are undergoing a combined Anesthesia-ICU program. A very challenging endeavor, we offer them full support and wish them good luck in their enterprise.

Rwanda Initiative: Following the CAS initiative in Rwanda, Dr. Catherine Paquet is the award recipient. In October, Catherine will follow Dr. Franco Carli to Rwanda in this teaching adventure. Congratulations and we look forward to hearing all about it upon their return!

Congratulations R5's for Successful FRCPC Certification!

(From Top left:)

Dr. Michael Szeto will be working at locum at Ottawa General Hospital starting July 2006.

Dr. René Allard will be at the Ottawa Heart Institute, for a one-year Cardiac Anesthesia Fellowship

Dr. Andrew Nice will work in the Department of Anesthesia of the Atlantic Health Sciences Centre, Saint John Regional Hospital, New Brunswick.

Dr. Faisal Siddigui will be doing an ICU fellowship in Winnipeg. (Seated:)

Dr. Lori Olivieri will be in Hamilton, Ontario for a one-year fellowship in Chronic Pain at

McMaster University. Dr. Sally Bird will remain with the Department a few more months in order to complete her residency.





Dr. Caroline Goyer



Our Thanks to Sally Bird for providing us this great shot of most of our residents taken at the RVH's Hersey Pavilion Terrace.

From Top Left:: Kevin Wong, Faisal Siddigui, Vincent Collard, Mohammed Al-Hujairi, Yasser Abdulhasan, Daniel Magin, Paul Pepin, René Allard, Centre Row Left: Zainab Jamali, Janius Tsang, Miroslava Kapala, Sally Bird, Lori Olivieri,

Bottom Row Left: Philip Waters, Edgar Hockmann, Andrew Nice, Paul Wieczorek, Trevor Hennessey

JOURNAL CLUB

With summer upon us, we can look back on this past academic year's Journal Club as well as forward to the upcoming edition. Last fall, Dr. Ted Hunter and I took over the coordinating duties for the McGill Anesthesia Journal Club from Dr. Alain Deschamps. We were quite fortunate that Dr. Deschamps had thoroughly organized the whole year's schedule, making the transition was very smooth. However, his research background and critical thinking skills will be dearly

MAKING A MARK

The Making a Mark program was established in 2002 by Organon Canada as a resident review course open to 5th year Anesthesia residents across Canada. This year, the course took place at the Banff Centre (Alberta) from February 9-12th.

The course objectives are to enhance applied knowledge in the selected areas of Anesthesia as determined by needs assessments of all current Canadian PGY 5 residents. The course begins with lectures on current

and relative topics and moves into practice oral exam sessions which are designed by anesthesiologists' from Canadian universities to be as close as possible to the real thing. Representing McGill Anesthesia were Dr Annie Côté, who presented the lecture "Anesthesia for the patient with valve disease", and Drs. Cristine Bozzer, Pierre Fiset and Ted Hunter who assisted with the oral exam preparations.

missed. Thank you Alain.

Our Journal Club meets every

second Wednesday of the

month at Thompson House at

17h30. The evening is designed

primarily as an educational

activity for our residents, but is

open to all, and, speaking from

personal experience, can be an

excellent venue for continuing

education for staff. We have

explored various formats in-

cluding traditional critical ap-

praisal of original research, Pro-

Con debate, "What's new in

On behalf of our R5 residents.

Loretta Carli Memorial Award: Catherine Paguet

Dr. Anne Moore presented the Loretta Carli Memorial Award to fifth-year Anesthesia resident Dr. Catherine Paquet at the Harold R. Griffith Memorial Lecture and Dinner this past April. The award will be used for the McGill Anesthesia/CAS Rwanda Initiative. Accompanied by Dr. Franco Carli, Dr. Paquet will travel to Rwanda this coming October for a one-month period to teach Anesthesia practice to Rwandans.



NEW Chief Resident: Vincent Collard

2006-2007 is welcoming the involvement of Dr. Vincent Collard as Chief Resident. Originally from Lac-St-Jean, and a McGill medical graduate, he joined our residency program in 2003.

Since then, Dr. Collard has greatly offered his ideas and support to the residency program. With his heartfelt smile and overflowing enthusiasm, it is obvious that his

strong baritone voice will resonate positively throughout the McGill Anesthesia Residency Program. Good Luck Vincent!

On the same note, I wish to say a special "thank-you" to Dr. Paul Wieczorek, the exiting Chief Resident, who did a fantastic job last year in this role...Thanks again Paul!

Diana Di 7azzo

Anesthesia" sessions and have

covered specialized topics in

Cardiac, Obstetric, Pediatric

and Regional Anesthesia as

well as more general subjects. I

must admit that we come for

the excellent presentations

made by our R4 residents and

fellows, but we stay for the

food, drink and camaraderie

that are also an integral part of

We would like to thank our

industry sponsors for their very

generous support of the Journal

the activity.

who were all successful in their royal college exams (Andrew Nice, Faisal Siddiqui, Lori Olivieri, Michael Szeto, René Allard, and Sally Bird), the McGill Department of Anesthesia would like to thank Organon Canada for this excellent opportunity. We would also like to extend our gratitude to our local Sales Representative. Albert Briand, for his dedicated assistance to our faculty and residents during this event and throughout the year.

Club: Abbott, Baxter, Bristol-Meyers-Squibb, Datex-Ohmeda and Organon. The funding we receive allows us to put together a very valuable and enjoyable educational activity.

Dr. Andrew Owen

For the next academic year we will be keeping some traditional sessions, but we will also add some novel approaches to our exploration of anesthesia literature. We hope you enjoy your time off during the summer and look forward to seeing all of you at our next meeting, September 13.2006.

Anesthesia Now is an interesting

www.anesthesianow.com

The Resident Seminars

This year, once again, Dr. François Beique, with the help of the Jewish General Hospital Anesthesia staff, has organized a very successful summer seminar series. Thanks to all staff and residents involved!

With regards to the residents' seminars, Dr. Roupen Hatzakorzian and all the different block supervisors, Dr. Gilles Plourde, Dr. Bergez Mistry, Dr. Albert Moore and Dr. Ted Hunter have all done a superb job orchestrating interesting lectures and outstanding lecturers.

In the last few years, Dr. Hatzakorzian has raised the Residents' Seminars to a whole new level by introducing end of block exams and, more importantly, by digitalizing the lectures. The disks that will be produced will help the residents in their study and lecture preparation.

This year Roupen is leaving on sabbatical, however, he will pass the flame to Dr. Vynka Lash. Thankyou Roupen and Vas-y Vynka!

WELCOME NEW FELLOWS

Introducing the 2006/2007 academic year fellows

MCH

July 1st, 2006 Dr. Witthaya Loetwiriyakul Thailand Clinical Fellowship

January 1st, 2007 Dr. Abdulmoshen AL Harbi Ontario Pediatric Acardia Anesthesia Fellowship

MGH

July 1st, 2006 Dr. Feyzi Artokoglu Turkey Regional Anesthesia Fellowship

August 1, 2006 Dr. Mohammed Shamsah Kuwait Acute Pain Fellowship

January 1st, 2007 Dr. Severine Lauwick Belgium Clinical Fellowship in Anesthesia for Minimally Invasive Surgery

RVH

July 1st, 2006 Dr. Hanan Morsi El-Shobary Egypt Clinical Fellowship in Anesthesia for Bariatric Surgery

RVH/JGH

July 1st, 2006 Dr. Jean-François Olivier Canada Cardiac Anesthesia Fellowship

www.virtualanaesthesiatextbook.com

Need a medical dictionary? In nine languages? **The Multilingual Glossary of Technical and Popular Medical Terms** in nine European Languages is for you! It's also searchable. Didn't find what you want there? **Dr Schueler's Health Informatics** has another glossary (english only).

...Mark your

Calendar...

2006/07 CME Events

For additional info:

www.mcgill.ca/anesthesia/cme

Wesley Bourne Lecture and

Faculty Dinner

Dr. Alejandro Jadad

University of Toronto

"Anesthesia in the Age of the

Internet: Will we be needed in

the 21st century?"

Combined Surgery/

Anesthesia Rounds

September 14th, 2006

CME UPDATE

Our Visiting Professors during the 2005/06 academic year were Paul White, Sulpicio Soriano, Daniel Sessler and André Boezaart. They made important and much appreciated contributions to our program in the fields of ambulatory surgery, pediatric anesthesia, perioperative temperature regulation and continuous peripheral nerve block. In addition, André Boezaart contributed his entire honorarium to support R5, Catherine Paquet, in her participation in the CAS Rwanda project. We thank him so much for this generous gift.

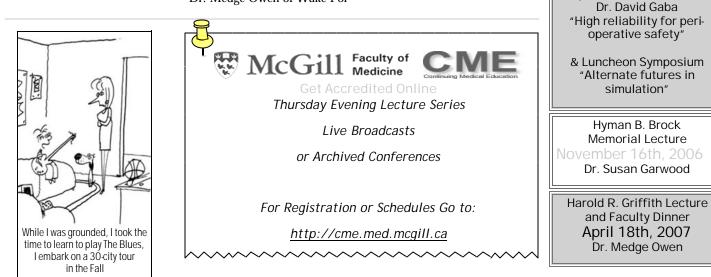
During the 2006/07 academic year, we look forward to the visit of Alex Jadad, Director of the Centre for Global Health Innovation in Toronto, who will be the Wesley Bourne Professor on September 6th. Later in the year (Nov. '06), we will welcome the Hyman Brock Professor, Susan Garwood of Yale University, and in April, Dr. Medge Owen of Wake For-

Dr. Sally Weeks

est University will join us as the Harold R. Griffith Visiting Professor.

I would like to thank Sandra Cardoso for her splendid work as coordinator of the CME program and the Chief Resident, Paul Wieczorek, for his help in entertaining our visitors.

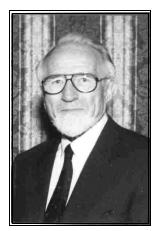
If anyone has any suggestions for CME topics and/or speakers, please feel free to discuss it with me.



PHILIP R. BROMAGE ANNUAL RESEARCH DAY

lent quality and great clinical and scientific relevance.

Dr. Terence Coderre



Dr. Philip R. Bromage

Group Photo: Julian Doan, Franco Carli, Hema Bagry, Andrea Kopp, Vincent Collard, Gabriele Baldini



illness.

Miroslava Kapala



A full slate of 18 papers on varied topics in Anesthesia were presented by Anesthesia Residents, Postdoctoral Fellows, and M.Sc. and Ph.D. students in Anesthesia Research. The presentations were, as usual, all of excel-

Once again, with the support of Baxter Pharma, we were able to continue to award the three best presenta-

Our thanks go out to the award jury which included Drs. Steven Backman, Catherine Bushnell, Sally Weeks and Yoram Shir. Although Dr. Bromage was scheduled to attend, his travel to Montreal was prevented by

The Philip R. Bromage Anesthesia Research Day was held this year on Thursday, May 4th.

tions. This year's prize winners were George Carvalho, Vincent Collard and Anil Kuchinad.

Many thanks to the supervisors and participants for making this event a continued success!



Jason Taam

Event Program

EVENT PROGRAM

Session I: Presentations by residents, fellows and graduate students (10 min presentation, 5 min discussion).

Chair: Dr. Thomas Schricker

A. Tsiodras: Do as I say.

S. Amberg: Safe and efficacious delivery of BIS-guided anesthesia for a high risk patient.

P. Wieczorek: Airway topicalization in the morbidly obese using atomized lidocaine 2% vs. 4%.

E. Hockmann: Developing a ventilator driven by surface electromyography.

M. Kapala: Regional anesthesia and intra-operative non-invasive BiPAP ventilation in a patient with severe COPD and obstructive sleep apnea.

S. Raghavendran: Bronchopulmonary dysplasia and anesthesia. **Session II:** Presentations by residents, fellows and graduate students (10 min presentation, 5 min discussion).

Chair: Dr. Franco Carli

V. Collard: Fast-tracking laparoscopic cholecystectomy using esmolol.

C. Paquet: Correlation between cerebral oxygen saturation and left ventricular function assessed by transesophageal echography and hemodynamic parameters through the pulmonary artery.

G. Carvalho: Hyperinsulinemicnormoglycemic clamp during cardiac surgery: Effects on circulating free fatty acids.

A. Kopp Lugli: Can epidural analgesia revert the catabolic response to surgery in type 2 diabetes patients?

H.S. Bagry: Insulin resistance, metabolic syndrome and the surgical patient.

G. Baldini: Intraoperative depth of anesthesia and postoperative pain: Is the metabolic stress response the missing link? **Session III:** Presentations by residents, fellows and graduate students (10 min presentation, 5 min discussion).

Chair: Dr. Terence Coderre

J. Doan: Failure of epidural analgesia - A quality assurance audit at the Montreal General Hospital.

J. Taam: Minimal threshold for stimulating catheters: What do we really know?

A. Kuchinad: Reductions in cortical grey matter density associated with fibromyalgia syndrome.

D.N. Xanthos: Adrenergic vasoconstrictor dysfunction in a rodent animal model of complex regional pain syndrome type I.

R. Sanoja: In mice, estrogen can prevent and reverse the hyperalgesic state induced by ovariectomy.

P.E. Scotland: Nociceptive responses to intrathecal DHPG in rats with neuropathy or chronic inflammation.



Paul Wieczorek



Edgar Hockmann



Stéphane Amberg

Organized by Drs. Terence Coderre and Thomas Schricker

ANESTHESIA RESEARCH UNIT

(Summer 2006)

A very important component of the research activities of the Anesthesia Department is the Anesthesia Research Unit (ARU). The ARU is staffed by four Professors of the Anesthesia Department: Drs. Gary Bennett, Cathy Bushnell, Fernando Cervero and Terry Coderre; whose laboratories are located on the twelfth floor of the McIntyre Building and in the Strathcona Anatomy and Dentistry Building.

The research of all four members of the ARU is focused on various aspects of pain mechanisms and, therefore, the ARU has become a core facility for the McGill Center for Research on Pain, whose Director is Dr. Cathy Bushnell, the Harold Griffith Professor of Anesthesia. The increased visibility of the ARU, and its close association with the McGill Center for Research on Pain, has added to the training facilities offered at the ARU for Anesthesia Residents and other trainees.

The ARU is now offering a training program for Anesthesia Residents. This will start next

fall with Dr. Yasser Abulhasan, a third year resident, who is due to join the laboratory of Dr. Fernando Cervero to pursue a Masters Degree in Neuroscience while completing his Anesthesia Residency. This new program will add a new dimension to the already high quality training provided by the Anesthesia Department for our Residents.

The ARU took a very active role in the organization of the 10th Annual McGill Pain Day. This event, started by Dr. Cathy Bushnell ten years ago, has now become a reference point for pain research in McGill and neighboring institutions. The day featured 50 poster presentations from McGill groups, from other Quebec laboratories as well as a Trainees' Workshop and a keynote lecture by Dr. Allan Basbaum, Department of Anatomy, UCSF, on "Pain mechanisms: from molecules to circuits". The event was organized by Dr. Fernando Cervero, Director of the ARU.

During the past year, the four senior members of the ARU

have undertaken numerous lecturing duties in Canada and abroad, and presented their research at several key international conferences. A prime venue for the presentation of the research conducted at the ARU, was the 11th World Congress on Pain, sponsored by the International Association for the Study of Pain (IASP), which took place in Sydney, Australia in late August 2005. Dr. Cervero is currently a member of the Executive Committee of IASP and Dr. Bushnell is the Editor in Chief of IASP Press, responsible for high quality publications in pain research and therapy.

The ARU continues to get substantial external funding from Canadian and international agencies. All four laboratories have received new trainees over the last year, and for the first time there are three Postdoctoral Fellows funded by the agreement between the McGill Centre for Research on Pain and AstraZeneca Research and Development. They are Dr. Magali Millecamps, from France, who has been working

Dr. Fernando Cervero

over the last year in Dr. Terry Coderre's laboratory, Dr. Petra Schweinhardt, from Germany, who has joined Dr. Bushnell's lab and Dr. Haroun Rashid, from Bangladesh, who is now in Dr. Cervero's laboratory.

We are very pleased to welcome these new members of the ARU who clearly demonstrate the attraction of the research facilities of the ARU and its high international reputation.

> In the U.S., the American Association for the Advancement of Science has set up Grants-Net, a searchable database of biomedical funding options specifiaimed cally at "Scientists in training -grad students, postdocs, and junior faculty members", and you can also sign up for regular email updates of new funding sources.

www.virtual-anaesthesia-textbook.com

UPDATE ON THE "UPDATE" Dr. Donald Hickey

The **47th McGill Anesthesia Update** was held at the Hyatt Regency Hotel from May 27th to May 29th, 2006. As expected, it was both an educational and financial success.

As Co-Director I have been involved with the organization of the course for a number of years, however, this was my first year as Course Director. I have taken over this role from Dr. Kenneth Kardash, who, over the years, has worked hard and has succeeded in putting the course on solid footing. I would like to add that this year's success would not have been possible without the hard work of my two able Co-Directors: Drs. Franco Carli and Thomas Schricker.

The Mise au jour pour les inhalothérapeutes was held on Sunday May 28th and was attended by 75 Respiratory Therapists. Based on their evaluations of this course we seem to be meeting their educational needs. The success was ensured by the enthusiastic involvement of Dr. Roupen Hatzakorzian. Unfortunately, due to other commitments. Roupen will be unable to assist next year, however, we are pleased to announce that Dr. Annie Côté has agreed to assist us with this element of the course for next year. This year we have instituted the **J. Earl Wynands Royal College Lecture** in honor of Dr. Wynands. Dr. Sally Weeks was the first of what we expect to be many lecturers, as we hope that this will become an annual event. Her lecture was entitled "The Dark Side – Maternal Mortality".

I wish to thank all the McGill Faculty who participated either by giving lectures or by acting as moderators. Although it is a year away, preparations will soon start for next year's course. We look forward to seeing you there!



Above: Drs. Earl Wynands, Sally Weeks, Franco Carli, Steven Backman & Donald Hickey Below: Dr. Sally Weeks



CHRONIC PAIN FELLOWSHIP THE MUHC PAIN CENTRE

Introduction: Pain is a subjective experience, involving physical, emotional, and psychosocial factors. Until recently there has been little interest in training medical doctors to understand the complex etiology of pain conditions and their treatment because pain has not been seen as life or health threatening, and was considered only as a symptom calling attention to an underlying medical problem. It has become apparent, however, that pain, especially chronic pain, should be regarded as a disease in its own right, requiring treatment like any other disease. With appropriate training, physicians can acquire the necessary tools to address pain treatment in all its dimensions.

The MUHC Pain Centre is part of McGill's Department of Anesthesia and of the McGill Centre for Pain Research. Located at the Montreal General Hospital, the MUHC Pain Centre is the official McGill facility for pain treatment in adults. In line with current concepts of pain as a multidimensional experience, the staff represents pain specialists in a variety of disciplines, working together to treat pain, offer training, and conduct research. Clinical staff members include pain specialists in anesthesia, dentistry, family medicine, nursing, physiatry, physiotherapy, psychology, and rheumatology.

Clinical Activities: Outpatients and inpatients with pain are treated. Typically, after evaluation, a treatment plan tailored to the individual patient's needs is developed. Treatment often includes intervention by more than one staff member, including physicians of multiple disciplines, psychologists, physiotherapists and nurses. Patients are treated with any one or a combination of medications, by invasive measures, physical interventions, psychological assessment and intervention (as individuals or as a part of pain management group), nursing counseling, patient education and medication follow-up. Clinical activity in the past year included approximately 1000 new patients, 300 consultations in hospitalized patients and 900-alleviating invasive procedures.

Research: Research at the Pain Centre is funded through several peer-reviewed grants offered by local and Canadian agencies. Clinical research includes trials on cannabis, extracted cannabis preparations and intravenous lidocaine. Epidemiological research includes surveys of complementary medicine use, dietary habits, waiting list patterns and herbal cannabis in chronic pain patients. Basic research involves studies in rodents exploring chronic pain mechanisms.

Educational Programs: These include weekly pain rounds, clinical-problems focussed presentations and discussions, multidisciplinary case discussions, and journal club.

Fellowship opportunities:

Two clinical and/or research fellowship positions are offered

Dr. Ann Gamsa

annually, funded by the Louise Edwards Foundation. Pain fellowship is for one year with a possible extension for a second year. These positions are open for board certified physicians from most disciplines. As well, fellowships are available for applicants who come with their own funding. Fellows will participate in all aspects of treatment of out-patients and hospitalized patients. In addition, the Pain Centre encourages fellows to join its research activity and even develop their own research projects.

For more information and fellowship requests please contact:

Yoram Shir, M.D.

Clinical Director - Pain Centre McGill University Health Centre - Montreal General Hospital 1650 Cedar Ave., E19-133 Montreal H3G 1A4 Canada

Fax: 514·934·8096 yoram.shir@muhc.mcgill.ca

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1						6		
5	7							
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					7	3		5

Brain Teaser: How to Sudoku

Sudoku, which in Japanese loosely means "single number", is a deceptively simple yet addictive game of logic that consists of a nine-bynine square grid, broken into three-by-three square cells. The Object: Fill each square with a number from 1 to 9 so that every number appears only once in each row, column and cell.

SOLUTION: BACK COVER

			3		6	8		
		3					6	4
		6		1		9		
		9		4		1	2	
	2	7		5		3		
		1		9		6		
6	3					7		
		4	2		7			



"Chronic pain, therefore, should be considered a disease of the nervous system; it is not merely a symptom of another disease

10TH ANNUAL MCGILL PAIN DAY Dr. Allan I. Basbaum, PhD Visiting Professor Professor and Chair, Department of Anatomy, UCSF

Dr. Allan Basbaum received his PhD from the University of Pennsylvania in 1972. He has been doing pain research since 1966, beginning with Dr. Ronald Melzack, as an undergraduate at McGill University. From 1972-75 he did postdoctoral research with Dr. Patrick Wall at University College London and then with Dr. Howard Fields at UCSF. He was appointed to the faculty at USCF in 1977 and is presently Professor and Chairman of the Department of Anatomy. He

holds a joint appointment in the Department of Physiology and is a member of the W. M. Keck Foundation Center for Integrative Neuroscience. Dr. Basbaum's research interests concern the transmission and control of nociceptive messages and the molecular mechanisms that contribute to persistent pain in the setting of tissue or nerve injury. He has served on the Council of the IASP and as its Treasurer. He has been a Board member and program chair of

the American Pain Society. He is presently Editor-in-Chief of Pain. He is a recipient of the Jacob Javits Investigator Award from the NIH, presented the Public Lecture at the Society for Neuroscience meeting and is recipient of the F.W.L. Kerr Memorial Award from the American Pain Society and the Bristol-Myers Squibb Prize for Distinguished Pain Research. In 2003 he was elected a Fellow of the American Academy of Arts and Sciences.

www.painreliefhumanright.com/pdf/ bio/**basbaum**.pdf

10TH ANNUAL MCGILL PAIN DAY

THURSDAY, JANUARY 19, 2006



PAIN MECHANISMS: FROM MOLECULES TO CIRCUITS SPEAKER: DR. ALLAN BASBAUM PROFESSOR AND CHAIR, DEPARTMENT OF ANATOMY UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

2:00-3:00 P.M. TRAINEES' WORKSHOP: CURRENT AND NEW TECHNIQUES IN PAIN RESEARCH MEAKINS AMPHITHEATRE, MCINTYRE BUILDING 3655 SIR WILLIAM OSLER, MONTREAL

4:00-6:00 P.M. POSTER SESSION, HORS D'OEUVRES & WINE 6:15 P.M. POSTER PRIZES AND INTRODUCTORY REMARKS 6:30-7:30 P.M. PLENARY LECTURE BY DR. BASBAUM MCGILL RESIDENCE HALL 3625 AVENUE DU PARC, MONTREAL

Congratulations Poster Session Winners:

Basic Science Category: Andrea Lee Bailey, McGill University Pharmacology and Therapeutics

"Cytotoxic Lesioning of Non-Peptidergic Primary Afferent C-Fibers Using IB4 - Saporin as a Tool to Identify the Functional Role of these Fibers in Pain Transmission. (2006)"

Human-Clinical Category: Phillipe Goffaux, CHUS, University of Sherbrooke Faculty of Medicine

"Expectancy – Mediated Modulation of Endogenous Pain Control: Spinal and Cortical Markers. (2006)"





Dr. Gilles Lavigne presents the poster session winners, Andrea Bailey and Phillipe Goffaux, their awards.

For more info about the McGill Centre for Research On Pain go to: <u>www.painresearch.mcgill.ca</u>

THE 21ST ANNUAL Harold R. Griffith Memorial Lecture & Faculty Dinner



Dr. André Boezaart

Professor André Pierre Boezaart, MD, MBChB, FCA(SA), PhD Director of Orthopaedic Anesthesia & RASCI University of Iowa

The Department of Anesthesia welcomed Dr. André P. Boezaart as the 21st Harold R. Griffith Visiting Professor. The Harold Griffith Memorial Lecture was entitled "Occultus Purgamentum". Dr. Boezaart's visit to McGill provoked much interested and excited comments and was well-received by all. As an act of generosity, Dr. Boezaart has donated his honorarium to our Resident Education Program in support of our Rwanda initiative this coming October.

Many thanks to Dr. Boezaart for his superb lectures and generosity which will not soon be forgotten.



Drs. Chartrand, Backman, Boezaart, Kleiman, Mrs. Kleiman, Mr. Alex Martel, Ms. Sandra Sundborg(Tyco Healthcare), Mrs. Boezaart



Right: Drs. Weeks, Moore, Paquet, Mr. Olha, Mrs. Waters, Drs. Waters, Wieczorek & Goyer

Clockwise Left: Drs. Baldini and Guest, Zavorsky, Ms. Louise Mazza, Drs. Raghavendran, Bagry, Carli







The Griffith Family



Drs. Sanoja & Guest, Cervero, Mrs. Cervero, Drs. Bushnell, Krnjevic, Mrs. Krnjevic



Drs. Hasel, Ramadori, Finlayson, Mrs. Ramadori, Dr. Gordon, Ms. Brecht



Drs. Hennessey, Wong, Al-Hujairi, Tsang, Kapala, Sarrazin, Mrs. Sarrazin, Dr. Woodruff



Drs. Owen, Collard, Yukawa, Bondy, Taam & Guest, Lash, Côté, Sidhu



Drs. El Sherbini, Plourde, Fiset, Mrs. Fiset, Drs. El-Shobary, Germain, Gauthier, Sloan, Mrs. Sloan



Dr. Scott, Mrs. Rafla, Drs. Rafla, Bandi, Gilbert, Pugsley, Hamawy



Drs. Carranza, Hunter, Fiset, Raghavendran, Bagry, Al-Radhwan, Buu, Kocur, Valois, Desparmet, Klubien



Dr John Pereira & Guest, Drs. Charghi, Courval, McMillan, Mistry, Hickey, Kimia

This CME event is Generously Sponsored by TYCO Medical Healthcare

JOHN PEREIRA & RAUL SANOJA WINNERS OF THE 4TH KRESIMIR KRNJEVIC ANESTHESIA RESEARCH AWARD FOR TRAINEES

5-HTP (Oxitriptan) for the Treatment of Fibromyalgia: A Review

Pereira JX¹, Hogg W², Ware MA¹, Fitzcharles MA¹, Shir Y¹



John Pereira

ABSTRACT: Fibromyalgia has been strongly associated with low serotonin levels and supplementation with its immediate metabolic precursor 5-hydroxy-ltryptophan (5-HTP) has been studied in two randomized and one open-label trial. Results show 5-HTP to be an effective treatment for fibromyalgia, with statistically significant results

seen within two weeks and continuing for twelve months. Its side effect profile is superior to newer antidepressants and it appears much safer than tryptophan regarding risk of eosino-philia myalgia syndrome (EMS). A combination of 5-HTP with a monoamine oxidase inhibitor (MAO-I) produces greater symptom improvement than either treatment alone, and surpasses the conventional combination of fluoxetine and amitrip-tyline for fibromyalgia. The possibility of 5-HTP induced cardiac damage remains to be explored.

BIO: Dr. John Pereira completed his undergraduate studies in Math, Chemistry, Physics and Honors Economics at McGill University. During his summer break, prior to starting medical school, he wrote "Principles of Economics: Consumer Choice Theory" a textbook that was used at McGill for several years.

As a McGill medical student, he researched Connectivity and Injury in Artificial Neural Networks with Dr. Leon Glass, and later Medical Informatics with Drs. Glass and Michael Rosengarten.

An interest in pain management was established during his first clerkship rotation of internal medicine and further fueled by an early elective at the Massachusetts General Hospital Pain Center. Dr. Pereira then started a two year Family Medicine residency at the Ottawa Civic Hospital, where he began work on his award winning paper "5-hydroxytryptophan" with Dr. William Hogg.

He also completed pain management electives at the University of California at San Francisco and Brigham and Women's Hospital. In 2005, he was awarded the Ronald Melzack Fellowship in Pain Management

At the MUHC Pain Centre, under the supervision of Dr. J. Francisco Asenjo, Dr. Pereira studied interventional pain management techniques, such as nerve root blockade and vertebroplasty, and will continue to study these techniques during the second year of his research fellowship.

Estrogen-dependent abdominal hyperalgesia induced by ovariectomy in adult mice: a model of functional abdominal pain

Sanoja, R., Cervero, F.



Raul Sanoja

ABSTRACT: Some abdominal pain syndromes are characterized by persistent pain without demonstrable pathology. Many of them are more prevalent in women and it is known that sex hormones are associated with differences in pain perception between males and females. To develop a model of functional abdominal pain in females we have studied the time course and

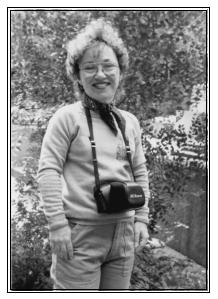
estrogen dependency of a hyperalgesic state induced by ovariectomy in adult mice. Three groups of C57/BL6 mice were used: virgin mice, proven breeders (2 or 3 successful pregnancies) and retired breeders (more than 3 successful pregnancies). Within each group, a third of the mice were ovariectomized (OVX), a third received sham surgery and a third were controls. OVX mice, but not sham or controls, developed a robust mechanical hyperalgesia and allodynia in the abdomen, hind limbs and proximal tail, but not in the forelimbs, that was established four weeks after OVX and lasted for the seven weeks of the experiment. Increases in visceral sensitivity were also observed in OVX mice. Thermal pain thresholds remained unchanged. The reproductive history of the animals had no influence on the hyperalgesia. In

another series of experiments a slow release pellet containing 17ß-estradiol was implanted in half of the OVX mice and a similar pellet without the hormone in the other half. Hormone replacement prevented the development of hyperalgesia in OVX animals although it did not stop the involution of the internal reproductive organs. We conclude that OVX in mice provides a useful model for a hormonally-dependent hyperalgesic state resembling functional pain.

BIO: Dr. Raul Sanoja is currently working as a post-doctoral fellow under the supervision of Dr. Fernando Cervero, Director of the Anesthesia Research Unit. Originally from Venezuela, Dr. Sanoja obtained his MD at the University of Carabobo and completed his graduate studies (D.Sc.: Physiology and Biophysics) at the Venezuelan Institute of Scientific Research (IVIC) under the mentorship of Dr. Victor Tortorici.

Among Dr. Sanoja's research interests are: pain modulation, visceral pain, pharmacology and pain, somatosensory networks and neural networks.

DOLORES KUMPS—A RECORD OF SERVICE



Dolores Kumps took her retirement in December 2005 from her position of 25 years as Administrative Assistant to the Anesthetist in Chief of the Montreal General Hospital

In 1980, Dolores joined the Department of Anesthesia at the Montreal General hospital as a Secretary and Administrative Assistant to the Anesthetist-in-Chief. When the MUHC was formed, she maintained this role as Administrative Assistant to the MGH Site Director.

Dolores has held a position of such responsibility and trust for a long period of time; and over the years she has become widely known and respected by the hospital and university communities. Dolores has not only been dedicated to her work over the years but has proven to be a loyal person with a global perspective. Dolores is a person with exexcellent communication skills who always saw the "big picture". Staff could rely on her vast knowledge for help, advice, reassurance and orientation as she always went out of her way to welcome and orient new personnel or visitors to the Department of Anesthesia.

In a teaching department, there is a constant flux and change. New residents, staff, fellows, technologists and students arrive and need orientation, advice and direction. Dolores was invaluable in this capacity. Over the years, she worked very hard with anesthesia personnel in all sectors to implement changes for the better. One of her greatest

Dr. Ian Metcalf

assets was in dealing with people, motivating them and evoking their best response. Of such nature is the key that unlocks the door to successful administration.

Dolores you have been a great team member, the entire MUHC is indebted to you. You have set an example for others to follow.

We salute you and wish you a happy retirement!

Dr. Ian Metcalf was the former Anesthetist-in-Chief at the Montreal General Hospital from 1980 to 1998.

CLINICAL/RESEARCH FELLOWSHIP IN ANESTHESIA FOR MINIMALLY INVASIVE SURGERY AT THE MCGILL UNIVERSITY HEALTH CENTRE

This is a newly established clinical/ research fellowship with a special interest in the perioperative care of patients undergoing Minimally Invasive Surgery for General, Cardiac, Thoracic, Urological, Vascular and Orthopedic Surgery. Animal and human research opportunities in this emerging field are available.

The application in the last two decades of a minimally invasive surgical (MIS) approach to abdominal, gynecological and a variety of other operations has received great attention in many academic centres. With improved technology, new approaches have been developed and applied to a complex range of surgeries. The popularity of MIS stems from the understanding that it causes less trauma and accelerates postoperative recovery.

At McGill, a very active surgical program in MIS has been established for over 10 years. The Steinberg-Bernstein Centre of Minimally Invasive Surgery at McGill University has been set-up with a private endowment to foster education, research and clinical innovation in the field of endoscopic surgery. The

Department of Anesthesia has been actively involved in the Centre by collaborating with surgeons and nursing in setting up clinical pathways for peri-operative care of surgical patients, and in a variety of animal and research activities. Funding for this clinical/research fellowship in anesthesia for MIS has been made possible thanks to support from the Steinberg-Bernstein Centre and the Montreal General Hospital Foundation.

Objectives: To train anesthesiologists in the peri-operative care of the patient undergoing minimally invasive surgery for a selection of surgical specialties. To develop and implement, under appropriate supervision, novel peri-operative strategies and treatments aimed at accelerating the recovery process and minimizing the surgical stress, therefore, enhancing the anesthesia contribution to the care of these patients in collaboration with surgical and nursing teams.

Prerequisites: Anesthesiologists who have completed a recognized postgraduate training program during the last 5 years and work in an academic institution where MIS is either established or in phase of development. Satisfactory knowledge of English is required. Knowledge of French is desirable. The fellowship is for one year, however, it can be renewed for a second year. To be eligible to practice clinical anesthesia, the fellow will receive a training card from the *College des medicines du Quebec*. All procedures will be coordinated by Dr Gilles Plourde, Director of Fellowship Program, Department of Anesthesia, McGill University. For information contact: Sandra.Cardoso@muhc.mcgill.ca

For more information please contact:

Franco Carli, MD, MPhil, FRCA, FRCPC McGill University MUHC, Montreal General Hospital Room D10.144 1650, Cedar Avenue Montreal, Quebec, Canada, H3G 1A4 Tel (514) 934 1934 ext 43261 Fax (514) 934 8249 E-mail: franco.carli@mcgill.ca

DEPARTMENTAL PUBLICATIONS (2005)

Grelik C, **Bennett GJ**, Ribeiro-da-Silva A. Autonomic fiber sprouting and changes in nociceptive sensory innervation in the rat lower lip skin following chronic constriction injury. *Eur J Pain* 2005;21:2475-2487.

Bennett GJ. Animal models and their clinical implications. In: Merskey H, Loeser JD, Dubner R (eds). *The Paths of Pain 1975-2005*, IASP Press, Seattle, 2005; pp 243-251.

Davies SL, Siau C, **Bennett GJ**. Characterization of a model of cutaneous inflammation from a sterile injury produced by a single exposure to ultraviolet irradiation in rat. *J Neurosci Methods* 2005; 148:161-166.

Bennett GJ. Experimental neuropathic pain in animals: models and mechanisms. In: Justins DM (ed), Pain 2005 -- An updated review: Refresher Course Syllabus, *IASP Press*, Seattle, 2005, chapt. 11.

Nixon GM, Kermack AS, McGregor CD, Davis GM, Manoukian JJ, **Brown KA**, Brouillette RT. Sleep and breathing on the first night after adenotonsillectomy for obstructive sleep apnea. *Pediatric Pulmonology* 2005;39:332-8.

Motto Al, Galiana HL, **Brown KA**, Kearney RE. Automated estimation of the phase between thoracic and abdominal movement signals. *IEEE Transaction on Biomedical Engineering* 2005;52(4):614-21.

Strigo IA, Duncan GH, **Bushnell MC**, Wainer I, Rosas MER, Boivin M, Persson J. The effects of racemic ketamine on painful stimulation of skin and viscera. *Pain* 113: 255-264, 2005.

Pukall CV, Strigo IA, Binik YM, Amsil R, Khalife S, **Bushnell MC** Neural correlates of painful genital touch in women with vulvar vestibulitis syndrome. *Pain* 115: 118-127, 2005.

Backlund H, Morin C, Ptito A, **Bushnell MC**, Olausson H. Tactile functions after cerebral hemispherectomy. *Neuropsychologia* 43:332-339, 2005.

Strigo IA, Albanese MC, **Bushnell MC**, Duncan GH. Visceral and cutaneous pain representation in the parasylvian cortex. *Neurosci. Letts.* 384: 55-59, 2005.

Apkarian AV, **Bushnell MC**, Treede R-D, Zubieta J-K. Human brain mechanisms of pain perception and regulation (in health and disease): Scientific Review. *Eur. J. Pain*, 9: 463-484, 2005. Olausson H, Charron J, Marchand S, Villemure, C, Strigo IA, **Bushnell MC.** Feelings of warmth correlate with activity in anterior insular cortex. *Neurosci. Letts*. 389: 1-5, 2005.

Carli F, Galeone M, Gvozdic B, Hong X, Fried GM, Wykes L, Eberhart L, **Schricker T**. Effect of laparoscopic colon resection on postoperative glucose utilization and the protein sparing effect. *Archives of Surgery* 2005;140:593-7.

Carli F, Zavorsky GS. Optimizing functional exercise capacity in the elderly surgical population. *Curr Opin Clin Nutr Metab Care* 2005;8:23-32.

Donatelli F, Tran D, **Carli F**. Epidural and PACU. *Current Drug Targets* 2005;6:795-806.

Mistaletti G, Donatelli F, **Carli F.** Metabolic effects of sedatives and analgesics in ICU. *Current Opinion in Critical Care* 2005;11:312-17.

Wieczorek PM, **Carli F.** Obstructive sleep apnea uncovered after high spinal anesthesia: A case report. *Canadian Journal of Anesthesia* 2005;52:761-4.

Bergman S, Feldman LS, Mayo N, **Carli F**, Anidjar M, Metrakos P, Tchervenkov J, Paraskevas S, Klassen DR, Vassiliou MC, Andrew CG, Stanbridge DD, Fried GM. Convalescence after laparoscopic live donor nephrectomy. *Am J Transplantation* 2005;5:2489-95.

Galan A, **Cervero F.** Painful stimuli induce in vivo phosphorylation and membrane mobilization of mouse spinal cord NKCC1 cotransporter. *Neuroscience* 2005;133:245-52.

Price TJ, **Cervero F**, De Koninck Y. Role of Cation-Chloride-Cotransporters (CCC) in pain and hyperalgesia. *Current Topics in Medicinal Chemistry* 2005;5: 547-55.

Sanoja R, **Cervero F**. Estrogen-dependent abdominal hyperalgesia induced by ovariectomy in adult mice: a model of functional abdominal pain. *Pain* 2005;118: 243-53.

Cervero F. The Gate Theory then and now. In: *The paths of pain.* 2005 Eds. H. Merskey et al. IASP Press (Seattle) pp. 33-48.

Laird JMA, **Cervero F.** Voltage-gated sodium channels and visceral pain. In: Sodium channels, pain and analgesia ed: Baker, M. and Coward, K. *Progress in Inflammation Research* 2005, series editor Parnham, M. Birkhäuser Verlag, Basel, Switzerland, pp.63-70.

Soliman AC, Yu JSC, Coderre TJ. MGlu

and NMDA receptor contributions to capsaicin-induced thermal and mechanical hypersensitivity. *Neuropharmacol* 2005,48:325-332.

Coderre TJ, Kumar N, Lefebvre CD, Yu SC. Evidence that gabapentin reduces neuropathic pain by inhibiting the spinal release of glutamate. *J Neurochem* 2005,94:1131-1139.

Coderre TJ, Sawynok J, Abbot FV. The formalin test. *Encyclopedic Reference of Pain* (Schmidt M & Willis WW, Eds.), Springer, Heidelberg, Germany, 2005.

Fiset P Plourde G, Backman SB. Brain Imaging in Research on Anesthetic Mechanisms; Studies with Propofol. *Prog Brain Res* 2005;150:245-50. Review.

Kardash KJ Garzon J, **Velly AM**, **Tessler MJ**. Ketorolac analgesia for inguinal hernia repair is not improved by peripheral administration. *Can J Anesthesia* 2005;52:613-17.

Koomson A, **Lavoie J**. Broken fragment from a Magill forceps in the airway of a neonate (Letter). *Can J Anesthesia* 2005;52:1105-6.

Olivieri L, **Plourde G**. Prolonged (more than 10 hours) Neuromuscular Blockade after Cardiac Surgery: Report of Two Cases. *Can J Anaesth*.2005;52(1):88-93.

Mogil JS, Smith SB, O'Reilly MK, **Plourde G**. Influence of nociception and stress induced antinociception on genetic variation in isoflurane anesthetic potency among mouse strains. *Anesthesiology*, 2005;103 (4):751-8.

Ruiz P, Kovarik G. Lung Mechanics and gas exchange during OLV following contralateral resection. *Can J Anesth* 2005;52:986-89.

Schricker T, Gougeon R, Eberhart L, Wykes L, **Mazza L, Carvalho G, Carli F.** Type 2 diabetes mellitus and the catabolic response to surgery. *Anesthesiology* 2005;102:320-6.

Schricker T, Wykes L, Eberhart L, **Carli F**, Meterissian S. Randomized clinical trial of the anabolic effect of hypocaloric parenteral nutrition after abdominal surgery. *Br J Surg* 2005;92:947-53.

Sloman R, Rosen G, Rom M, **Shir Y**. Nurses' Assessment of Pain in Surgical Patients. *J Adv Nurs* 2005;52:125-32. Fitzcharles MA, Almahrezi A, **Shir Y**. Pain: Understanding and challenges for the rheumatologist. *Arthritis Rheum* 2005;52:3685-92.

Tran QHD, **Finalyson RJ**. Use of Stenale Block to salvage an ischemic hang caused by the extravasation of vaso-pressors. *Reg Anesth Pain Med* 2005;30 (4):405-8.

Tran QHD, **Gordon A**, **Asenjo JF**, De la Cuadra-Fontaine JG, Retained and cut stimulating intraclavicular catheter" (correspondences), *Can J Anesth* 2005;52:998-9.

Wright S, **Ware MA**, Guy G. The use of a cannabis-based medicine (Sativex) in the treatment of pain caused by rheumatoid arthritis (letter). *Rheumatology* 2006;45(6):781

Perez J, **Ware MA**, Chevalier S, Gougeon R, **Shir Y**. Dietary omega-3

fatty acids could be associated with increased neuropathic pain in nerve-injured rats. Anesth Analg 2005;101:444-8

Burford-Mason A, Dryden T, Kelner M, Saunders PR, **Ware MA.** Complementary and alternative therapies for pain in older adults. *Geriatr Aging* 2005;8(6):28-33

Ware MA, Beaulieu P. Cannabis for the treatment of pain: an update of recent clinical trials. *Pain Res Manage* 2005;10A:27-30

Clark AJ, Lynch ME, **Ware MA**, Beaulieu P, McGilveray IJ, Gourlay D. Guidelines for the use of cannabinoid compounds in chronic pain. *Pain Res Manage* 2005;10A:44-46

Ware MA, Tawfik V. Safety of issues concerning the medical use of cannabinoids. *Pain Res Manage* 2005;10A:31-37

Ware MA, Adams HA, Guy GW. Me-

dicinal use of cannabis in the UK: results of a nationwide survey. *International Journal of Clinical Practice* 2005;59(3):291-295

Withington DE. Minimal exhaled nitric oxide production in the lower respiratory tract of healthy children aged 2 to 7 years old. *Annals of Saudi Medicine* 2005;25 (2):120-3.

Zavorsky GS, Lands LC, Schneider W, **Carli, F**. Comparison of fingertip to arterial blood samples at rest and during exercise. *Clin J Sports Med* 2005;15:263-270

Zavorsky GS, Lands LC. Lung diffusion capacity for nitric oxide and carbon monoxide is impaired similarly following short-term graded exercise. *Nitric Oxide: Biology and Chemistry* 2005;12:31-38

> "Just Quote Me" (ou can tell how big a person is by what it takes to discourage them. -Anonymous

THE 5TH ANNUAL JOHN W. SANDISON RESIDENTS' EDUCATION DAY



"Physicians deserve to have a healthy and happy life in addition to healthy and happy clinical practices. This is the era of promoting physician well-being, which means significant changes to how we structure our education and training programs, our clinical practices, and our approaches to CME."

Visiting Professor Derek Puddester, MD, FRCPC, Assistant Professor Co-Head Behavioral Neurosciences and Consultation Liaison Team

Co-Director Education Department of Psychiatry, Children's Hospital of Eastern Ontario

Director, Faculty Wellness Program, Faculty of Medicine, University of Ottawa

48th Annual McGill Anesthesia Update

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For Further Information Contact:

Kelly Ann McCulloch Glover, Tel.: (514)934-1934 (ext. 44173) Fax: (514)934-1779 Email: Kelly.glover@muhc.mcgill.ca Web: www.mcgill.ca/mgh_pgb **The John Westwood Sandison Residents' Education Day** was held on April 20th, 2006 at the Royal Victoria Hospital. This event is a tribute to Dr. John W. Sandison who was Chairman of the McGill Department of Anesthesia from 1977 to 1985.

The Education Day consists of Grand Rounds Lecture for all faculty and residents, followed by a plenary session and workshop for Anesthesia residents. The goal of the Sandison Day is to expose faculty and residents to a broad range of issues that affect our practice.

This year's guest lecturer was Dr. Derek Puddester, who, as director of the Faculty Wellness Program in the Faculty of Medicine, University of Ottawa, was able to deliver such pertinent lectures: "Taking Care: Canada's Effort to Build a Sustainable Medical Profession" (Grand Rounds), "Keeping Your Eye on the Ball: Recapturing and Revitalizing your Love and Passion for Anesthesia" (Plenary), and "Real Residents, Real Issues, Real Solutions" (Workshop).

We thank Dr. Puddester for joining us in this event, which is a tribute to Dr. John Sandison, who, throughout his professional life, persistently promoted quality education for medical students and residents.

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<u>getCITED</u> is an ambitious project to facilitate searches for book chapters, working papers, conference papers, and other types of publications and academic research not commonly indexed. The project is off to a running start with over 315,000 identities and 3,250,000 publications indexed, but the site creators are requesting the cooperation of "the entire academic community." Scholars are encouraged to register with the site (for free) and enter in the details of their publications. Anyone may search the database for publications, identities, institutions, or departments, but only registered members may add or edit content. A free database created solely by and for researchers and scholars is an attractive idea and deserves support.

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Established in 1966, the Canadian Anesthesiologists' Society International Education Fund (CAS IEF) plays an active role in making anesthesia available to people living in less well off areas of the world.

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Our goal is to promote education in anesthesia which in turn will lead to improved anesthesia services in developing countries. We do this on behalf of all Canadian anesthesiologists.

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gela Enricht

Angela Enright, MB FRCPC CAS IEF Chair

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what programs are in place, where our doctors are located, and what training is involved.

IN MEMORIAM—DR. MORRIS GERTEL

Dr. Morris Gertel, who died in May, was to his students and colleagues, a giant among the teachers of anesthesia in Israel.

He was born in Montreal. Canada, in 1938, to parents who were immigrants form Poland and, who over the next few years, lost almost all their family in the Holocaust. He studied medicine at McGill University in Montreal and completed his residency in Anesthesia at the Royal Victoria Hospital, a department where the influence of Harold Griffith and Wesley Bourne was still strongly felt. He joined an elite department, with names like Phil Bromage, Gordon Fox, Arthur Sheridan, Michael Cousins and many others. To this day, he is remembered by his friends in Montreal for being an outstanding physician, teacher and man.

In 1982 he immigrated with his family to Jerusalem, Israel, first working at Sharei Zedek Hospital and, after a year, joining the department at Hadassah, led by Terry Davidson, where he became Director of Neurosurgical Anesthesia. In addition to that sub-specialty, which he pioneered in Israel, he was fascinated by physiology and physics as applied to the practice of anesthesia and anesthesia equipment, became involved in patient safety and quality assurance, and for many years, ran the resident teaching program.

At his funeral, Eliyad Davidson said: "I am convinced that many of my colleagues who had the fortune to be taught by him will agree that he was the teacher, above all others, who made the greatest impression on them during their medical education. He was a man of truth. He believed in order, precision, attention to detail; he was the first to arrive in the OR in the morning, to check that everything was as it should be; he instituted norms of working practices in Hadassah that are still in place today.

He was a mine of information. He built an impressive medical library in his home which could boast of texts not held by any of the medical and anesthesia libraries in Hadassah or in Israel. As each new edition came out, he would take care to update his collection, yet, unlike most of us, he actually read them; he studied, absorbed and retained almost every detail in them. The monthly journals also came under his close scrutiny and soon almost every question pertaining to the anesthesia literature awaited his assessment and opinion."

His modesty was genuine. I only learned as I researched for this obituary, that in Montreal he worked extensively in Obstetric Anesthesia and, together with Gordon Fox, wrote the chapter on regional anesthesia, in the textbook "Obstetric Anesthesia" edited by Gertie Marx and Gerald Bussell, which was, in its day, one of the leading texts in its field. In all the years that I knew him, he never once let on. Titles and honors did not interest him in the least. His truth and honor he found within himself and at home with Roni. his wife, with his children. grandchildren, friends, in his Torah, in his deep and abiding faith, and his straight way of life.

He was the ultimate teacher both in his life, also in sickness. Again Eliyad Davison: "... in his illness he taught us how to carry on with dignity, despite the hardship and the pain, how to carry on working while still feasible, and when work became impossible, how he clung so



Dr. Morris Gertel

bravely to life. He believed that you have to live the life you have been given, and in that he continued to teach and educate those around him until the end."

May his memory be for a blessing.

Dr. Yehuda Ginosar

SPECIAL ANNOUNCEMENT

The International Association for the Study of Pain has chosen Montreal as the venue for their 13th World Congress on Pain to be held in 2011. This is the largest pain research and management congress in the world which attracts some 6000 delegates from Europe, North America and the rest of the world.

NYU STAR NAMED DEAN OF MCGILL'S FACULTY OF MEDICINE



Richard I. Levin brings additional heft to brain-gain success story at McGill.

"McGill is ones of the world's great public research universities. It is also a leader in human genomics and proteomics, and, just as the 20th century was the century of physics, the 21st century will be the century of biological breakthrough."

Heather Munroe-Blum, Principal and Vice-Chancellor of McGill University, is delighted to announce the appointment of Dr. Richard I. Levin as Vice-Principal (Health Affairs) and Dean of the Faculty of Medicine. Currently the Vice-Dean for Education, Faculty and Academic Affairs at New York University (NYU) School of Medicine, Dr. Levin will take on his new position at McGill on September 1, 2006.

In making the announcement, Prof. Munroe-Blum noted her excitement that Dr. Levin, an accomplished scientist and academic leader in medicine, will serve as the Faculty of Medicine's 26th dean since 1829. She said that Dr. Levin's mandate is to lead the Faculty to the highest tier of excellence in medical education, research in health sciences, clinical services to patients, and in designing stronger relationships with the community, including the private sector.

"Dr. Levin has outstanding credentials and leadership skills," said Principal Munroe-Blum. "He also brings a deep understanding and passion for the unique role of education and research in advancing our society and mankind, which is an essential quality for the position."

That view was echoed by senior members of Canada's medical establishment. "The recruitment of Dr. Levin is a coup, not just for McGill, but for Canada," said Dr. Alan Bernstein, President of the Canadian Institutes of Health Research.

Dr. Levin said he welcomes the challenge because McGill is Canada's leading medical research university, known internationally for its strength in medical and biomedical sciences, and because Quebec and Canada have unique strengths that position the country to be a world leader in medical advances and discovery for the future.

"McGill is one of the world's great public research universities. It is also a leader in human genomics and proteomics, and, just as the 20th century was the century of physics, the 21st century will be the century of biological breakthrough," he said.

"McGill is in a unique position to lead in medical education and research. It already has a series of collaborations in place, including through organizations like Genome Canada and Génome Québec, that position it to build this rich fabric of medical sciences. In this respect, the future is exhilarating."

In his current role, Dr. Levin is responsible for NYU's distinguished clinical programs and all its educational programs, from the Salk School, a magnet school run jointly with the Board of Education of the City of New York, to its continuing medical education programs.

Dr. Levin, who has practiced and taught medicine for 25 years on the front lines at Bellevue Hospital Center in New York, the oldest public hospital in the United States, says he is also drawn by Canada's health care system.

"I'm a strong believer that quality health care should be available to all," he said. "Canada has, more successfully than most nations in the world, established a truly universal system from which other countries can learn. That is a real accomplishment." Source: University Relations Office (URO) May 29, 2006 www.med.mcgill.ca

As part of its ambitious recruitment program since 2000, McGill has recruited some of the very best minds and scholars from other elite institutions around the world. More than 600 new professors have been recruited to McGill since 2000, including 335 from institutions outside the country.

Dr. Levin has been a full professor of medicine at NYU since 1996. Among other positions, Dr. Levin has served as the Director of Training Programs, in Cardiovascular Disease at NYU and has also been the recipient of numerous distinguished awards and honors throughout his career.

Dr. Levin's scientific interests include endothelial cell biology, the prevention of atherothrombotic events, and the role of the new information technologies in medical education. In addition to numerous peer awards and distinctions, he has been awarded four patents relating to his work developing a device and system for coronary health intervention, and for studies on the promotion of wound healing.

A proven innovator, Dr. Levin invented a medical device for the detection and analysis of ambulatory myocardial ischemia, then co-founded the company QMED around that technology. QMED is now a publicly traded disease management and wellness company.

Dr. Levin received his BS in Biology from Yale University in 1970, his MD from NYU School of Medicine in 1974, and did a Postdoctoral Fellowship at Cornell University Medical College from 1979 to 1983.

WELCOME TO MCGILL ANESTHESIA

Prior to joining McGill last year, **Christine Steinmeyer** worked in management in the health care sector for over 25 years, 20 of those at the Montreal General Hospital. A graduate of Concordia University's MBA program, Christine joined the Department in June as the new Administrative Assistant to Dr. Steven Backman.

Denis Francoeur is the new Administrative Assistant to Dr Pierre Fiset at the MCH. Denis has been involved in the administration field for many years, more recently at the CHUM and previously at different ministries of the Government of Quebec. He is a graduate of both the University of Sherbrooke, in English Studies, and of HEC Montreal in Business Management.



After completing her anesthesia residency at the University of Ottawa in 2004, **Dr. Nathalie Buu** completed her Pediatric Anesthesia Fellowship training at the BC Children's Hospital (Vancouver) in June 2005 and then joined the MCH Department of Anesthesia on a temporary replacement for Dr. Frigon. During her studies, Dr. Buu was the recipient of the UBC Department of Anesthesia Research Prize and the Organon Canada Resident Research Award. In January, Dr. Buu was appointed Assistant Professor to the McGill Department of Anesthesia and will continue her work at the MCH.

In 2000, **George Carvalho** obtained his MD from the University of Western Ontario following a BSc in Human Biology with high distinction from the University of Toronto (1996) during which he was awarded the University of Toronto's Scholar's Award in Recognition of Outstanding Achievements and was also placed on the Dean's List. In 2005, after completing his anesthesia residency training at McGill, Dr. Carvalho was awarded the CAS Fellowship Award in Anesthesia for his project entitled "The inotropic effects of insulin and glucose: a new diet for the ischemic heart" and went on to complete a Clinical Research Fellowship in Cardiac Anesthesia at the Royal Victoria Hospital under the supervision of Dr. Thomas Schricker. As of July 1st, we are happy to announce that George has been appointed to the McGill Department of Anesthesia as an Assistant Professor based at the Royal Victoria Hospital.

On October 1st, **Dr. Andrew Green**, who has been appointed Assistant Professor, will join the RVH Department of Anesthesia after completing a one-year Cardiothoracic Anesthesia Fellowship at Duke University (Durham, NC). In 2005, Dr. Green completed his Anesthesia Residency training at the University of Toronto and was the recipient of the Sunnybrook and Women's College Healthcare Centre Chief Resident Award. Dr. Green has received several awards during his training, among them the RESTRACOMP MSc Research Scholarship Hospital for Sick Children Award (Toronto).

Dr. Roshanak Charghi obtained her MD from the Université de Laval in 1999 following a BSc in Physical Therapy from McGill. She returned to McGill for her Anesthesia Residency in 1999 where she developed a special interest in chronic pain. She went on to complete a Chronic Pain Fellowship at McGill and, on August 1st, was appointed Assistant Professor to the Department of Anesthesia and will be based primarily at the SMBD-Jewish General Hospital. Dr. Charghi will continue her work in pain-related activity, spending one day per week at the MUHC Pain Centre (Montreal General Hospital) performing OR pain interventions and treating patients in the clinic.

On August 1st, **Dr. Thomas M. Hemmerling** joined the McGill Anesthesia Department as Associate Professor and will be based primarily at the Montreal General Hospital. Dr. Hemmerling completed his Cardiac Surgery Residency at the Hannover Medical School (Germany) in 1993 and Anesthesia residency training at the University Erlangen-Nuremburg (Germany) in 1997. He went on to complete a fellowship in Cardiac Anesthesia in 1999 under the supervision of Professor Dinkel (University Erlangen-Nuremburg) and, in 2001, he completed a research fellowship under the supervision of Dr. François Donati (l'Université de Montréal). Dr. Hemmerling is a certified Anesthetist, Intensivist and Emergency doctor with a strong research and teaching background. His research interests are in the field of neuromuscular monitoring, cardiac anesthesia, and automated anesthesia delivery systems.



We welcome back **Dr. Ralph Lattermann** who is expected to join the McGill Anesthesia Department as an Assistant Professor based at the Royal Victoria Hospital in early fall! Dr. Lattermann obtained his MD in 1997 at the University of Ulm (Germany). In 2000, he was awarded the Ronald Melzack Research Award from McGill University which funded his MSc studies in Dietetics and Human Nutrition under the supervision of Drs. F. Carli, L. Wykes and T. Schricker. During this time, he also completed a two-year Clinical Fellowship in Anesthesia at the Montreal General Hospital. In 2002, Dr. Lattermann returned to the University of Regensburg to complete his anesthesia residency training. Dr. Lattermann's continued research activities in the field of metabolism, nutrition and anesthesia led him to obtain his PhD degree in Anesthesiology in 2005 (Thesis: "Catabolic response to surgical trauma: modification by epidural blockade and nutrition."). Since then, he has been employed as Staff at the University of Regensburg where he has established himself as an independent investigator. We look forward to his return to McGill!

Dr. Brigitte Lecours, who recently completed her anesthesia residency training at Université de Sherbrooke, will be joining the RVH Department on a temporary replacement until December 2006.



Diana Di Zazzo

WE HOPE YOU ENJOYED THE LATEST EDITION OF NEWSLINE!

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- News from around your division, site, department
- Articles on various topics of interest
- Upcoming events
- Letters to the editor

We welcome your submissions at any time, however the deadline for the Winter edition of Newsline will be

November 30th, 2006.

McGill University

Department of Anesthesia, Send Correspondence, submissions & inquiries to: Diana Di Zazzo

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