

# Centre for Medical Education Annual Report

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## EXECUTIVE SUMMARY

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The last year has been one of continued growth and activity for the Centre for Medical Education, and a few of the year's highlights will be summarized here.

Educational programs and initiatives at the Centre continued to thrive as we welcomed students and residents for electives in medical education, senior residents for postgraduate fellowships in medical education, and new Masters Students to the joint Centre for Medical Education and Department of Educational and Counseling Psychology Master of Arts in Educational Psychology. Core Faculty and Centre Members were also actively involved in the Faculty of Medicine's educational programs, at all levels of the educational continuum, and the Educational Design Group of the Faculty's Strategic Planning Process.

2009-2010 could also be dubbed the "Year of Professionalism" at the Centre. In early 2009, after many years of teaching, research and dissemination, Drs. Richard and Sylvia Cruess, together with Yvonne Steinert, edited a book on *Teaching Medical Professionalism*. In February 2010, the Centre for Medical Education, together with the Faculty Development Office, organized a Symposium entitled *Professionalism: Celebrating the Past... Mapping the Future* in honour of Drs. Richard and Sylvia Cruess. This event brought together over 125 participants from different disciplines, departments and universities across the country. In addition, in a year where we marked the contributions of Drs. Richard and Sylvia Cruess to the area of medical professionalism, we were extremely pleased to announce the establishment of the newly created *Richard and Sylvia Cruess Chair in Medical Education*. It is our hope that this new position will help to usher in a new era of research in medical education at McGill.

Scholarship and research productivity were two other key priorities. The hiring of two educational researchers and one full-time postdoctoral fellow helped to move our research agenda forward. So did the development of an internal committee on research in medical education as well as a series of research capacity building sessions for Core Faculty, Centre members, students and residents. The results of our renewed research strategy are highlighted in the appendices, as are the peer-reviewed articles and book chapters of Core Faculty and Centre members. There has clearly been a significant increase in scholarly output at the Centre for Medical Education in 2009-2010, and we look forward to building on our achievements in 2011.

In looking to the year ahead, we hope to build on the success of our educational programs, continue to compete for research grants and publish widely in medical education, develop new partnerships, both at McGill and with other organizations and institutions dedicated to medical education, and contribute actively to the life of the Faculty of Medicine and the University. We believe that we are at an exciting juncture in the development of medical education at McGill, and we look forward to participating in the development of future physicians and medical educators.

**SECTION I – DESCRIPTION OF THE UNIT**

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The McGill University Centre for Medical Education promotes excellence and scholarship across the continuum of health sciences education. More specifically, the Centre for Medical Education:

- Encourages innovation in teaching and learning;
- Serves as a resource for curriculum development in undergraduate, postgraduate and continuing health sciences education;
- Stimulates interest in educational research and development;
- Conducts research and scholarly work in health sciences education; and
- Ensures that research advances the field of health sciences education and informs educational practice.

The Members of the Centre for Medical Education represent diverse backgrounds and disciplines and are involved in:

- Educational planning, curriculum design and program evaluation
- Mentorship of students, residents, fellows and colleagues
- Faculty development and educational consultations
- Research in health professions education
- Dissemination of educational innovations and research findings

Centre membership consists of: 14 Core Faculty, each of whom devotes at least one day a week to medical education activities; two Educational Researchers; one Medical Council of Canada Postdoctoral Fellow; one Postdoctoral Fellow in the Basic Sciences; 26 Centre Members, who devote at least one day a month to research and development in medical education; and eight Affiliate Members, who attend Centre meetings on a regular basis and participate in collaborative projects. All Core Faculty and Centre Members collaborate with individuals, departments and other organizations to advocate for excellence in teaching and learning, scholarship, and improved health care. (**Appendix I** includes the names and departmental affiliations of all Centre staff.)

In August 2009, we welcomed Dr. Meredith Young (Cognitive Psychology) from McMaster University to the position of Assistant Professor to work on the evaluation of students, residents and faculty members. She also has an independent research program related to clinical decision-making. In December 2009, we welcomed Dr. Valerie Ruhe (Education) from the University of British Columbia to work in the areas of program evaluation, research design and evaluation, with a focus on McGill's Physicianship and Physician Apprenticeship programs.

In addition, in July 2010, we were pleased to welcome Dr. Stuart Lubarsky as the newest member of our Core Faculty. Dr. Lubarsky's research will focus on innovations in teaching neurology, clinical reasoning and the script concordance test. Moreover, his joint appointment

with the Department of Medicine as clinician educator and researcher signals a new era for medical educators at McGill.

In addition to these appointments, we were pleased to welcome the following new Centre Members in 2009-2010: Dr. Thomas Hutchinson (Programs in Whole Person Care), Dr. Christine Meyers (Emergency Medicine), Dr. Jay Nadeau (Biomedical Engineering), Dr. Rosario Rodriguez (Family Medicine), Dr. Melina Vassiliou (Surgery) and Dr. Teresa Valois (Anesthesia). In 2010-2011, we welcomed: Dr. Ilana Bank (Pediatrics), Dr. Laeora Berkson (Internal Medicine), Dr. Beth-Ann Cummings (Internal Medicine) and Dr. Nicholas King (Biomedical Ethics and Department of Social Studies of Medicine).

## **SECTION II – PAST YEAR’S ACTIVITIES**

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### **TEACHING AND LEARNING**

Members of the Centre for Medical Education continue to participate in teaching and learning at all levels of the educational continuum. Highlights will be described here.

#### ***Undergraduate and Postgraduate Teaching***

At the undergraduate level, Core Faculty and Centre Members are intricately involved in the *Basis of Medicine*, *Physicianship*, and the admissions process. Drs. Jim Brawer, Radan Čapek, and Colin Chalk continue to serve as Course Directors in the *Basis of Medicine*, the first 18 months of the undergraduate medical curriculum, and Dr. Jeffrey Wiseman continues to function as the Undergraduate Program Director for the Department of Medicine.

In addition, Dr. Donald Boudreau is responsible for the design and implementation of *Physicianship*, which focuses on the physician as healer and professional. We have now entered the sixth year of this course, and a systematic program evaluation, designed to examine outcome and process, is in progress. It is also noteworthy that 16 Core Faculty and Centre Members were Osler Fellows during the last two years. Responsible for guiding and mentoring students over the four years of their undergraduate experience, they include: Drs. Lorraine Bell, Farhan Bhanji, Donald Boudreau, Michelle Elizov, Ron Gottesman, Stuart Lubarsky, Marcus Martin, Saleem Razack, Ruth Russell, Kenneth Shaw, Michael Stein, Melina Vassiliou, Mark Ware, Kevin Waschke, Patrick Willemot and Jeffrey Wiseman. In addition, Drs. Richard and Sylvia Cruess continue to deliver the core content of *Professionalism* for the undergraduate program; Drs. Miriam Boillat and Yvonne Steinert co-direct the faculty development initiatives that support this curricular component; Dr. Miriam Boillat co-chairs *Physicianship 2A*; and Dr. Helen MacNamara chairs *Physicianship 3*.

On another note, Dr. Saleem Razack, who was appointed to the position of Assistant Dean of Admissions, Equity and Diversity in December 2009, continues to head McGill’s new admissions process, which is based on the McMaster Multiple Mini-Interview. This novel process maps selection criteria onto *Physicianship* and involves the large-scale use of the McGill Medical

Simulation Centre to select prospective students. Innovative in its use of standardized actors to assess both the cognitive and non-cognitive attributes of potential medical students, the admissions process links administrative exigencies (e.g., the need for a fair and valid selection process) with scholarship (i.e., program evaluation).

At the postgraduate level, Core Faculty and Centre Members continue to hold key leadership positions. Dr. Sarkis Meterissian is the Associate Dean for Postgraduate Education; Dr. Linda Snell is responsible for faculty-wide teaching and learning of the CanMEDS competencies; and Dr. Peter McLeod directs the Postgraduate Fellowship in Health Sciences Education at the Centre, as described below.

### ***Strategic Planning in the Faculty of Medicine – The Year of Thinking Dangerously***

At the administrative level, Core Faculty and Centre Members have been actively engaged in Dean Richard Levin's strategic planning process, which began in the summer of 2008 and was entitled "The Year of Thinking Dangerously". Dean Levin asked the Centre for Medical Education staff to consider what our Faculty of Medicine should look like in the 21<sup>st</sup> century, and we devoted three Centre meetings to this topic. In addition, the following Core Faculty and Centre Members participated in the Strategic Planning Education Design Group (EDG): Drs. Farhan Bhanji, Miriam Boillat, Jim Brawer, Colin Chalk, Beth-Ann Cummings, Peter McLeod, Jay Nadeau, Linda Snell, Yvonne Steinert and Melina Vassiliou. The objectives of the EDG were to envision the priorities of medical education in the future, considering societal needs and the changing face of health care, and to identify new curricula, pedagogical methods and forms of assessment. More recently, as part of the implementation phase, Dr. Colin Chalk was appointed to the position of Director of Curriculum Development, Fundamentals of Clinical Medicine. The goal of this portfolio is to design a curriculum for the first year and a half of the MDCM curriculum, following the principles laid out by the EDG report.

### ***Postgraduate Fellowship in Health Sciences Education***

This program, modeled on the Faculty Development Office's *Teaching Scholars Program*, is designed for senior residents and fellows with an interest in medical education. We welcomed two fellows in 2009-2010.

Dr. Sing-Yun Chang, a resident in the Department of Pathology, examined the impact of an integrated teaching approach on student motivation and learning strategies during histology laboratories. Dr. Chang's project, "Clinical relevance under the microscope: Scaffolding medical students' motivation for learning histology" was accepted for presentation at the United States and Canadian Academy of Pathology's 100<sup>th</sup> Annual Meeting in San Antonio, Texas in February 2011. Dr. Saleem Razack was her faculty advisor. Dr. Nicholas Gélinas-Phaneuf, a resident in the department of Neurology and Neuroscience, focused on "The assessment of technical skills in neurosurgery: The development of the Global Assessment of Intra-operative Neurosurgical Skills (GAINS) scale", together with attending staff at the Brain Tumor Research Centre at the Montreal Neurological Institute, the University Health Network (Toronto), the MUHC and that National Research Council Industrial Materials Institute (Boucherville, Quebec). Dr. Gélinas-

Phaneuf also presented his project at the Canadian Conference on Medical Education in May 2010 and is currently pursuing an MA in Educational Psychology at McGill. Dr. Colin Chalk was his faculty advisor.

Fellows in 2010-2011 included Drs. Catherine Patocka and Daniel Zigman. Dr. Patocka, Chief Resident for the McGill Emergency Medicine Residency Training Program, is interested in studying how we teach and learn electrocardiogram interpretation in the emergency department and how educators develop residents-as-teachers. Dr. Jeff Wiseman is her faculty advisor. Dr. Zigman, a resident in Psychiatry, is interested in examining the integration of simulation into residency training to teach the assessment of danger to junior residents in a controlled environment. Dr. Colin Chalk is his faculty advisor.

Looking back over our Fellowship Program, it is worth mentioning that Dr. Jennifer Walton (2004-2005) has continued to incorporate medical education into her career as a pediatrician at the University of Alberta and her fellowship project, entitled "Patterns of interaction during rounds: Implications for work-based learning", was published in June 2010 in *Medical Education*. Dr. Joanne Alfieri (2008-2009) has also continued to deliver the findings of her study, "The effectiveness of web-based anatomy instruction in radiation oncology," at a number of scientific meetings: the Association for Medical Education in Europe in Malaga (August 2009); Canadian Association of Radiation Oncology in Quebec City (October 2009); and the American Society for Radiation Oncology Annual Meeting in Chicago (November 2009). She has received unprecedented acknowledgement for her work and has recently submitted her research for publication.

### ***Medical Education Electives***

Under the leadership of Dr. Linda Snell, our medical education electives program continues to be very popular for both undergraduate students and residents. This year we welcomed a number of students and residents.

- Philip Stasiask, a fourth-year medical student, focused on "Examining self-efficacy in new attending physicians". Centre Member Dr. Christine Meyers and Core Faculty Dr. Linda Snell were his advisors.
- Florin Costescu, a fourth-year medical student, carried out a project entitled "McGill ophthalmology undergraduate program - Curriculum assessment and suggestions for the future". Dr. Linda Snell was his advisor.
- Jason Robins, a fourth-year medical student, worked on a project entitled "Assessing the efficacy of undergraduate radiology teaching: The McGill experience". Dr. Linda Snell was his advisor.
- Anaïs Rameau, a fourth-year medical student, focused on "Why medical students should be taught about the conceptualization of disease - The illustrative case of gastroesophageal reflux disease in the medical curriculum at McGill University". Drs. Meredith Young and Nicholas King were her advisors.

- Dr. Preeti Amoy Anand, a third-year resident in Internal Medicine, focused on "An assessment of self-efficacy and behavioural performance after the introduction of simulation-based crisis resource management training". Drs. Linda Snell and Ron Gottesman were her advisors.
- Dr. Daniel Brody, a Pediatric ER Fellow, is continuing to study the presence/ absence of parents during resuscitation in the emergency room. Dr. Farhan Bhanji is his advisor in collaboration with members of the McGill Medical Simulation Centre.
- Dr. Razaz Wali, a Fellow in Maternal Care, is developing a curriculum to teach students and residents about breast-feeding in Saudi Arabia. Drs. Peter McLeod and Ms. Anjana Srinivasan (from the JGH) are her advisors.

The success of our elective students has been particularly rewarding, especially as a number of former students have continued to pursue a career in medical education. For example, Dr. Rachel Fisher (elective participant in 2008-2009) presented the results of her project, "A novel integrated simulation-based orientation program for junior anesthesia residents: A program evaluation," at the Canadian Conference on Medical Education in May 2010. She continues to consult with Core Faculty and Educational Researchers in the development of this curriculum-based endeavour and hopes to pursue advanced studies in medical education. Dr. Brett Schrewe (2008-2009), a fourth-year resident in Pediatrics, recently presented "Towards an understanding of how young patients are othered through discourse in an urban pediatric hospital centre" at the Summer School of Sociolinguistics, University of Edinburgh. We are also very proud of former elective participants, Dr. Stuart Lubarsky, who spent six months with us in 2007-2008, and Dr. Mylène Dandavino, who was at the Centre in 2004-2005, as they both graduated with a Masters in Medical Education from Maastricht University in June 2010.

#### ***Master of Arts in Educational Psychology, Health Professions Education Stream***

Together with colleagues in the Faculty of Education, we have entered the fourth year of the Health Professions stream in the Master of Arts in Educational Psychology. Four new students have been accepted this year: Ms. May Bader (Dentistry, University of Jordan); recent graduate from the Centre's Fellowship program Dr. Nicholas Gélinas-Phaneuf (Neurology and Neurosurgery, McGill); Dr. Inas Fakhry Kostandi-Malaty (Medicine, Cairo University); and Ms. Christine Summerside (Nursing, McGill). They join the current cohort which includes: Drs. Khalid Al-Ejji (Gastroenterology, McGill), Dr. Geneviève Chaput (Medicine, Université de Montréal), Ms. Heidi Clavet (Physiotherapy, Ottawa), Dr. Wid Kattan (Medicine, Saudi Arabia), Ms. Donna Stanbridge (Nursing, McGill), Dr. Marilou Vaillancourt (General Surgery, McGill) and Dr. Kevin Waschke (Gastroenterology, McGill).

The Centre for Medical Education will also offer the graduate seminar, *Current Issues in Health Professions Education*, in the winter of 2011. The course is organized by Dr. Linda Snell who will collaborate with Core Faculty, including Drs. Farhan Bhanji, Richard and Sylvia Cruess, Saleem Razack, Yvonne Steinert and Meredith Young, to teach this course. In addition, Dr. Valerie Ruhe taught a graduate course in the Faculty of Education this past fall on *Educational Evaluation*. During this course, which focused on approaches, frameworks and models to evaluate



educational programs, students designed an evaluation plan of an authentic program and had opportunities to revise their work based on peer and instructor feedback.

### ***Faculty Development Workshops***

The Faculty Development Office, which assists faculty members in their roles as educators, researchers and administrators, continues to work closely with the Centre for Medical Education. In the last 16 years, the Faculty Development Office has welcomed 2,506 faculty members, for a total of 6,850 “visits” to approximately 200 workshops. During the 2009-2010 academic year, close to 750 participants attended faculty-wide workshops, symposia and outreach activities.

Faculty-wide workshops this past year included the following:

- Learning Is Not a Spectator Sport: Promoting Interaction in Large and Small Group Teaching
- Qualitative Research in Health Sciences Education: From Design to Implementation
- Advanced Clinical Teaching Skills
- Enhancing Student Engagement: Using Effective Clicker Questions
- Beyond Ask and Answer: Advanced Interactive Questioning Using Clickers
- Leading and Managing in the Lab

In addition, the Faculty Development Team sponsored three new programs for faculty members: a 3.5-day Leadership Development Program, to help prepare future leaders in the Faculty; a 2-day Train-the-Trainer Program, to enable increased faculty development activities in the schools and departments; and booster sessions, designed as an opportunity for those who took part in previous workshops to further develop their skills. The Faculty Development Team was also involved in faculty-wide initiatives at the postgraduate level, for teachers in the RUIS, for Osler Fellows, and in a number of outreach activities that included the following topics:

- Leadership and Change
- Teaching and Evaluating Professionalism
- Accueillir un étudiant dans mon milieu clinique! Que dois-je faire de différent?
- Giving Effective Feedback
- Evaluating Students and Residents
- Teaching When There’s No Time to Teach
- How to Support the Resident in Difficulty

### ***Medical Education Rounds and Visiting Speakers***

In 2009-2010, the Centre for Medical Education and the Faculty Development Office welcomed the following invited speakers to present their innovations and research at Medical Education Rounds: Dr. Ron Epstein, from the University of Rochester Medical Center, New York, presented

“Promoting mindful practice in students and residents to improve quality of care”; and Dr. Hilliard Jason, from the University of Colorado in Denver, spoke on “How our brains learn: Four needed transformations in medical education”.

In addition, we welcomed the following guest speakers to Centre meetings to discuss current topics in medical education:

- Dr. Carla Pugh from Northwestern University, Illinois, and the Flanders Family Visiting Professor in Medical Simulation, talked about the “Assumptions of an educator: Potential pitfalls during simulation design and implementation” at joint rounds hosted by the Simulation Centre and the Centre for Medical Education.
- Ms. Lois Ingram from Ingram and Associates in New York, presented data from her research with Dr. Donald Boudreau on “Program evaluation of the physicianship curriculum”
- Dr. Ron Epstein, from the University of Rochester Medical Center, New York, spoke about “Defining and assessing professional competence”
- Dr. Molly Cooke, from the University of California at San Francisco, discussed “Faculty engagement and development as intentional by-products of curriculum innovation”
- Dr. Jordan Cohen, former Executive Director of the Association of American Medical Colleges, presented “Educational innovations in times of change”
- Dr. Scott Wright, from Johns Hopkins University School of Medicine and a McGill alumnus, spoke about “Role modelling and clinical excellence”
- Dr. Hilliard Jason, from the University of Colorado in Denver, discussed “Humility 101: The foundation of effective teaching”
- Dr. Ara Darzi, from Imperial College in London (UK) and the Flanders Family Visiting Professor in Medical Simulation, gave a presentation on “Simulation.”

Invited guests were also welcomed at our day-long symposium on ***Professionalism: Celebrating the Past... Mapping the Future*** in honour of Drs. Richard and Sylvia Cruess’ work in the area of professionalism. The event brought together over 125 participants from 28 health science disciplines and departments, 17 different organizations and universities and 5 Canadian provinces. The day-long symposium began with an introductory plenary given by Drs. Richard and Sylvia Cruess on the “Heart and mind of professionalism”. Presentations included: “Professionalism: A social network perspective” by Fred Hafferty (University of Minnesota, Duluth); “The context of professionalism” by Shiphra Ginsburg (University of Toronto); “The assessment of professionalism” with Maxine Papadakis (University of California, San Francisco); and “Working in a multi-generational context” with Sharon Johnston (University of Ottawa). In addition, Dr. Linda Snell, Core Faculty at the Centre for Medical Education, gave a faculty perspective on professionalism in the Faculty of Medicine and Dr. Robert Sternszus, a pediatric resident from McGill, spoke about the “Student perspective on professionalism”.

Finally, two cohorts of graduating Teaching Scholars presented their projects at Medical Education Rounds this past year. The 2008-2009 cohort included: Drs. Paola Fata (Surgery),

Christine Meyers (Medicine), Jay Nadeau (Biomedical Engineering), Teresa Valois (Anesthesia) and Patrick Willemot (Medicine). The 2009-2010 cohort included: Dr. Ilana Bank (Pediatrics); Dr. Lorraine Bell (Pediatrics) and Ms. Jennifer Fitzpatrick (Genetic Counselling). Scholars for 2010-2011 include: Drs. Sero Andonian (Urology), Amira El-Messidi (Obstetrics and Gynecology), Catherine Paquet (Anesthesiology), and Vincent Ponette (Obstetrics and Gynecology).

## **RESEARCH**

Research activities have grown substantially over the past 18 months, thanks in part to the addition of two educational researchers and one full-time post-doctoral fellow at the Centre. They, along with Core Faculty and Centre Members, have continued to develop research projects on the following major themes: Professionalism, Core Competencies, Faculty Development, Teaching and Learning, Student and Resident Assessment, and Program Evaluation.

**Appendix II** lists the current medical education research grants held by members of the Centre. Core Faculty and Centre Members are currently involved in 50 educational grants, totaling approximately \$2,7000,000. **Appendix III** lists publications by Core Faculty and Centre Members over this same time period. Core Faculty and Centre Members have published 65 peer-reviewed articles and 25 book chapters related to medical education in 2009 and 2010. This represents a significant increase in publications over the previous two years. The Centre was also well-represented at major medical education conferences, including the Canadian Conference on Medical Education, the International Conference on Residency Education, the Association for Medical Education in Europe, and the Ottawa Conference on the Assessment of Competence in Medicine and the Health Care Professions, with over 100 national and international presentations at scientific meetings.

A few significant accomplishments will be highlighted for each of the Centre's major research themes.

### ***Professionalism***

As stated earlier, a number of the Centre's research activities have had a direct impact on curriculum development, teaching and learning, and assessment at the undergraduate and postgraduate levels. A notable example is the work of Drs. Richard and Sylvia Cruess, which culminated in the publication of a book on *Teaching Medical Professionalism*, co-authored with Dr. Yvonne Steinert, in early 2009. This team has also continued to publish scholarly articles on the teaching and evaluation of professionalism, as outlined in **Appendix III**.

Together with Dr. Meredith Young, Drs. Richard and Sylvia Cruess and Yvonne Steinert have started to test the validity and reliability of a new tool, the MD-ACT, designed to assess the professional and teaching behaviors of clinical teachers and residents. This area of investigation builds on the published work of Dr. Sarah Todhunter, a former elective student from the UK, and initial findings are being presented at a number of scientific meetings this year.

**Core Competencies**

Dr. Linda Snell co-edited an issue of *Medical Teacher* on competency-based medical education and her commentary, written together with Dr. Jason Frank on “Competencies, the tea bag model and the end of time,” has had a major influence on the debate about competency-based education. Together with other colleagues, Dr. Snell also wrote a number of other articles on competency-based medical education on behalf of the International CBME Collaborators, in the same issue of the journal.

Dr. Meredith Young, in collaboration with Dr. Lisa Graves from the Northern Ontario School of Medicine, is focusing some of her work on this topic as she is examining the “Evaluation of perceived and actual competency in a family medicine OSCE: Insight for a competency-based curriculum” through a JANUS funded project. This initiative will investigate whether students can accurately predict performance on an OSCE exam, and if performing a skills exam can align perceptions of performance and actual competency.

Dr. Ruth Russell’s involvement, as Vice Chair of the Working Group in Child and Adolescent Psychiatry (CAP) at the Royal College of Physicians and Surgeons of Canada, in delineating core competency standards for child and adolescent psychiatrists, is another example of Centre involvement in competency-based education and research.

**Faculty Development**

Members of the Centre and the Faculty Development Team were very successful in grant submissions related to faculty development in the last 18 months. One of these studies, entitled “Simulation-based faculty development to enhance the teaching and learning of CanMEDS competencies”, is being conducted by Drs. Yvonne Steinert, Peter McLeod, Miriam Boillat, Saleem Razack, and Michelle Elizov. The goals of this project are to: design and deliver a simulation-based workshop using Objective Structured Teaching Encounters (OSTEs); enhance the teaching of CanMEDS roles in an integrated fashion; and assess the benefits of this educational intervention in promoting the teaching and learning of the CanMEDS framework for postgraduate teachers.

The Royal College of Physicians and Surgeons of Canada (RCPSC) also awarded Dr. Peter McLeod and Centre Members funding for a new initiative on “Peer assessment of lecturing: An intervention for sustained impact”. This research study is investigating the impact of peer assessment on faculty members’ perceptions and educational practices, and the results of this study will hopefully inform the design of a peer assessment intervention that will have a sustained impact on teachers’ performance.

Dr. Kevin Chin and members of the Centre also received a grant from the RCPSC to study “A faculty development workshop on narrative medicine: Assessing the impact on teaching.” This investigation is designed to assess the impact of a narrative medicine workshop on Osler Fellows within the framework of the Physicianship Program. In addition, Dr. Michelle Elizov was awarded funding for her project on “Mentorship in clinical medicine”. She will investigate the

nature, role and importance of mentoring in the clinical context, at all levels of the educational continuum. Finally, the Faculty Development Team received funding from the RCPSC for follow-up research on the Leadership Development Program, which was offered in January 2010. Members of the Faculty Development Team have also published widely in 2009 and 2010, as is outlined in **Appendix III**.

### ***Teaching and Learning***

During the past year, Drs. James Brawer, Radan Čapek, Colin Chalk and Peter McLeod completed a collaborative study on the effectiveness of clinical vignettes in multiple choice questions in enhancing student performance; this study was published by the *Journal of the International Association of Medical Science Educators*.

Drs. Tom Hutchinson and James Brawer also examined the impact of dichotomies inherent in medical practice on the patient-physician relationship and this work is currently in press. In addition, Dr. Brawer, together with Drs. Abraham Fuks and Donald Boudreau, is conducting a study to identify immutable ethical foundational constants unique to the practice of medicine. The areas under study are the phenomenology of Emmanuel Levinas, the Aristotelian approach of Edmund Pellegrino, and Jewish metaphysical/mystical sources. Dr. Brawer also began two additional explorations on the philosophical basis for health sciences education in the last year. One of these challenges our preoccupation with knowledge. The case is made that ignorance (i.e., not knowing) is a far more effective focus for educators. Four dimensions of ignorance are identified, two of which exceed knowledge in the educational value conferred upon students, and a “taxonomy of ignorance” is being constructed. The second initiative is focused on developing a two-dimensional approach to information taught in the basic health sciences. One dimension reflects the traditional utilitarian approach that characterizes current medical school teaching. A second parallel dimension comprises esthetics, philosophical implications, and historically significant insights latent within seemingly dry, utilitarian, factual material. Dr. Brawer is developing the argument that each dimension has an important, albeit different, impact on the totality of the students’ educational experience.

In a related field, Dr. Don Boudreau continues to be an active member of the McGill Narrative Medicine Research group. As part of this group, he has submitted a grant application to CIHR and a recent article has been accepted for publication in *Medicine and Literature*.

Research in the area of clinical reasoning has also continued to thrive, with six publications by Drs. Chalk, Lubarsky and Charlin on the script concordance test. In addition, Dr. Meredith Young was awarded funding from the Medical Council of Canada for her study, in collaboration with colleagues from McMaster University, entitled “Adapting MCCQE Part II: Assessing dual processing in clinical reasoning”. This funding was awarded to investigate the relationship between dual processing, medical errors and the reliability of junior residents to adaptively use different reasoning strategies. In addition, a research day on clinical reasoning, led by Drs. Meredith Young and Stuart Lubarsky, has emerged as a result of our annual Medical Education Research Day with l’Université de Montreal.

Drs. Pierre-Paul Tellier and Mark Ware recently received a grant from Purdue Canada to look at how pain management can be integrated into the medical school curriculum. We look forward to seeing the results of this study as they are likely to have an impact on how the Faculty of Medicine at McGill teaches pain management to medical students.

At the postgraduate level, Dr. Sarkis Meterissian was awarded funding from Health Canada for “The future of postgraduate medical education in Canada: Post-graduate project, phase I”, a national project which is examining whether the structure and processes of the postgraduate medical education system in Canada are designed to meet current and future societal needs. This national collaboration, which includes a number of Core Faculty, is an important initiative that will help to design the future of postgraduate medical education in Canada.

At the interdisciplinary level, Dr. Saleem Razack, in collaboration with Drs. Brian Hodges (University of Toronto), Mary Maguire (Faculty of Education) and Yvonne Steinert, received funding from SSHRC for a research project entitled “Understanding competing discourses and creating dialogues about equity, excellence and diversity”. The grant will examine the medical school admissions process in a diverse urban setting and will aim to understand the multiple discourses about equity and excellence in Canadian medical schools’ admissions processes.

On a related note, Dr. Mary Ellen Macdonald has been involved in medical education research projects which focus on communication with patients and the community. In 2009 and 2010, she has been part of several research teams which examined topics such as “Improving the quality of bereavement care to individuals and families: Knowledge translation in action” and “Communication among health professionals, patients, and families”.

Finally, Dr. Susanne Lajoie continues her work on computers as cognitive tools, looking more specifically at technology for case-based instruction and problem-solving. Her research is funded in part by agencies such as the Social Sciences and Humanities Research Council and the Fonds québécois de recherche en sciences et culture; it has also led to numerous publications including one on “Scaffolding problem-based learning with CSCL tools”.

### ***Student and Resident Assessment***

Dr. Gerald Fried and his team in the Department of Surgery have developed and validated metrics to assess technical surgical performance on simulators and in the operating room. Using these metrics, they are constructing learning curves and developing mathematical models that provide information on rate of learning and learning potential, and they will evaluate different simulation-based teaching strategies to assess the effects on these parameters. From these studies they plan on creating teaching curricula based on best evidence.

Dr. Ronald Gottesman and Dr. Farhan Bhanji are currently involved in several studies which focus on the assessment of students and residents, including “Assessing and improving the quality of cardiopulmonary resuscitation (CPR) delivered during simulated pediatric cardiac arrest using a novel pediatric CPR feedback device” and “Can adherence to PALS guidelines be

improved by team training of pediatric resuscitation team members”. Both projects are funded by CIHR-HSFC.

Dr. Meredith Young’s research also focuses on diverse aspects of student assessment. She is currently working on the following projects: “Adapting MCCQE part II: Assessing dual processing in clinical reasoning” and “Measures of diagnostic pattern recognition: Relation to individual differences and expertise”. These paired funds will investigate whether an individual’s ability to think in a “big picture” manner is related to individual differences (i.e., whether it is a trait that varies from person to person), or whether it is related to task-specific experience. Dr. Young will be testing medical and non-medical undergraduates as well as practicing physicians in order to investigate whether thinking patterns are related to specific experience or to an innate and varying trait.

### ***Program Evaluation***

The evaluation of the Physicianship component of the MD, CM program continues under the stewardship of Dr. Donald Boudreau and the Program Evaluation of Physicianship (PEP) Committee. In particular, Drs. Boudreau and Valerie Ruhe recently completed an analysis of data gathered from the Medical Student Assessment Project (MEAP) and a manuscript summarizing the results has been submitted for publication. The PEP Committee is also overseeing the on-going implementation of a four-year case study looking at the impacts of the *Physician Apprenticeship* course on students and Osler Fellows.

Drs. Kevin Chin and Markus Martin are conducting a study on how to evaluate and remediate medical students and residents during clinical rotations in obstetrics and gynecology. Using a rating scale, coupled with a socio-cultural framework, a number of suggestions have been made that will enable improvements at individual, interpersonal, and institutional levels.

Drs. Saleem Razack and Ron Gottesman recently completed a study on the “Evaluation of current practice of *team training* of pediatric resuscitation team members in Canadian hospitals: Performance of an ecological survey and stakeholder consultation”, which was funded by the Royal College of Physicians and Surgeons of Canada; a manuscript summarizing the results is currently underway.

### ***McGill Qualitative Health Research Group (MQHRG)***

Founded in January 2003 by Dr. Mary Ellen Macdonald and a group of qualitative researchers at McGill University, the MQHRG provides an informal yet rigorous learning environment for qualitative health researchers. Members of the MQHRG meet regularly at the Centre for Medical Education, with members giving presentations at half of the meetings this year. Highlights from 2009-2010 include the following:

- MQHRG held its first Student Research (Half) Day where members Sara Saunders (Physical and Occupational Therapy), William Affleck (Bioethics and Religious Studies), Lisa Chan (School of Nursing), and Laura Bissaillon (Population Health)

presented their research projects. A panel of mentors convened to help work through methodological and ethical challenges.

- MQHRG submitted a White Paper to the McGill Faculty of Medicine Research Design Group.
- Visiting postdoctoral trainee Dr. Eneida Simões da Fonseca, from Rio de Janeiro, Brazil, presented her research in the area of education of children with special health care needs.
- MQHRG hosted two journal writing workshops designed to assist members in polishing manuscripts for submission to peer-reviewed journals.
- A special joint meeting with McGill's Whole Person Care welcomed special guest Megan Wainwright, M.Sc., from Durham University, who presented her Masters research: "An ethnographic study in a clinic for patients with functional constipation".
- MQHRG held its first meeting in the Faculty of Dentistry in the spirit of broadening its presence on campus. Doctoral candidate in Dental Sciences, Reem Alansari, presented her research.

With an increasing emphasis on qualitative research and mixed methods designs in medical education, the presence of the MQHRG at the Centre offers invaluable opportunities to Core Faculty and Centre Members.

#### ***Other Developments in Research – Research Capacity Building***

With the goal of strengthening research at the Centre, and under the leadership of Drs. Mary Ellen Macdonald and Donald Boudreau, we have implemented a series of research capacity building seminars. In 2009-2010, Mary Ellen Macdonald gave a seminar on "Formulating a compelling research question" and Dr. Bob Bracewell, from the Faculty of Education, gave a session on "Issues to consider in determining sample size". We also welcomed Dr. Timothy Wood from the Medical Council of Canada in Ottawa, who gave a workshop on grantsmanship. In the fall of 2010, Dr. Meredith Young presented a session on "Reliability". These capacity-building sessions have also been supplemented by preparatory sessions for grant submissions and conference presentations, formal peer-reviews of grant applications, and manuscript review sessions. The intention of these meetings is to provide a forum where research on an individual and Centre-basis can be moved forward with candid collaboration and constructive feedback.

Another component of capacity building in 2009-2010 was our partnership with the MUHC RI to facilitate research efforts in medical education. This collaboration has resulted directly in the arrival of Postdoctoral Fellow Dr. Claire Trottier, whose research project is designed to study the training that biomedical graduate students receive at the MUHC RI. Of note, her findings will be used to design new training initiatives for graduate students.



### *HONOURS, AWARDS AND PRIZES*

A number of Core Faculty members were honored this year. Highlights include the following: (Please see **Appendix IV** for complete details on awards.)

- **Dr. Radan Čapek** was awarded the CAME Certificate of Merit which promotes, recognizes and rewards faculty committed to medical education in Canadian medical schools.
- **Dr. Colin Chalk** received the Osler Award for Outstanding Teaching.
- **Dr. Richard Cruess** was appointed Chief of Staff Emeritus at the Shriners Hospital for Children in Montreal.
- **Dr. Sylvia Cruess** was named to the Order of Canada.
- **Dr. Linda Snell** received the AFMC Award for Outstanding Contribution to Faculty Development in Canada.
- **Dr. Yvonne Steinert** was named the Bijtel Chair, a Visiting Professorship, at the Faculty of Medicine at the University of Groningen in the Netherlands.
- **Dr. Jeffrey Wiseman** received the Douglas G. Kinnear Award, which is given by medical residents in recognition of exceptional skills in the teaching of clinical medicine within the Department of Medicine at the MUHC, and was named to the Faculty Honor List for Educational Excellence.

### *INVOLVEMENT IN THE COMMUNITY*

Core Faculty and Centre Members are intricately involved in community service, and three programs are highlighted here.

In 2006, we developed **IMEX** (International Medical Educators eXchange) with collaborating medical schools in Halifax, London, Utrecht, and Stockholm. The goal of this program is to broaden the perspective of experienced medical educators by enabling them to visit three different medical schools over the course of two years. In October 2011, the Centre will host McGill's third cohort of IMEX Scholars.

**McGill Mini-Med**, which was founded by Mrs. Kappy Flanders and Dr. Yvonne Steinert, has now completed its tenth year and continues to be a model to the other "minis" at McGill. It is also a prime example of partnering with the community to promote knowledge and understanding.

For the fourth time, faculty members from McGill University and Université de Montréal convened in April 2010 to discuss issues related to medical education. The objectives of the **2010 Education Research Day in the Health Sciences**, which was organized by the Centre for Medical Education, were to provide an opportunity for faculty from both universities to get to know each other, discuss their interests, ideas and challenges in health sciences education and develop potential collaborations. One representative from each university spoke on the following topics: innovations in teaching and learning, clinical reasoning, and assessment and evaluation.

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**SECTION III - PLANNING AHEAD**

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Looking forward, educational research and scholarship continue to be high priorities for the centre. With this objective in mind, we are delighted with the funding received for the **Richard and Sylvia Cruess Chair in Medical Education**. We also hope to build on this legacy and continue to increase the number of PhD researchers and postdoctoral fellows at the Centre. Such positions are critical to building new research programs, moving our educational mission forward, and ensuring the improvement and quality of our educational practices at McGill.

In addition, we plan to continue to implement the recommendations made during the Centre's self-study and external review, conducted by Dr. Brian Hodges, Director of the Wilson Centre, in April 2009. As noted below, some of these recommendations have already been implemented:

- **Centre Visibility:** Core Faculty and Centre Members serve as ambassadors of the Centre within the university and the hospital system in Montreal. The Centre has participated in branding exercises with Centre members as well as the design of a logo image, which is currently underway. These initiatives will help to clarify the Centre's mandate and visual identity. Additionally, the Centre's website has been translated to French and will be available in both official languages as of February 2011. We are also pleased to note that the Centre website is being frequently accessed as a resource in medical education.
- **Centre Newsletter:** In a further attempt to promote Centre visibility, we issued our first newsletter in December 2010. Under the editorship of Administrative Coordinator Deanna Radford, our newsletter was distributed throughout the Faculty of Medicine. The newsletter garnered a warm response and we look forward to continuing to share news and information on medical education at McGill.
- **Committee Structure:** As a result of our self-study, we have established several new committees at the Centre, including a Membership Committee and a Research Committee (outlined below), to complement previously established committees: a Medical Education Awards Committee, a Fellowship Committee, and a Masters Program Committee. In addition, Core Faculty now participate in quarterly business meetings to provide guidance regarding Centre business and administration.
- **Membership Committee:** This committee was formed to establish Core Faculty and Centre Members benefits and expectations and to help guide the membership renewal and appointment process. The committee made significant progress in 2009-2010, particularly with regards to underlining the benefits and expectations of Centre membership.
- **Coordinated Research Grant Strategy:** The McGill Research in Medical Education (McRIME) committee was created to support the Centre in the promotion of excellence and scholarship across the continuum of health sciences education research. Under the

leadership of Drs. Mary Ellen Macdonald and Donald Boudreau, the committee has created an internal review process for IRB and grant submissions, both of which were implemented in the fall of 2010. This committee also organized the sessions devoted to research capacity-building (outlined above).

- **Visiting Scholars:** The Centre has welcomed visiting scholars from abroad in the last two years. Of note, a number of articles and book chapters produced by Core Faculty members in 2009-2010 are the result of collaboration with visiting scholar Dr. Peter Cantillon (a family doctor from Ireland), who was at the Centre in 2008-2009. We are currently planning for three visiting scholars in 2011-2012, and we look forward to fruitful collaborations with them as well.

As noted in this report, the last 18 months have been very productive for the Centre for Medical Education, and we look forward to building on our numerous achievements in the year ahead. In particular, we hope to: build on the success of our educational programs for students, residents, fellows and faculty members; continue to compete for research grants and publish widely in medical education; develop new partnerships, both at McGill and with other organizations and institutions dedicated to medical education; and contribute actively to the life of the Faculty of Medicine and the University.

### ***ACKNOWLEDGEMENTS***

In closing, I would like to acknowledge Dean Richard Levin for his active support and engagement in the ongoing activities of the Centre for Medical Education, Ms. Deanna Radford and Ms. Marie-Noël Ouellet for their invaluable contributions to all Centre activities, Dr. Linda Snell in her capacity as Director of the Electives Program and the Masters in Educational Psychology, Dr. Peter McLeod as Director of the Postgraduate Fellowship in Health Sciences Education, Drs. Donald Boudreau and Mary Ellen Macdonald in their capacity as co-chairs of the McGill Research in Medical Education Committee, and all Core Faculty and Centre Members for their dedication to excellence and scholarship in medical education.

Core Faculty	
Name	Department
Donald Boudreau	Internal Medicine
Jim Brawer	Anatomy and Cell Biology
Radan Čapek	Pharmacology and Therapeutics
Colin Chalk	Neurology and Neurosurgery
Richard Cruess	Centre for Medical Education
Sylvia Cruess	Centre for Medical Education
Stuart Lubarsky	Neurology and Neurosurgery
Mary Ellen Macdonald	Oncology and Nursing
Peter McLeod	Internal Medicine, Pharmacology and Therapeutics
Sarkis Meterissian	Surgery and Oncology
Saleem Razack	Pediatrics
Linda Snell	Internal Medicine
Jeffrey Wiseman	Internal Medicine
Yvonne Steinert	Family Medicine

Educational Researchers	
Name	Area of Specialty
Valerie Ruhe	Education
Meredith Young	Cognitive Psychology

Postdoctoral Fellows	
Name	Area of Specialty
Kevin Chin	Educational Psychology
Claire Trottier	Biomedical Science

Centre Members	
Name	Department
Ilana Bank	Pediatrics ( <i>Member as of 10/11</i> )
Laeora Berkson	Internal Medicine ( <i>Member as of 10/11</i> )
Farhan Bhanji	Pediatrics
Miriam Boillat	Family Medicine
Beth-Ann Cummings	Internal Medicine ( <i>Member as of 10/11</i> )
Mylène Dandavino	Pediatrics ( <i>Member as of 10/11</i> )
Michelle Elizov	Internal Medicine
Gerald Fried	Surgery, Adair Chair of Surgical Education
Ron Gottesman	Pediatric Critical Care Medicine
Janet Henderson	Internal Medicine ( <i>Membership to 09/10</i> )
Jim Henderson	Life Sciences Library
Nicholas King	Biomedical Ethics, Social Studies of Medicine ( <i>Member as of 10/11</i> )
Lorie Kloda	Life Sciences Library ( <i>Member as of 09/10</i> )
Srinivasan Krishnamurthy	Obstetrics and Gynecology ( <i>Membership to 09/10</i> )
Susanne Lajoie	Educational and Counselling Psychology
Markus Martin	Obstetrics and Gynecology
Helen McNamara	Obstetrics and Gynecology
Christine Meyers	Emergency Medicine ( <i>Member as of 09/10</i> )
Fraser Moore	Neurology and Neurosurgery
Jay Nadeau	Biomedical Engineering ( <i>Member as of 09/10</i> )
David Ragsdale	Neurology and Neurosurgery
Frank Ramadori	Anesthesia
Charo Rodriguez	Family Medicine ( <i>Member as of 09/10</i> )
Ruth Russell	Psychiatry
Ken Shaw	Surgery ( <i>Membership to 09/10</i> )
Michael Stein	Rheumatology ( <i>Membership to 09/10</i> )
Pierre-Paul Tellier	Family Medicine ( <i>Membership to 09/10</i> )
Teresa Valois	Anesthesia and Pediatrics ( <i>Member as of 09/10</i> )
Melina Vassiliou	Surgery ( <i>Member as of 09/10</i> )
Adrianna Venturini	Physical and Occupational Therapy
Mark Ware	Anesthesia, Family Medicine and Pain Centre

Affiliate Members	
Name	Department / Organization
Bernard Charlin	Director, URDESS, Université de Montréal
Deborah Danoff	Canadian Medical Protective Association
Adam Finkelstein	Educational Developer, Teaching and Learning Services
Thomas Hutchinson	Medicine, McGill Programs in Whole Person Care ( <i>Member as of 09/10</i> )
Kevin Lachapelle	Director, Medical Simulation Centre
Joyce Pickering	Associate Dean, Medical Education and Student Affairs
Michael Rosengarten	Centre for Continuing Health Professional Education ( <i>Membership to 09/10</i> )
Laura Winer	Associate Director, Teaching and Learning Services

Masters Students		
Name	Department	Year of Study
Khalid Mohsin Al-Ejji	Gastroenterology	II
May Bader	Dentistry	I
Genevieve Chaput	Family Medicine	III
Heidi Clavet	Physiotherapy	III
Nicholas Gélinas-Phaneuf	Neurology and Neurosurgery	I
Wid Kattan	Educational Psychology	II
Inas Fakhry Kostandi-Malaty	Medicine	I
Ali Samkari	Surgery	I
Donna Stanbridge	Nursing	III
Christina Summerside	Educational Psychology	I
Marilou Vaillancourt	Surgery	II
Kevin Waschke	Gastroenterology	III

Postgraduate Fellows	
Name	Department
Sing-Yun Chang	Anatomical Pathology (2009/10)
Nicholas Gélinas-Phaneuf	Neurology and Neurosurgery (2009/10)
Catherine Patocka	Emergency Medicine (2010/11)
Daniel Zigman	Psychiatry (2010/11)

Teaching Scholars	
Name	Department
Ilana Bank	Pediatrics (2009/10)
Lorraine Bell	Pediatrics (2009/10)
Jennifer Fitzpatrick	Human Genetics (2009/10)
Sero Andonian	Urology (2010/11)
Amira El Messidi	Obstetrics and Gynecology (2010/11)
Catherine Paquet	Anesthesia (2010/11)
Vincent Ponette	Obstetrics and Gynecology (2010/11)

Medical Education Elective Participants		
Name	Department	Period
Philip Stasiak	Fourth-year medical student	October/November (2009/10)
Florin Costescu	Fourth-year medical student	October/January (2009/10)
Jason Robins	Fourth-year medical student	November/December (2009/10)
Anaïs Rameau	Fourth-year medical student	January/February (2009/10)
Preeti Amoy Anand	Third-year resident, Internal Medicine	May (2009/10)
Daniel Brody	Resident, Pediatric ER fellow	May/June (2009/10)
Razaz Wali	Fellow, Maternal Care	December (2010/11)

Alqurashi W, **Razack S**, **Bhanji F**, Jabbour M. A survey of international medical graduate residents on their preparation for, and training in, Canadian residency programs. (Academy for Innovation in Medical Education, University of Ottawa, 2009-2010, \$15,882)

Bracewell R, **Lajoie S**, Breuleux A, Donin J, Frederiksen C. Technologies dérivées des sciences cognitives pour l'instruction et le développement des compétences professionnelles basées sur l'utilisation des micro-ordinateurs. (Gouvernement du Québec: Le Ministère de l'Enseignement Supérieur de la Science et de la Technologie, 1993–2010, \$50,000)

Bracewell R, **Lajoie S**, Breuleux A, Donin J, Frederiksen C. Cognitive tools to support teaching and learning in technology rich problem solving environments. (Social Sciences and Humanities Research Council, 2008-2011, \$165,250)

Brassard P, Klein M, **Macdonald ME**. The burden of HIV/AIDS in Nunavik: Identifying gaps and priorities. (Canadian Institutes of Health Research, 2010-2011, \$33,000)

Chang A, **Gottesman R**, **Bhanji F**, et al. Assessing and improving the quality of cardiopulmonary resuscitation (CPR) delivered during simulated pediatric cardiac arrest using a novel pediatric CPR feedback device. (CIHR-HSFC, 2010-2013, \$380,000)

**Chin K**, Liben S, **Boudreau D**, **Boillat M**, Faremo S and **Steinert Y**. A faculty development workshop on narrative medicine: Assessing the impact on teaching. (Royal College of Physicians and Surgeons of Canada, 2009-2011, \$24,683.63)

Cohen R, Stajduhar K, Baxter S, Bitzas V, Crooks V, Heyland D, Koop P, Lapointe B, **Macdonald ME**, Williams A. Knowledge transfer for family caregiving in P/EOL care. (Canadian Institutes of Health Research, 2010-2011, \$40,000)

Dawes M, Bartlett JC, Grad R, McKibbin A, Nie JY, **Kloda LA**. Refining access to health information using a novel indexing approach. (Canadian Institutes of Health Research, 2008-2011, \$101,654)

**Elizov M**. Mentorship in clinical medicine. (Royal College of Physicians and Surgeons of Canada, 2010-2011, \$29,000)

Feldman L, **Vassiliou M**, **Fried G**. Mastery versus standard proficiency laparoscopic technical skills training: A randomized controlled trial (Society of American Gastrointestinal and Endoscopic Surgeons, 2010-2011, \$25,704)

**Fried G**. Development and validation of the GOALS-IH module to assess performance of laparoscopic incisional hernia repair. (Canadian Association of General Surgery, 2009-2010, \$10,000)



**Fried G.** Centre for excellence grant for minimally invasive surgery. (Covidien Canada, 2001-2010, \$2,750,000)

Gilfoyle E, **Gottesman R, Bhanji F**, et al. Can adherence to PALS guidelines be improved by team training of pediatric resuscitation team members. (CIHR-HSFC, 2010-2013, \$420,000)

Graves L, **Young ME.** Evaluation of perceived and actual competency in a family medicine OSCE: Insight for a competency-based curriculum. (College of Family Physicians of Canada, 2010-2011, \$10,000)

Haddad P, **Ware M.** Developing a standardized clinical evaluation form. (Interdisciplinary Network for Complementary and Alternative Medicine Research (IN-CAM), 2008-2010, \$5,000)

**King N**, Harper S, **Young ME.** Measurement, ethics, and health policy: Investigating the role of value judgments in the measurement and evaluation of health inequalities. (Canadian Institutes of Health Research, 2010-2012, \$190,434)

**Kloda L.** Bourse de doctorat en recherche. (Fonds québécois de la recherche sur la société et la culture, 2007-2010, \$60,000)

Korner-Bitensky N, Teasell R, Wood-Dauphinee S, Salbach N, Bourbonnais D, Levin M, Jutai J, Menon A, Fung J, Bayley M, Kagan A, Kaizer F, Fellows L, Rochards C, Dumoulin C, Rochette A, **Kloda L**, Thomas A, Martino R, Mayo NE, Eng J, Duncan P, Page S. StrokEngine: An interactive e-learning resource for moving evidence-based stroke rehabilitation into clinical practice – Continuation project. (Canadian Stroke Network, 2010-2013, \$254,700)

Korner-Bitensky N, Teasell R, Wood-Dauphinee S, Levin M, Jutai J, Menon-Nair A, Fung J, Bayley M, Kagan A, Kaizer F, Fellows L, Richards C, Desrosiers J, Dumoulin C, Rochette A, **Kloda L**, Thomas A, Martino R, Mayo N, Eng J, Duncan P, Page S. A novel strategy for sustaining StrokEngine and StrokEngine-Assess. (Canadian Stroke Network, 2008-2010, \$162,500)

**Lajoie S.** Designing technology-rich environments for case-based instruction: A model for life-long learning. (Social Sciences and Humanities Research Council, 2010-2011, \$75,000)

**Lajoie S.** Cognitive tools to support teaching and learning in technology rich problem-solving environments. (Social Sciences and Humanities Research Council, 2008–2011, \$211,938)

**Lajoie S.** Computers as cognitive tools. (James McGill Research Fund, 2004–2011, \$105,000)

**Lajoie S**, Hmelo-Silver C, **Wiseman J**, Ki Chan L, Lu J, Moreno R. Designing technology-rich environments for case-based instruction: A model for life-long learning. (Social Sciences and Humanities Research Council, 2010-2011, \$75,000)

**Lajoie S**, Frasson C, Nkymbou R, Aimeur E. Intelligence émotionnelle dans l'apprentissage. (Fonds québécois de recherche en sciences et culture, 2006–2010, \$456,000)

Lang A, Aston M, Brunelle G, Cadell S, Carr T, Chochinov H, Doran D, Downey A, Drouin S, Fleiszer A, Glasgow R, Goodwin S, Grinspun D, Mawani A, **Macdonald ME**, O'Connor P, Strumpf E, Sword W. Improving the quality of bereavement care to individuals and families: Knowledge translation in action. (Canadian Institutes of Health Research, 2010-2011, \$15,000)

Légaré F, Bourduas, F, Coutu M, Desroches F, Griffiths M, Labrecque M, Politi M, **Rodriguez R**, Rousseau M and Stacey D. Effective continuing professional development for translating shared decision-making in primary care. (Canadian Institutes of Health Research, 2010, \$99,984)

Loye N, Laveault D, **Charlin B**, Nonnon P. Vers des tests diagnostiques à grande échelle en éducation: un nouveau cadre de référence. (Social Sciences and Humanities Research Council, 2009-2011, \$36,634)

**Lubarsky S**. Influence of the learning environment on the development of clinical reasoning skills. (Fonds de la recherche en santé du Québec, 2008-2010, \$77,455)

**Macdonald ME**, Brassard P, Salsberg J. Advancing primary health care for and with urban Aboriginal peoples. (Canadian Institutes of Health Research, 2010-2011, \$9,655)

**Macdonald ME**, **Hutchinson T**, Allen D, Cohen SR. Decision-making over time. The care of people with end-stage renal disease (ESRD): Communication among health professionals, patients, and families. (Kidney Foundation of Canada, 2009-2011, \$100,000)

**Macdonald ME**, Shrier I, Boivin JF, Brophy J, Carnevale FA, Furlan AD, Kakuma R, Platt RW, Rossignol M, Steele R. Meta-analysis: Understanding the subjective interpretation of an objective analysis. (Canadian Institutes of Health Research, 2009-2012, \$38,033)

McGillion M, Watt-Watson J, Stremler R, Barry M, **Snell L**, **Wiseman J**, Hardie K, Rose L, Stinson J, Kavanagh T, Rooke S. Efficacy, student satisfaction and quality across three simulation learning conditions for undergraduate nursing students' education about pain-related misbeliefs: A pilot randomized controlled trial. (Centre for Innovation and Excellence in Nursing Education, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, 2008-2010, \$9,931)

McGillion M, Dubrowski A, McCartney C, Stremler R, Watt-Watson J, Silver I, Robb A, Dao T, Stinson J, Hunter J, Nelson S, Costello J, Tait G, Victor C, **Snell L**, **Wiseman J**, Regehr G, Carnahan H, Leegaard M. Efficacy and quality of deteriorating patient-based simulation versus standardized patient-based simulation for improving health care professionals' pain knowledge and assessment skills: A pilot equivalence randomized controlled trial. (Network of Excellence in

Simulation for Clinical Teaching and Learning - Innovation and Evaluation Projects, University of Toronto Lawrence S. Bloomberg Faculty of Nursing and Centre for Innovation and Excellence in Nursing Education, 2008-2010, \$49,126)

**McLeod PJ, Steinert Y, Ruhe V, Brawer J, Chalk C, Capek R.** Peer assessment of lecturing: An intervention for sustained impact. (Royal College of Physicians and Surgeons of Canada, 2010-2011, \$15,160)

Menon K, **Gottesman R et al.** Understanding the consenting process in pediatric critical care research. (Canadian Institutes of Health Research, 2009-2011, \$49,000)

**Meterissian S.** Medical Education Consortium. (McGill University, 2010-2012, \$100,000)

Norman GR, Wood TJ, **Young ME**, Dore KL, Sherbino J. Adapting MCCQE Part II: Assessing dual processing in clinical reasoning. (Medical Council of Canada, 2010-2011, \$25,000)

Pluye P, Grad R, Repchinsky C, Bartlett G, Cohendet P, Dawes M, Farrell B, Légaré F, Loiselle C, Macdonald J, **Rodriguez R.** Assessing and improving electronic knowledge resources in partnership with information providers. (Canadian Institutes of Health Research, 2007-2010, \$295,694)

**Razack S**, Maguire M, Hodges B, **Steinert Y.** Understanding competing discourses and creating dialogues about equity, excellence and diversity in a medical school admissions process in a diverse urban setting. (Social Sciences and Humanities Research Council of Canada, 2010-2013, \$194,178)

Sewitch MJ, **Macdonald ME**, Yaffe M. Discussion of complementary and alternative medicine for cancer in mainstream health care: Perspectives of family medicine physicians and patients. (St. Mary's Hospital, 2009-2010, \$16,000)

**Steinert Y, Pickering J, Boudreau D.** Postdoctoral fellowship program in medical education research. (Medical Council of Canada, 2008-2010, \$104,000)

**Steinert Y, Razack S, Elizov M**, Derossis A, **Boillat M, McLeod PJ**, Faremo S, **Chin K, Ouellet MN, Lachapelle K, Snell L.** Simulation-based faculty development to enhance the teaching and learning of CanMEDS competencies. (Royal College of Physicians and Surgeons of Canada, 2009-2010, \$5,000)

**Steinert Y, Boillat M, Razack S, Snell L, Wiseman J**, Eidelman D, Israel, M, Guyda H, **Meterissian S, Ouellet MN**, Moore, K. Assessing the impact of a leadership development program for health care professionals. (Royal College of Physicians and Surgeons of Canada, 2010-2011, \$5,000)

**Steinert Y, Meterissian M, Ouellet MN, Arsenault G.** Faculty development grant for teachers of international medical graduates. (Association of Faculties of Medicine, 2009-2010, \$5,000)

**Tellier PP, Ware M.** Integrating pain management in the medical school curriculum. (Purdue, Canada, 2010-2012, \$100,000)

Towers A, Keast D, Kennedy A, **Macdonald ME**, Pritzker R. Defining research and development priorities for lymphedema care in Canada: Launching of the Canadian lymphedema framework. (Canadian Breast Cancer Research Alliance, 2009-2010, \$10,353)

**Venturini A.** Local communities of practice in rehabilitation: Bridging the gap between research and practice. (Edith Strauss Rehabilitation Research Project in Knowledge Translation, 2009-2010, \$10,000)

Verma S, **Meterissian S**, Rungta K, **Ruhe V.** The future of postgraduate medical education in Canada. (Health Canada, 2010-2011, \$300,000)

**Ware M.** Chercheur-boursier clinicien (Senior). (Fonds québécois de la recherche sur la société et la culture, 2010-2014, \$154,000)

**Young ME**, Norman GR, Watter S, Woods N, Dore KL, Sherbino J. Measures of diagnostic pattern recognition: Relation to individual differences and expertise. (Medical Council of Canada, 2010-2011, \$30,000)

A list of all publications, including URLs, from January 1, 2009 – December 31, 2010 can also be found on our website at: <http://www.mcgill.ca/centreformeded/research/>.

### JOURNAL ARTICLES

**Boudreau D**, Cassell EJ, Fuks A. Preparing medical students to be attentive listeners. *Med Teach*. 2009; 31(1): 22-9.

**Boudreau D**, Cassell EJ. Abraham Flexner's "mooted question" and the story of integration. *Acad Med*. 2010; 85: 378-83.

**Brawer JR**. Medical education: Striving for mediocrity. *Med Educ*. 2009; 43: 1026-7.

**Brawer JR**, Lener M, **Chalk C**. Student perspectives on the value of lectures. *JIAMSE*. 2009; 19: 84-8.

Cantillon P, **McLeod P**, **Razack S**, **Snell L**, **Steinert Y**. Lost in translation: The challenges of global communication in medical education. *Med Educ*. 2009; 43(7): 615-20.

**Čapek R**, **McLeod P**, **Chalk C**, **Brawer JR**. Do accompanying clinical vignettes enhance students' success in answering multiple choice questions (MCQ) testing factual knowledge. *JIAMSE*. 2010; 20: 110-9.

Carrière B, Gagnon R, **Charlin B**, Downing S, Bordage G. Clinical reasoning assessment in pediatric emergency medicine: Validity of a Script Concordance Test. *Annals Ann Emerg Med*. 2009; 53(5): 647-52.

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**Donald Boudreau**

- Gold Professorship in the Humanities in Medicine, Arnold P. Gold Foundation, 2009 to 2012

**Radan Čapek**

- CAME Certificate of Merit, May 2010

**Colin Chalk**

- Osler Award for Outstanding Teaching, Faculty of Medicine, McGill University, May 2009

**Richard L. Cruess**

- Chief of Staff Emeritus, the Shriners Hospital for Children, Montreal, Fall 2009

**Sylvia R. Cruess**

- Named to the Order of Canada, December 2010

**Amira El Messidi**

- Outstanding Teacher in Obstetrics, Department of Obstetrics and Gynecology, McGill University, June 2010

**Ronald Gottesman**

- Promoted to Full Professor of Pediatrics, 2010

**Nicholas King**

- Epidemiology, Biostatistics and Occupational Health Student Society Senior Teaching Award, Best Course, McGill University, 2010

**Lorie Kloda**

- Doctoral Award for Research and Professional Excellence, McGill University Education Graduate Students' Society (\$1000), 2009
- New Voices Award, Medical Library Association, Medical Education Section, (\$500), 2009.

**Sarkis Meterissian**

- Promoted to Full Professor with tenure in Departments of Surgery and Oncology, February 2010

**Christine Meyers**

- Nominee, Canadian Association of Emergency Physicians Teacher of the Year Award, 2010

### Jay Nadeau

- Nominated for Canada's Top 40 Under 40, Fall 2010

### Charo Rodriguez

- Finalist, Baldwin Award for Best Paper published in Journal of Interprofessional Care, July 2009

### Linda Snell

- AFMC Award for Outstanding Contribution to Faculty Development in Canada, May 2010

### Yvonne Steinert

- Bijtel Chair, Visiting Professorship, Faculty of Medicine, University of Groningen, The Netherlands, Summer 2009

### Melina Vassiliou

- Henry K.M. deKuyper Distinguished Educator in Surgery Award, 2009
- Association for Surgical Education Haemonetics Best Paper for "How Should We Establish the Clinical Case Numbers Required to Achieve Proficiency in Flexible Endoscopy?", 2009

### Jeffrey Wiseman

- Douglas G. Kinnear Award, Department of Medicine, MUHC, 2009
- Faculty of Medicine Honour List for Excellence in Medical Education, 2009

### Daniel Zigman

- Resident Award for Most Promising Teacher, Department of Psychiatry, 2010