Canadian Chiropractic Research Agenda

CLOSING THE RESEARCH - PRACTICE GAP IN NEUROMUSCULOSKELETAL HEALTH, INJURY AND DISEASE

September 27 - 28 2013

Toronto

InterContinental Toronto Yorkville
220 Bloor Street West, Toronto, Ontario M5S 1T8
www.toronto.intercontinental.com
CLOSING THE Research-practice gap in neuromusculoskeletal health, injury and disease

This Symposium brings together a university-based collaborative network of world class chiropractic researchers from the disciplines of neurophysiology, biomechanics, epidemiology, cellular/molecular biology and the social sciences.

In 2009, the Consortium convened in a Workshop funded by CIHR and the CCRF, to focus on innovative, state-of-the-art research developments and new perspectives on improving the health of Canadians. The Consortium identified the need to increase its research capacity, to strengthen cross-disciplinary relationships, and to foster greater networking opportunities and new research streams.

In 2011, the Consortal Symposium once again brought together researchers in an interactive forum to further shape relationship building across disciplines, knowledge exchange and enhanced networking. The Symposium collectively addressed the strengths of the chiropractic discipline in epidemiological, biomechanical, biomedical research, health services and population health in terms of translating chiropractic research into better health for Canadians.

This Consortium meets every two years to address the important challenges facing an evolving profession as it experiences unprecedented rapid growth in its research capacity.

This year, the Consortium convenes to address the key issues and priorities facing the chiropractic profession and the growing need to close the Research-Practice gap. The themes and important questions being addressed include:

- How can research better relate to the 7,000 clinical practitioners across Canada?
- What research is needed by our professional associations over the next five years?
- How can/should researchers, policy and clinical decision-makers work together?
- How do Clinical Practice Guidelines link to policy development?
- What is the role of scientific evidence in the development of public and health policy?
- How can we collectively contribute to reduce the knowledge-to-practice gap and improve patient care?
- How can we favourably influence policies to help standardize the patient experience across Canada?
- How do we strengthen the connections between the research of a neurophysiologist, biomechanist, cell biologist, epidemiologist or social scientist and the field practitioner?
- Does collaborative neurophysiology research lead to better treatment and prevention of whiplash injuries?
- How can biomechanics research best contribute to clinical practice in the future?
- How do advances in cellular and molecular biology define the clinical practice of chiropractic?
- Are there measurable outcomes of chiropractic research in Canada?
- What deliverables and meaningful outputs should we develop to quantify our benefit to our stakeholders - CIHR, the public, policymakers?
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Consortium Members

Dr. Carlo Ammendolia, DC, PhD.................................................................University of Toronto
Dr. Lesley Biggs, PhD........................................................................University of Saskatchewan
Dr. Jean-Sébastien Blouin, DC, PhD............................................................University of British Columbia
Dr. Jean Boucher, PhD...........................................................................Université du Québec à Montréal
Dr. Paul Bruno, DC, PhD........................................................................University of Regina
Dr. Brian Budgell, DC, PhD.................................................................Canadian Memorial Chiropractic College
Dr. Jason Busse, DC, PhD....................................................................McMaster University
Dr. André Bussières, DC, PhD.............................................................McGill University
Dr. J. David Cassidy, DC, PhD, Dr.Med.Sc........................................University of Southern Denmark
Dr. Jean Boucher, PhD...........................................................................Université du Québec à Montréal
Dr. Paul Bruno, DC, PhD....................................................................University of Regina
Dr. Brian Budgell, DC, PhD.................................................................Canadian Memorial Chiropractic College
Dr. Jason Busse, DC, PhD....................................................................McMaster University
Dr. André Bussières, DC, PhD.............................................................McGill University
Dr. J. David Cassidy, DC, PhD, Dr.Med.Sc........................................University of Southern Denmark
Dr. Pierre Côté, DC, PhD......................................................................University of Ontario Institute of Technology
Dr. John Church, PhD........................................................................University of Alberta
Dr. Edward Crowther, DC, EdD...............................................................International Medical University (Malaysia)
Dr. Simon Dagenais, DC, PhD..............................................................Palladian Health
Dr. Martin Descarreaux, DC, PhD.........................................................Université du Québec à Trois-Rivières
Dr. Jim Dickey, PhD............................................................................Western Ontario
Dr. Mark Erwin, DC, PhD.......................................................................University of Toronto
Dr. Jill Hayden, DC, PhD.......................................................................Dalhousie University
Dr. Walter Herzog, PhD......................................................................University of Calgary
Dr. Greg Kawchuk, DC, PhD.................................................................University of Alberta
Dr. Adrian Levy, PhD...........................................................................Dalhousie University
Dr. Annalyn Mercado, PhD...................................................................Saskatchewan Health Region
Dr. Bernadette Murphy, DC, PhD............................................................University of Ontario Institute of Technology
Dr. Genevieve Newton, DC, PhD..............................................................University of Guelph
Dr. Steven Passmore, DC, PhD...............................................................University of Manitoba
Dr. Mathieu Piché, DC, PhD.................................................................Université du Québec à Trois-Rivières
Dr. Jeffrey Quon, DC, PhD...................................................................University of British Columbia
Dr. John Srbely, DC, PhD.......................................................................University of Guelph
Dr. John J. Triano, DC, PhD.................................................................Canadian Memorial Chiropractic College
Dr. Gabrielle van der Velde, DC, PhD.....................................................Toronto Health Economics and Technology Assessment (THETA) Collaborative
Dr. Ellen Vogel, PhD............................................................................University of Ontario Institute of Technology

Program Development Committee

Dr. André Bussières, DC, PhD • Dr. Pierre Côté, DC, PhD
Dr. Martin Descarreaux, DC, PhD • Dr. Allan Gotlib, C.M., DC
Dr. Jill Hayden, DC, PhD • Dr. Bernadette Murphy, DC, PhD
Dr. Jeffrey Quon, DC, PhD • Dr. Kent Stuber, DC, MSc
Friday, September 27, 2013

Preconference Workshops

8:30 – 9:00 am  Breakfast (workshop attendees only)

9:00 – 10:30 am  Evidence Syntheses/Systematic Reviews Workshop: Maximizing Confidence in Evidence
Workshop Leaders: Dr. Jill Hayden, DC, PhD, Dr. Jason Busse, DC, PhD, Dr. Ted Crowther, DC, EdD, Dr. Simon Dagenais, DC, PhD, Dr. Jeff Quon, DC, PhD, Dr. Jan Hartvigsen, DC, PhD

10:30 – 10:45 am  Nutrition break

10:45 – 12:30 pm  CIHR Grant Development Workshop:
• The New CIHR Open Grant Competition
• How to Write Grant Proposals – 10 Key Ingredients
• The Complexity of Assembling the Right Team
• Challenges and Pitfalls of Team Grants
• *Hands-On Mock Peer Review Panel
Workshop Leaders: *Dr. Hani El-Gabalawy, MD, CIHR Scientific Director, IMHA, Dr. Bernadette Murphy DC, PhD, Dr. Martin Descarreaux DC, PhD, Dr. Greg Kawchuk DC, PhD, Dr. Jean-Sébastien Blouin DC, PhD, Dr. Silvano Mior DC, PhD, Dr. Adrian Levy PhD

12:30 – 1:00 pm  Lunch (workshop attendees only)

1:55 pm  Welcome and opening remarks - Dr. Kent Stuber, DC, MSc

2:00 – 2:30 pm  Speaker: Dr. André Bussières, DC, PhD
Topic: Clinical Practice Guidelines – Linking the Guideline Initiative to Policy Development

2:30 – 3:00 pm  Speaker: Dr. Pierre Côté, DC, PhD
Topic: What is the role of scientific evidence in the development of public and health policy?

3:00 – 3:15 pm  Nutrition break

3:15 – 4:45 pm  Panel A - Moderators: Dr. Ed Cambridge, DC, PhD candidate, Dr. Shawn Rossi, DC, PhD candidate
Panel: Dr. Natalia Lishchyna (OCA), Dr. Paul Carey (CCPA), Dr. Jeff Warren (CCA), Dr. John Triano, DC, PhD, Dr. Walter Herzog, PhD
Themes:
1. What research is needed by our professional associations over the next 5 years?
2. What opportunities that we see now and in the future in our respective research areas and jurisdictions?
3. How can/should researchers, policy and clinical decision-makers work together (including barriers/facilitators, lessons learned).
4. How can research better relate to the 7,000 clinical practitioners across Canada?

4:45 – 5:15 pm  Speaker: Dr. Simon Dagenais DC, PhD
Topic: Managing utilization of chiropractic for third-party health plans.
Friday, September 27, 2013
6:30 – 9:30 pm
Reception & Dinner
University of Toronto Faculty Club
41 Willcocks Street (10 minute walk from the hotel)
www.facultyclub.utoronto.ca

Speaker: Dr. Colin Carrie
Parliamentary Secretary to Health Minister Leona Aglukkaq
Health Canada

The emerging role for chiropractors in Canada’s healthcare system and health research system in the next 10 years:
“How can doctors of chiropractic become an integral part of every Canadian’s healthcare team by 2023?”
Strategies to establish national and international research collaborations to support cost-effective public policy in Canada

Saturday, September 28, 2013
8:00 – 8:30 am    Breakfast

8:30 – 9:00 am    Speaker: Dr. Jane Aubin, PhD
Chief Scientific Officer and Vice President
Research and Knowledge Translation Portfolio
CIHR
Topic: Multidisciplinary research and the Strategy for Patient-Oriented Research (SPOR)

9:00 – 10:30 am Panel B – Moderators: Dr. Carol Cancelliere, DC, PhD candidate, Dr. Jean-Philippe Pialasse, DC, PhD candidate

Panel: Dr. Paul Bruno, Dr. Steven Passmore, Dr. John Srbely, Dr. Carlo Ammendolia, Dr. Jason Busse
Theme: Chiropractic researchers in interdisciplinary academic environments:
Is integration successful? What are the facilitators and barriers?
How do we make this model sustainable in the future?
What are opportunities that we see now and in the future in our respective research areas and jurisdictions?

10:30 – 10:45 am Nutrition break

10:45 – 12:00 pm Open Group Discussion
Leader: Dr. Greg Kawchuk, DC, PhD
Q & A to engage open discussion in 4 areas.
• How can we collectively contribute to reduce the knowledge to practice gap and improve patient care?
• How can we favourably influence policies to help standardize the patient experience across Canada (i.e., clinician use of best practice for patient assessment and management)?
• How do we strengthen the connections between the research of a neurophysiologist, biomechanist, cell biologist, epidemiologist or social scientist and the field practitioner? “Tell me and I’ll forget; show me and I may remember; involve me and I’ll understand.”
• How do we work with field practitioners to demonstrate competency and legitimacy to the public, in order to achieve cultural authority?

12:00 – 1:00 pm Lunch
1:00 – 1:20 pm Speaker: Dr. Jean-Sébastien Blouin, DC, PhD
Topic: Collaborative neurophysiology research, whiplash injuries and prevention

1:20 – 1:40 pm Speaker: Dr. Jim Dickey, PhD
Topic: A biomechanist’s view of chiropractic research
How can biomechanics research best contribute to clinical practice in the future?

1:40 – 2:00 pm Speaker: Dr. Mark Erwin DC, PhD
Topic: How advances in cellular and molecular biology are defining the clinical practice of chiropractic
Crossing the “clinical practice-research” bridge.

2:00 – 2:20 pm Speaker: Dr. Gabrielle van der Velde DC, PhD
Topic: Health economic evidence for the development of a guideline for the management of minor traffic injuries in Ontario: Results of an economic evaluation of two treatments for whiplash compared to the legislated standard of care.

2:20 – 2:40 pm Speaker: Dr. Brian Budgell DC, PhD
Topic: Is our research ignoring the neurological concepts of chiropractic?

2:40 – 3:15 pm Nutrition Break

3:15 – 4:30 pm Panel C – Moderators: Dr. Connie D’Asthoflo, DC, PhD candidate and Dr. Neil Neary, DC, PhD candidate
Panel: Dr. Jeff Quon, Dr. Jill Hayden, Dr. Sam Howarth, Dr. Bernadette Murphy, Dr. Jan Hartvigsen
Theme: The 5 year plan – measurable outcomes of chiropractic research in Canada
• How do we objectively measure the success of our collective research efforts to our various stakeholders over the next few years?
• What deliverables and or meaningful outputs should we choose (or develop) to try to quantify our benefit to our stakeholders (chiropractors, CIHR, the public, policymakers, etc.)?
• What are opportunities that we see now and in the future in our respective research areas and jurisdictions?

4:30 – 5:00 pm Speaker: Dr. Michael G. Fehlings, MD, PhD, FRCSC, FACS
Professor of Neurosurgery, Halbert Chair in Neural Repair and Regeneration
Medical Director, Krembil Neuroscience Centre, Toronto Western Hospital Head, Spine Program, University of Toronto
Topic: “The Spine Program” at the University of Toronto – a model of collaboration.

5:00 – 5:30 pm Speaker: Dr. David Cassidy DC, PhD, Dr. Med. Sc, University of Southern Denmark
Topic: Critical analysis of our growing research capacity

5:30 pm Closing remarks followed by Wine & Cheese reception - Dr. Kent Stuber, DC, MSc

Schedule Summary

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<tr>
<td>8:30 am – 12:30 pm</td>
<td>Friday - Workshops</td>
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<td>2:00 pm – 5:30 pm</td>
<td>Friday - Conference</td>
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<tr>
<td>6:30 pm – 9:30 pm</td>
<td>Friday evening Reception &amp; Dinner</td>
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<td>8:00 am – 5:30 pm</td>
<td>Saturday - Conference</td>
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<td>5:30 pm – 6:00 pm</td>
<td>Closing Ceremony Wine &amp; Cheese</td>
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Dr. Jane E. Aubin was appointed Chief Scientific Officer (CSO) and Vice-President (VP), Research at the Canadian Institutes for Health Research in July 2011, later renamed Research and Knowledge Translation Portfolio. As CSO, Dr. Aubin is responsible for the oversight of all scientific affairs at CIHR and provides CIHR with expert advice on matters relevant to science and technology, potential opportunities, and emerging orientations and trends in the national and international health research community. As VP, Research and Knowledge Translation, she is responsible for all aspects of adjudication of grants and awards at CIHR and finally, as a member of the Scientific Council, she participates in the development, implementation, and reporting on CIHR’s research and knowledge translation strategy.

Dr. Aubin’s career path has included several senior academic administrative positions, including Chair of the Graduate Department of Dentistry, Director of Postgraduate Dental Education, and Chair of the Department of Anatomy and Cell Biology at the University of Toronto. She is currently a member of the Faculty of Medicine at the University of Toronto where she is a Professor of Molecular Genetics. Dr. Aubin has been Scientific Director and CEO of the Canadian Arthritis Network of Centres of Excellence and, until recently, Scientific Director of CIHR’s Institute of Musculoskeletal Health and Arthritis (IMHA), specializing in arthritis, musculoskeletal, oral and skin conditions.

Dr. Aubin received a BSc (Honours Chemistry and Mathematics) and the Gold Medal in Chemistry at Queen’s University in Kingston. She then completed her PhD in Medical Biophysics at the University of Toronto. She later did her postdoctoral training in Molecular Biology and Biochemistry at the Max Planck Institute for Biophysical Chemistry in Goettingen, Germany.

Dr. Colin Carrie was elected to the House of Commons in June 2004 and re-elected in January 2006, October 2008, and May 2011. In 2008, Prime Minister Stephen Harper appointed him to serve as Parliamentary Secretary to the Minister of Health. He was reappointed to this position on May 25, 2011. From 2006 to 2008, Dr. Carrie served as Parliamentary Secretary to the Minister of Industry.

Following his appointment as Parliamentary Secretary, Dr. Carrie resumed his membership on the House of Commons Standing Committee on Health. In the most recent Parliament, he has worked on several important health-related issues, resulting in the passage of Bill C-32 An Act to Amend the Tobacco Act. This new law effectively prohibits the sale of certain flavoured tobacco products (“cigarellos”) which are marketed to young people.

Dr. Carrie has also worked on efforts to modernize the Canadian Consumer Products Safety Act for the first time in over 40 years. As Parliamentary Secretary, he has participated in efforts to recognize foreign medical credentials for newcomers to Canada, made targeted efforts to reduce the amount of sodium in foods, and worked to increase HIV/AIDS research and funding. He has been a constant advocate for several important health issues, including autism, obesity, Hepatitis-C victims, and families affected by Fetal Alcohol Spectrum Disorder (FASD). While serving in the opposition during the 38th Parliament, Dr. Carrie re-introduced Bill C-420, An Act to Amend the Food and Drugs Act, which advocated for greater choice in personal healthcare and natural health product availability for Canadians.

The son of a career Naval officer, Dr. Carrie grew up in several cities across Canada, settling in Oshawa when he was 15. A graduate of Oshawa’s RS McAuliff CVI, he earned a Bachelor’s degree in Kinesiology from the University of Waterloo and graduated from the Canadian Memorial Chiropractic College as a Doctor of Chiropractic in 1989.

Prior to entering Parliament, Dr. Carrie co-owned and operated one of Durham Region’s leading chiropractic and wellness clinics in Oshawa. He is a past executive member of the Durham Chiropractic Society, former chair of Spinal Health Week and former Director of the Oshawa Federal Progressive Conservative Riding Association.
Dr. El-Gabalawy, an internationally recognized rheumatologist, is Professor of Medicine and Immunology, and senior investigator at the Endowed Rheumatology Research Chair at McGill University. His research interests have focused on the mechanisms initiating and sustaining joint inflammation in rheumatoid arthritis (RA). Dr. El-Gabalawy has published landmark studies on synovial biology, the pathogenesis of early arthritis, and has recently established a unique First Nations cohort to study gene-environment interactions in the pre-clinical phase of arthritis.

Dr. El-Gabalawy has held a number of administrative positions at the University of Manitoba, including serving as an academic Division Head of Rheumatology and Arthritis Centre Director for three terms, Clinical Director of the Rheumatology Research Laboratory, Residency Program Director, and Chair of the Grants and Allocations Committee for the Health Sciences Centre Foundation in Winnipeg. He has served as a member and Chair of CIHR peer review committees, and has held key leadership positions in The Arthritis Society, the Canadian Arthritis Network Centres of Excellence, and the Royal College of Physicians and Surgeons of Canada. He is also a former member of the CIHR-IMHA Institute Advisory Board.

Over the span of his career, Dr. El-Gabalawy has published more than 100 peer-reviewed papers, as well as multiple book chapters and editorials. He has received academic awards and recognitions including an NIH Bench to Bedside Award, fellowship in the Canadian Academy of Health Sciences, and a Queen Elizabeth II Diamond Jubilee Award for service to the arthritis community.

Dr. Michael Fehlings is the Medical Director of the Krembil Neuroscience Center and heads the Spinal Program at the Toronto Western Hospital, University Health Network. Dr. Fehlings is a Professor of Neurosurgery at the University of Toronto, he holds the Gerald and Tootsie Halbert Chair in Neural Repair and Regeneration, and is a Scientist at the McEwen Centre for Regenerative Medicine and a McLaughlin Scholar in Molecular Medicine. In the fall of 2008, Dr. Fehlings was appointed the inaugural Director of the University of Toronto Neuroscience Program and Co-Director of the newly formed University of Toronto Spine Program.

Dr. Fehlings combines an active clinical practice in complex spinal surgery with a translationally oriented research program focused on discovering novel treatments for the injured brain and spinal cord. This is reflected by the publication of over 400 peer-reviewed articles chiefly in the area of spinal cord injury and complex spinal surgery. Dr. Fehlings leads a multi-disciplinary team of researchers which is examining the application of stem cells, nanotechnology and tissue engineering for spinal cord repair and regeneration. He is also a principal investigator in the Christopher and Dana Reeve Foundation North American Clinical Trials Network, is co-chair of the internationally renowned Spine Trauma Study Group and leads several internationally recognized clinical research efforts through AOSpine.

Dr. Michael Fehlings has received numerous prestigious awards including the Gold Medal in Surgery from the Royal College of Physicians and Surgeons (1996), a nomination to the Who’s Who list of the 1,000 most influential scientists of the 21st century (2001), the Lister Award in Surgical Research (2006), the Leon Wiltse Award from the North American Clinical Trials Network, is co-chair of the internationally renowned Spine Trauma Study Group and leads several internationally clinical research efforts through AOSpine.

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Dr. Carlo Ammendolia is the Director of the Chiropractic Spine Clinic and the Spinal Stenosis Program at the Rebecca MacDonald Centre for Arthritis and Autoimmune Diseases at Mount Sinai Hospital. He received his MSc degree in Clinical Epidemiology and Health Care Research in 1999 and, in 2005, his PhD in Clinical Evaluative Sciences from the University of Toronto. Dr. Ammendolia is an Assistant Professor in the Institute of Health Policy, Management and Evaluation at the University of Toronto. He is also an Associate Scientist at the Institute for Work & Health. In 2012, Dr. Ammendolia was awarded the CCRF Professorship in Spine Award from the Department of Surgery in the Faculty of Medicine. He has been in clinical practice for over 30 years and now combines clinical practice and research in the area of non-operative treatment of mechanical, degenerative and inflammatory spinal disorders with a special interest in lumbar spinal stenosis. Dr. Ammendolia also conducts research in return to work and workplace wellness and health promotion.

Professor Lesley Biggs received her BSc (1980) in Psychology and her MSc (1993) and PhD (1990) from the Department of Behavioral Science, Faculty of Medicine—all from the University of Toronto. She joined the Department of Sociology at the University of Saskatchewan, and in 1999 served as Head of the Department of Women’s and Gender Studies. Currently, she is a member of the Department of History and chairs curriculum renewal for the College of Arts and Science. Professor Biggs chaired the Midwifery Advisory Committee for the Government of Saskatchewan which led to the legalization of midwifery in 2007 when the Midwifery Act was proclaimed. She was awarded the CCA’s Award of Merit and the University of Saskatchewan’s Master Teacher Award in 2009. Currently, Professor Biggs is president of the Council of Chiropractic Education and has been a member of the Canadian Commission on Accreditation for the past 13 years.

Dr. Jean-Sébastien Blouin is an associate professor and holder of a CCRF Professorship in the School of Human Kinetics at the University of British Columbia (Canada). His research focuses on the physiology of human movement with particular interest in the sensorimotor control of balance, the neural control of the neck musculature and the pathophysiology of whiplash injury. As part of his research program, he participates in the development of innovative research tools and procedures that will advance our understanding of sensorimotor control of movement and balance.

Dr. Jean P. Boucher is Full Professor in the Kinanthropologie Department at the Université du Québec à Montréal. He was first appointed professor in 1983 and got his doctorate degree in Exercise Science from the University of Massachusetts. His research activities contributed to the fields of neuromuscular control and functional health. Recently, Dr. Boucher developed a new line of research investigating electrophysiological aspects of fat cells. To date, he obtained close to $1M in research funding, and his productions include two patents, two applications, and over 140 published book chapters, communications, conferences and scientific articles. He was chair of graduate studies in Kinanthropologie from 1985 to 1987 and 1995 to 1997, and chaired the Department of Kinanthropologie from 1997 to 2006. He is a Fellow of the American College of Sports Medicine (FACSM) and a founding member of the International Society of Functional Electrical Stimulation (IFESS).

Dr. Paul Bruno obtained his Bachelor of Human Kinetics from the University of British Columbia (1999) and Doctor of Chiropractic from the CMCC (2004). He was a research fellow and lecturer at the Anglo-European College of Chiropractic in the UK from 2004-10. He was awarded the Elsevier International Post-Graduate Research Prize (2005, 2006, 2007) before receiving his PhD from the University of Portsmouth (2008). In July 2010, he was appointed Assistant Professor and CCRF Research Chair in Neuromusculoskeletal Health in the Faculty of Kinesiology and Health Studies at the University of Regina. Dr. Bruno’s research program focuses on rehabilitative exercise therapy targeted at restoring optimal motor control strategies in patients with low back pain, with the long-term goal of establishing evidence-based clinical protocols for diagnosing specific motor control impairments in low back pain patients, allowing clinicians to more effectively target rehabilitative exercise therapy to the specific needs of individual patients.
Dr. Brian Budgell is the Director of the Laboratory of Neurophysiology at CMCC. He was in full-time clinical practice for approximately six years before turning to research. For seven years, from 1993, he conducted research under the late Professor Akio Sato in the Department of the Autonomic Nervous System at the Tokyo Metropolitan Institute of Gerontology, focusing on the neurobiological basis of somatic therapies, most particularly somato-autonomic reflexes. Prior to taking up his most recent appointment at CMCC, he was an associate professor for seven years in the School of Health Sciences, Faculty of Medicine at Kyoto University where he conducted both human and animal investigations, especially concerning the effects of spinal stimulation on cardiovascular function. His most current work at CMCC concerns the effects of spinal stimulation on spinal cord blood flow, and the influence of spinal cord compression on the modulation of somato-autonomic reflexes.

Dr. Jason Busse has completed a BSc in Microbiology and an MSc in Medical and Molecular Genetics at the University of Toronto, a Doctorate in Chiropractic at CMCC, and a PhD in Health Research Methodology at McMaster University under the supervision of Dr. Gordon Guyatt. Dr. Busse is an Assistant Professor in the Departments of Anesthesia and Clinical Epidemiology & Biostatistics at McMaster University and has been active clinically in the management of disability secondary to chronic pain and fatigue syndromes since 1999. Dr. Busse has authored over 90 peer-reviewed publications with a focus on medically unexplained syndromes, orthopedic trauma, the integration of chiropractic into mainstream healthcare, insurance medicine, and methodological research. His academic efforts are supported by a New Investigator Award from the Canadian Institutes of Health Research and the Canadian Chiropractic Research Foundation.

Dr. André Bussières is an Assistant Professor at the School of Physical and Occupational Therapy in the Faculty of Medicine at McGill University and a professor in the Chiropractic Department at l’Université du Québec à Trois-Rivières. He has clinical training in nursing (U. Montréal, 1987) and chiropractic (CMCC, 1991), and completed an MSc in Kinesiology (UQTR, 2008), and a PhD in Population Health (U. Ottawa, 2012). He is a Fellow of the College of Chiropractic Scientists (Canada), and serves as Assistant Editor of the Journal of the Canadian Chiropractic Association. He holds a Canadian Chiropractic Research Foundation (CCRF) Professorship in Rehabilitation Epidemiology (McGill University), and leads the Clinical Practice Guideline Initiative. He received the 2012 Medal of Honor of l’Ordre des Chiropraticiens du Québec and the 2009 Canadian Chiropractic Association (CCA) Young Investigator Award. His research interest focuses on evidence-based guideline development and uptake to improve clinical practice and patient outcome, knowledge synthesis, implementation research and professional behaviour change.

Dr. David Cassidy is an epidemiologist and a senior scientist at the University Health Network in Toronto. He is a Professor in the Division of Epidemiology at the Dalla Lana School of Public Health and at the Institute of Health Policy Management and Evaluation at the University of Toronto. He is currently on a leave of absence in Denmark, where he is the Globalization Professor at the Institute of Sports Science and Clinical Biomechanics at the Faculty of Health, University of Southern Denmark. Originally trained as a chiropractor, he went on to obtain doctoral degrees in Pathology at the University of Saskatchewan and Injury Epidemiology at Karolinska Institute in Stockholm, Sweden. He has published over 250 research papers and chapters in textbooks. His research interests include injury epidemiology, musculoskeletal disorders and neurotrauma.

Dr. Pierre Côté is an Associate Professor at the Faculty of Health Sciences at UOIT and the Director of the UOIT-CMCC Centre for the Study of Disability Prevention and Rehabilitation, and an Associate Professor of epidemiology at the Dalla Lana School of Public Health at the University of Toronto. Dr. Côté graduated from CMCC in 1989. He holds a Master’s Degree in Surgery from the University of Saskatchewan (1996) and a PhD in Epidemiology at the University of Toronto (2002). In 2011, he chaired the Catastrophic Impairment Expert Panel for the Financial Services Commission of Ontario. He is currently the Principle Investigator of the OPTIMA collaboration, a project funded by the Government of Ontario to design an evidence-based practice guideline for common traffic injuries. He has published more than 125 scientific papers and textbook chapters and his research interests include injury epidemiology and the burden and determinants of disability related to musculoskeletal disorders.
programs that measure pa
has developed treatment pathways for disease management
Palladian, Dr. Dagenais was a scien
improvement, reduce unnecessary or inappropriate care, and
reforms. His most recent co-edited book, Paradigm Freeze: Why
It Is So Hard to Reform Health Care in Canada, examines efforts
to reform healthcare in five Canadian provinces.

Dr. John Church is Associate Professor,
Department of Political Science, University of
Alberta. He has researched and taught health
policy for over two decades. During this time
he has worked with governments, NGOs and
professional associations at the international,
national, provincial and local level to strategize,
develop and evaluate health policy reforms. His most recent co-edited book, Paradigm Freeze: Why
It Is So Hard to Reform Health Care in Canada, examines efforts
to reform healthcare in five Canadian provinces.

Dr. Edward Crowther is an Associate Pro-
fessor in the School of Health and Medicine at the International Medical University in Kuala
Lumpur, Malaysia. He completed his chiro-
practic training in Canada and subsequently
an MSc in Health Services Administration
and EdD in Education (Health Policy) from
D’Youville College, Buffalo, New York. Involved
in education for many years, he has held aca-
demic and clinical teaching positions in chiropractic, health services administration and medicine at CMCC, D’Youville College, and the DeGroote School of Medicine, McMaster University.
He has published in a range of biomedical journals. His current research interests, and the focus of his graduate and doctoral studies, include healthcare quality, healthcare service, and cost effectiveness.

Dr. Simon Dagenais is a clinical epidemi-
ologist and health economist with expertise in
applying evidence-based care to the manage-
ment of musculoskeletal disorders in man-
aged-care settings. He is currently the Chief
Scientific Officer and Senior Vice President
for Product Development at Palladian Health,
which manages health benefits for spine-re-
lated conditions. In this role, Dr. Dagenais
has developed treatment pathways for disease management
programs that measure patient-reported outcomes to monitor improvement, reduce unnecessary or inappropriate care, and
minimize unwarranted increases in costs. Prior to working for Palladian, Dr. Dagenais was a scientist and research methodolo-
gist in the Division of Orthopaedic Surgery at the University of
Ottawa, where he assisted physicians and surgeons to develop
clinical research projects related to the spine, upper extremity,
lower extremity, and other musculoskeletal disorders. Before
that, he conducted basic and clinical research to obtain regu-
latory approval from the FDA for an investigational new drug
injected into connective tissues for musculoskeletal disorders.

Dr. Martin Descarreaux is a 1998 chiroprac-
tic graduate from the Université du Québec
dans les Rivières (UQTR), where he now is a
full professor, teaching pathomechanics and
rehabilitation. He completed a Master’s de-
gree in Kinesiology at the UQTR in 2000 and
his PhD in Kinesiology at the Université Laval
in the Department of Social and Preventive
Medicine in 2004. He currently holds the Chi-
ropractic Research Chair at UQTR. Dr. Descarreaux specializes in
neuromuscular control of the spine and his research interests
include the neurophysiologic effects of spinal manipulation.
The characterization of the neurophysiological and biomech-
anical effects of spinal manipulations is upmost among the Chair’s research themes.

Dr. Jim Dickey is a professor at the Western
University in the School of Kinesiology. He
completed his BSc and MSc at the University
of Waterloo working with Dr. David Winter.
He worked as a research assistant in the
orthopaedics Department at Sunnybrook
Hospital before performing his PhD in Me-
chanical Engineering at Queen’s University.
He is actively involved in teaching and research. His research
program is focused on joint biomechanics and includes specific
projects evaluating the health effects of whole-body vibration
from industrial vehicles.

Dr. W. Mark Erwin is an assistant professor
within the divisions of Orthopaedic and Neu-
rological Surgery at the University of Toronto
and Toronto Western Research Institutes,
a member of the Section on Biologics with
the North American Spine Society and the
AOSpine Research Network. His research
clearly covers both orthopaedic (DDD) and
perhaps more closely neurosurgery (both
DDD and stem cell applications to spinal cord disorders). His
research program is directed along a restorative/regenerative
theme and was begun with his PhD work concerning the restor-
avative capacity of notochordal cells. He has published over 18
fundamental cellular/molecular biologically-applied scientific
papers concerning the biology of the intervertebral disc and
more recently, stem cell applications. His lab has a focus upon \textit{in vitro} cellular mechanisms and \textit{in vivo} functional evaluation within an overall translational research programme concerning the intervertebral disc and neural repair.

**Dr. Jill Hayden** is Assistant Professor in the Department of Community Health & Epidemiology, Dalhousie. She graduated from CMCC in 1996 and completed the Chiropractic Clinical Residency Program in 1999. In 2007, she completed her PhD in Clinical Epidemiology at the University of Toronto. She has been the recipient of several training and achievement awards and currently holds a Dalhousie/CCRF Research Professorship in Epidemiology. Dr. Hayden’s research experience and expertise includes systematic review methods and knowledge translation, prognostic research, and musculoskeletal health. She has been involved with the Cochrane Collaboration for many years, including as review author, Advisory Board Member for the Back Review Group, co-Convenor of the Prognosis Methods Group, and Canadian Chiropractic Centre Network Site Representative. Dr. Hayden is founding and current Head of the Nova Scotia Chiropractic Resource Centre whose aim is to build regional capacity in systematic reviews and evidence-informed healthcare decision-making.

**Dr. Walter Herzog** received his undergraduate training in Physical Education at the Federal Technical Institute in Zurich, Switzerland (1979), completed his doctoral research in biomechanics at the University of Iowa in 1985, and completed postdoctoral fellowships in Neuroscience and Biomechanics in Calgary, Canada in 1987. Currently, Dr. Herzog is a Professor of Biomechanics with appointments in Kinesiology, Medicine, Engineering, and Veterinary Medicine, holds the Canada Research Chair for Cellular and Molecular Biomechanics, and is appointed the Killam Memorial Chair for Inter-Disciplinary Research at the University of Calgary. His research interests are in musculoskeletal biomechanics with emphasis on mechanisms of muscle contraction and the biomechanics of joints with focus on mechanisms of onset and progression of osteoarthritis. Dr. Herzog is the recipient of the Borelli Award from the American Society of Biomechanics, the Career Award from the Canadian Society for Biomechanics and is the past president of the International, American and Canadian Societies for Biomechanics.

**Dr. Greg Kawchuk** is an Associate Professor and Canada Research Chair in Spinal Function in the Department of Physical Therapy at the University of Alberta. Dr. Kawchuk obtained his chiropractic training from CMCC in 1990 and practised actively until 2004. In that time, he acquired his Master’s degree in Biomechanics and then his PhD in Bioengineering. Dr. Kawchuk’s research is aimed at defining the mechanisms that initiate and sustain spinal disorders with the long-term goal of creating meaningful strategies to prevent, diagnose and treat back pain. His work to date has developed several technologies to measure spinal function that are now being used in clinical trials. He has authored over 50 papers and presented his work internationally at ISSLS, NASS, WCPT, and WFC.

**Dr. Adrian R. Levy** is a Lead Researcher for Nova Scotia for the Maritime SPOR SUPPORT Unit. He is a Professor at Dalhousie University and, since 2009, has been serving as Head of the Department of Community Health and Epidemiology and as a District Chief in the Nova Scotia Capital District Health Authority where he interacts regularly with other clinical District Chiefs and the senior executives in the Health Authority and the Nova Scotia Department of Health and Wellness. He has a leadership role in a number of core elements of the unit including the Population Health Research Unit and the Research Methods Unit. He holds a PhD from McGill in Epidemiology, and post-graduate training at McMaster in Economic Evaluation. In July 2000, he joined the faculty of the University of British Columbia. His academic interests in health services research include health technology assessment, comparative effectiveness research, computer simulation, pharmacoepidemiology, and pharmacoeconomics.

**Dr. Annalyn Mercado** obtained her BA (Hons.), majoring in Psychology, at the University of Manitoba in 1995. She then moved to Saskatoon, SK, where she received a MA (1998) and PhD (2003) in Clinical Psychology from the University of Saskatchewan. Both her clinical and research interests are in health and rehabilitation psychology. Since receiving her PhD, she has worked as a clinical psychologist at the Kinetik & FIT for Active Living Programs, Saskatoon City Hospital. She is also a Professional Affiliate with the Clinical Psychology Department at the University of Saskatchewan.
Dr. Bernadette A. Murphy graduated from Queens University in 1985 and CMCC in 1989. She completed her MSc (1992) and PhD (1998) in Human Neurophysiology at the University of Auckland. She was a faculty member in the Department of Sport and Exercise Science from 1999-2007, where she established an MSc in Exercise Rehabilitation. In January 2008, she returned to Canada and took on the role of Head of Kinesiology in the Faculty of Health Sciences at UOIT. She is the Director of the Human Neurophysiology and Rehabilitation Laboratory. The overall theme of her research is neural adaptation in humans and the role of physical interventions such as spinal manipulation and exercise in aiding the re-establishment of appropriate neuromuscular connections. She has been awarded the WFC best scientific paper award (1995) and 3rd prize in 2007, the New Zealand Chiropractor of the Year (2004) and the 2010 OCA award for most significant contributions to research.

Dr. Genevieve Newton earned her BSc in Liberal Sciences from Laurentian University in 1997, her BSc in Human Biology in 1999 and her Doctor of Chiropractic degree in 2001 from the National University of Health Sciences. She continued her education in nutrition with an MSc (2003) and a PhD (2007) from the University of Guelph. Her graduate and post-doctoral research at the University of Waterloo in the Faculty of Applied Health Sciences was focused in the areas of omega-3 fatty acids and niacin. Dr. Newton is currently an Assistant Professor at the University of Guelph in the department of Human Health and Nutritional Sciences. Dr. Newton’s research is focused on using active techniques to facilitate learning in nutrition and kinesiology education, specifically, the effectiveness of using breakout groups as an active learning strategy, as well as whether using nutrition and nutraceutical-based learning modules can facilitate learning and integration of metabolic pathways in biochemistry.

Dr. Steven Passmore is an Assistant Professor and holder of a CCRF Professorship in the School of Medical Rehabilitation at the University of Manitoba. He also holds an adjunct appointment in the Research Department at New York Chiropractic College. With a background in Kinesiology, Dr. Passmore completed his MSc (2003) at the University of Nevada, Las Vegas, his DC (2006) at New York Chiropractic College, and his PhD (2013) at McMaster University. Dr. Passmore utilizes his theoretical and applied background in perceptual motor control to explore performance-based outcome measures in an attempt to objectively determine population characteristics, movement outcomes and sustainability of interventions. His practise experience (2007-2010) resulted in an interest in the integration of chiropractic care into mainstream healthcare systems. He has held competitive grants from the Canadian Institutes for Health Research (CIHR), the Worker’s Compensation Board of Manitoba (WCB), the Manitoba Medical Service Foundation (MMSF), and the Alexander Gibson Fund.

Dr. Mathieu Piché graduated in 2002 from the chiropractic doctoral program at Université du Québec à Trois-Rivières (UQTR). He obtained a Master’s degree in Cell Biology from UQTR in 2004 for his work on neural plasticity of sensory systems in rodents. In July 2009, he obtained his PhD in Neurological Sciences from Université de Montréal for his work on endogenous modulation of pain in humans. He is currently an Associate Professor in the Department of Chiropractic at UQTR where he teaches Neurophysiology. He holds the “UQTR Research Chair in Pain Neurophysiology” and is a co-researcher for the FCQ Chiropractic Research Chair held by Dr. Martin Descarreaux. He also collaborates with researchers from the Tokyo Metropolitan Institute of Gerontology and from Université de Montréal. His research interests include the physiology and pathology of endogenous pain modulation and the impact of spinal pain on autonomic regulation in humans and rodents.

Dr. Jeffrey Quon received his Doctor of Chiropractic degree and a postgraduate Diploma in Clinical Sciences from CMCC. He also completed an externship at the Royal University Hospital in Saskatoon, is a Fellow of the College of Chiropractic Sciences of Canada, and is the Chiropractic Consultant to WorkSafeBC.
Dr. Quon completed his Master of Health Science degree, and a Doctorate in Epidemiology from the University of British Columbia (UBC) in 2007. He is currently a Clinical Associate Professor in the School of Population and Public Health, UBC Faculty of Medicine, a Research Associate at the International Collaboration on Repair Discoveries (ICORD), and a Research Associate and Non-medical Clinical Associate in the Combined Neurosurgical and Orthopaedic Spine Program, Department of Orthopaedics, UBC Faculty of Medicine. He has practised in Vancouver since 1989, and his current research activities include a randomized controlled trial to evaluate the effects of spinal manipulation on biochemical and clinical outcomes.

Dr. John Z. Srbely graduated from CMCC in 1992, certified in Acupuncture in 2000, received his PhD in Biomechanics and Neurophysiology in 2008 from the University of Guelph and was appointed Assistant Professor in September 2008 in the Department of Human Health and Nutritional Science, University of Guelph. He was awarded the 2005 CCA Young Investigator Award. He holds a CCRF Research Chair in Spine Mechanics and Neurophysiology and is a member of the Editorial Board of the JCCA. He is the Associate Chair of the Natural, Physical and Engineering Science Research Ethics Board at the University of Guelph. Primary research interests include the study of the neurophysiologic mechanisms of chronic pain, especially chronic myofascial pain syndrome and osteoarthritis, the study of central sensitization and its impact on chronic pain and the pathophysiology of chronic degenerative joint/spine disease. He is a Network Investigator for the Canadian Arthritis Network (CAN) studying pain and function in osteoarthritis.

Dr. John Triano is a graduate of Logan College (DC), Webster College (MA), and the University of Michigan (PhD). He is a Fellow of the College of Chiropractic Scientists (Canada) and serves as an Editorial Advisor to the Journal of Manipulative and Physiological Therapeutics (since 1986), Spine (since 1994), The Spine Journal (since 2000), and is Associate Editor for the Journal of Electromyography and Kinesiology. Currently, he is Professor and Dean of Graduate Education at the Canadian Memorial Chiropractic College with cross-appointment as Associate Professor, Rehabilitation Sciences at McMaster University and Adjunct Professor at UOIT. He serves as Principal Investigator or Co-investigator on NIH/NCAAM-CIHR (2007-present) awards, was awarded a CIHR grant in 2011 and Workers Safety Improvement Board of Manitoba grant in 2012.

Dr. Gabrielle van der Velde is a scientist at the Toronto Health Economics & Technology Assessment (THETA) Collaborative, an Assistant Professor in the University of Toronto Faculty of Pharmacy, and adjunct scientist at the Institute for Work & Health. A licensed chiropractor, she completed a PhD in Clinical Epidemiology and Health Care Research at the University of Toronto in 2008. She was awarded three doctoral and post-doctoral fellowships, and a Bisby award, all from the Canadian Institutes of Health Research. Dr. van der Velde’s primary interest is in health technology assessments and economic evaluations of interventions for musculoskeletal conditions; currently, she is leading an economic evaluation of whiplash interventions in Ontario. She is also interested in the measurement of health-related quality of life and evaluation of measurement properties of health scales using modern test theory methods, including Rasch analysis.

Dr. Ellen Vogel is Dean of the Faculty of Health Sciences (FHS) at UOIT. She completed a PhD at the University of Alberta (Nutrition and Metabolism) and a postdoc from Health Canada. She is a Fellow with Dietitians of Canada and has received awards for leadership in dietetics practice. Well known for her work in community health, Dr. Vogel has led or co-led national studies tackling topics such as the effectiveness of community-based programs and building capacity for food security through policy change. The recipient of multiple grants from the Canadian Foundation for Dietetic Research, she shared her work on building dietitians’ capacities in nutritional genomics at close to 30 conferences. Since 2002, Dr. Vogel has examined faculty adoption of new information and communication technologies for teaching and learning. Her work elucidates the capacities of faculty members to transition from traditional face-to-face instruction to hybrid courses and online delivery models.
Dr. Marc-André Blanchette entered the Public Health PhD program in epidemiology in 2008 at the University of Montreal under the supervision of Dr. Michèle Rivard. The program focuses on training researchers who master one field of expertise while maintaining a global vision of public health. In 2010, Dr. Blanchette entered two different strategic training programs funded by the CIHR. The first program focuses on a transdisciplinary approach for the prevention of work disability and is based at the University of Toronto. The second program focuses on Transdisciplinary Research on Public Health Interventions: Promotion, Prevention and Public Policy (4p). Dr. Blanchette’s research focuses on the first line of care in work-related disease. His study will investigate if direct access to different healthcare providers influences the compensation duration. Dr. Blanchette is funded by a CIHR Fellowship.

Dr. Jean-Alexandre Boucher enrolled in a PhD program at UQTR in September 2010, under the supervision of Dr. Martin C. Normand, DC, PhD and co-supervision of Dr. Martin Descarreaux, DC, PhD. He will study the effect of local muscle vibration on trunk sensorimotor control, starting by determining whether the application of paraspinal muscle vibration alters the control of isometric force production of the trunk in healthy participants. The validation of vibration parameters on a monoarticular lower limb muscle and the effect of paraspinal muscle vibration in patients with non-specific lumbosacral pain will also be undertaken. Dr. Boucher is a member of the Groupe de recherche sur les affections neuro-musculo-squelettiques (GRAN), and also benefits from financial support awarded by the Fondation de Recherche Chiropratique du Québec to pursue his PhD. He presented his research at the 2013 WFC Congress in Durban this past April.

Dr. Edward Cambridge is currently studying as a PhD student under the supervision of Professor Stuart McGill, PhD, in the Spine Biomechanics Laboratory, in the Department of Kinesiology, and the Faculty of Applied Health Science at the University of Waterloo. He is currently working on hip and spine integration, and understanding this relationship through normal mechanics of the linkage, the effects of low back pain, and corrective exercise and rehabilitation. His thesis will comprise a combination of biomechanical modeling, as well as experimental research, in order to better understand the relationships and constructs of hip and spine function. Dr. Cambridge received the CIHR-CMCC summer student scholarship in 2008 and 2009 while at CMCC. He received the CIHR Sir Frederick Banting & Dr. Charles Best Canada Graduate Scholarship Award – for Master’s Students. Dr. Cambridge was also honoured as the 2012 CCA Young Investigator of the Year award.

Dr. Carol Cancelliere graduated from CMCC in 2004, completed her BSc (Hons) at University of Toronto in 2000 and her MPH at Lakehead University in 2011. She is a PhD student at the Institute of Health Policy, Management and Evaluation, University of Toronto, supervised by J. David Cassidy. She is a recipient of the CIHR Frederick Banting and Charles Best Canada Graduate Scholarships – Doctoral Award (2011-2012). Her thesis will focus on the incidence and prognosis of post-traumatic brain injury (MTBI)/concussion, as part of the International Collaboration on MTBI prognosis (funded by the Ontario Neurotrauma Foundation), and she is currently working on return-to-work guidelines after MTBI.

Dr. Diana De Carvalho is a PhD candidate at the University of Waterloo supervised by Dr. Jack P. Callaghan. Dr. De Carvalho is completing her doctoral thesis examining the effect that office chair design features and movement strategies have on biomechanical factors during prolonged sitting. She has also developed a dataset capable of providing reasonable estimations of the radiographic lumbar lordosis angle from external inclinometric measures for both genders and has collected bilateral intramuscular recordings of the lumbar multifidus muscle during spine manipulation. Her work has been funded by a CIHR Doctoral Research Award, an Ontario Graduate Scholarship, four University of Waterloo President’s Scholarships as well as a seed grant from CRE-MSD. She has also received a Certificate in University Teaching from the Center for Teaching Excellence at the University of Waterloo and continues to publish case reports from her private practice at the University of Guelph Health and Performance Centre.
Dr. Connie D’Astolfo is the President and Clinical Director of SPINEgroup. Dr. D’Astolfo is currently completing a PhD in Health Management, Policy and Informatics at York University under Dr. Peter Tsasis, PhD. Her thesis topic involves improving the current decision-making processes which underlie rehabilitation of seniors across the long-term care continuum using an integrated clinical model. Objectives include speedier diagnosis, early detection, cost-effective and responsive rehabilitation policies and clinical strategies to better meet the needs of our senior population and reduce impact on the economy and health organizations. Dr. D’Astolfo has consulted with the Ontario government and other health organizations on health-related policy and management projects and initiatives. Early in her career, Dr. D’Astolfo pioneered and led an inter-disciplinary pain management team for several long-term care homes and was the first chiropractor to be fully integrated in the LTC sector in Ontario. Her expertise lies in rehabilitation, performance management and program evaluation.

Dr. Diane Grondin is a PhD candidate at the University of Toronto in Health Policy Management and Evaluation, Health Services (Knowledge Translation). She is Assistant Professor at CMCC and Adjunct Assistant Professor at the University of Ontario Institute of Technology. She is a graduate of CMCC (DC) and the University of Windsor (MHK). Dr. Grondin is most interested in studying healthcare policy and methods for effective knowledge exchange within the healthcare system. She is interested in the motor-learning and human-factors components of practice innovation and behaviour change. Prior and ongoing research is in spine biomechanics and she has worked extensively as an ergonomic consultant for a number of years. She has also held senior positions within the independent medical assessment industry. On a personal level, Dr. Grondin is interested in nutritional policy and supports healthy practices within the community.

Dr. Julie-Marthe Grenier is an Associate Professor of Radiology at UQTR since August 2006. She previously served as Assistant Professor of Radiology and Coordinator of Clinical Diagnostic Imaging Services at Palmer College of Chiropractic – Florida, where she was voted Faculty of the Year in 2005. She completed her Bachelor of Science degree and Doctorate of Chiropractic studies in 1999 at Cleveland Chiropractic College in Kansas City. She obtained her radiology credentials (DACBR) in 2003 after a residency at Palmer College in Iowa. Her research interests focus on imaging and clinical education. She has published several articles and book chapters, and presented the results of her research in a variety of venues. She is currently a PhD candidate at UQTR, supervised by Dr. Jean-Marie-Miron and Dr. Liette St-Pierre. The title of her thesis is, “A description of the radiographic film interpretation experience in chiropractors of different expertise level.”

Dr. Cesar Hincapié trained as a chiropractor at CMCC, holds an Honours Bachelor degree in Physical Health and Education, and a Master’s degree in Epidemiology from the University of Toronto, where he studied pain patterns after traffic collisions, the etiology of troublesome low back pain, and undertook systematic reviews of pain, injury and metabolic disorders in dancers. Currently, Dr. Hincapié is a PhD candidate in the Division of Epidemiology at the Dalla Lana School of Public Health, University of Toronto, and a research fellow in the Division of Health Care and Outcomes Research, at the University Health Network. Dr. Hincapié has been awarded a CIHR Fellowship award in the area of Knowledge Translation. His dissertation aims to advance understanding of the risk of lumbar disc herniation from chiropractic care.

Dr. Alexandra Ladouceur obtained her chiropractic degree in June 2010 from Université du Québec à Trois-Rivières (UQTR). In September 2010, she undertook a PhD in psychology at UQTR under the supervision of Dr. Mathieu Piché, DC, PhD and Dr. Pierre Rainville, PhD. Her research projects concern the functions and dysfunctions of pain regulatory systems. Using electrophysiological and brain imaging methods, she investigates the pathophysiological mechanisms of chronic pain in patients affected by non-specific low-back pain. She is a student member of the Groupe de recherché sur les affections neuromusculosquelettiques (GRAN) and Groupe de Recherche en Neurosciences (GRN). Her work is supported by PhD research fellowships from the Fondation de Recherche en Chiropratique du Québec. Her initial results have been presented at the Society for Neuroscience (SFN) meeting in 2011 and have been published in the journal Pain (August 2012). In September 2012, she undertook medical studies while simultaneously managing to finish her PhD at UQTR.
Dr. Neil Neary practised in Brandon, MB for 11 years prior to enrolling in the Master of Public Health – Health Promotion program in the Centre for Health Promotion Studies at the University of Alberta. After completing his Master’s degree in 2011, he was accepted as a PhD student in Health Promotion and Socio-behavioural Science at the U of A. He is interested in combining qualitative research methods that capture the complex nature of systems with computational modeling methods (e.g. agent-based modeling) that allows for manipulation and testing of system parameters. Neil is currently employed as a Senior Consultant for Clinical Engagement Strategies and Initiatives with Alberta Health Services. His PhD thesis proposal will be about how knowledge and expertise that exists in front-line clinician groups, such as chiropractors, is incorporated into healthcare systems at an organizational level.

Dr. Jean-Philippe Pialasse is a PhD candidate at “l’Université Laval” in Québec City and funded by a “Fond de Recherche du Québec en Santé” (FRQS) Doctoral Research award. He is training under the supervision of Dr. Martin Simoneau, PhD and Dr. Martin Descarreaux, DC, PhD. Dr. Pialasse’s research focuses on the relation between vestibulomotor impairment and adolescent idiopathic scoliosis (AIS). More precisely, he is evaluating the reaction to galvanic vestibular stimulation in patients and healthy participants. The purpose of this work is to show the link between an abnormal vestibulomotor reaction and the onset or the progression of AIS. In addition to his doctorate, Dr. Pialasse is also active for the profession as secretary of the “Association Francaise de Chiropratique” Board of Governors.

Dr. Katherine Pohlman is currently a PhD student at the University of Alberta in the Department of Pediatrics. She received her Doctor of Chiropractic degree in 2006 from the Palmer College of Chiropractic. In 2008, she received her Diplomate in Clinical Chiropractic Pediatrics and, in 2010, her Masters in Clinical Research also from the Palmer College of Chiropractic. She started her PhD in 2010 with the University of Alberta’s Complementary and Alternative Research and Education (CARE) department and anticipates graduation in June 2015. Prior to her studies at the University of Alberta, Dr. Pohlman was a clinical project manager for several federally funded clinical trials at the Palmer Center for Chiropractic Research. Currently, Dr. Pohlman serves as the Vice President of the American Chiropractic Association’s Council on Chiropractic Pediatric and a member of the Institutional Review Board at the Palmer College of Chiropractic. Her research interests include the safety and effectiveness of spinal manipulative therapy, especially within the pediatric population.

Dr. Shawn Rossi obtained his chiropractic degree from CMCC in 2007. His practice focus is on rehab management of patients utilizing evidence-based medicine. Prior to that, he obtained a Bachelor degree from Laurentian University (2001) and a Master’s (2003) in pharmacological studies investigating a novel femoral implant which released gentamycin at a slow rate to reduce the rate of infection. He is currently finishing a PhD on interprofessional healthcare delivery focusing on cost-effective strategies in musculoskeletal care and the development of a low back pain care pathway. He also does research on the effects of exercise on people stricken with Multiple Sclerosis (MS). He is a faculty member at the Northern Ontario School of Medicine and serves a director of client services for the MS society. Dr. Rossi received the honour of best chiropractor in Sudbury (2009) and the Ontario chiropractic community service award (2010).
**Dr. Josh Stehmeier** is a PhD student at the University of British Columbia (Okanagan Campus) in the Human Kinetics Program in the School of Health and Exercise Science in the Faculty of Health and Social Development. His research interests are focused on health promotion and awareness in a corporate setting, and looking at interventions that decrease absenteeism and presenteeism in the workplace. He hopes to examine healthcare in Canada by targeting the private sector. A possible future question is if chiropractic intervention on a regular basis improves employee performance and productivity. His supervisor is Dr. Cristina Caperchione, PhD.

**Dr. Maja Stupar** is a Doctoral candidate in Clinical Epidemiology at the Institute of Health Policy, Management and Evaluation, University of Toronto. Her thesis, supervised by Dr. Pierre Côté, addresses measurement of outcomes in musculoskeletal injuries. Specifically, she is evaluating psychometric properties of an outcome measure developed for assessing whiplash-related disability. Dr. Stupar was a Canadian Institutes of Health Research (CIHR) Vanier Canada Scholar. She also received the CIHR Michael Smith Foreign Study Supplement in 2010 and the 2011 CCA Young Investigator Award. Dr. Stupar is currently involved in the Minor Injury Guideline Development project as part of the Core Scientific Team. The results of this project, led by Dr. Pierre Côté, will have an impact on the current treatment of minor injuries resulting from traffic collisions in Ontario by contributing updated treatment guidelines and clinical prediction rules.

**Dr. Jean Théroux** graduated from CMCC in 1984. In private practice for 19 years, he started teaching as a sessional lecturer in 1995 at the chiropractic department at the Université du Québec de Trois-Rivières. He was appointed adjunct professor from 2006-09. From 2007-09 he held the position of Director of Clinical Practicums. Dr. Théroux obtained a Master’s degree in Biomedical Sciences in 2012 from the University of Montreal. His thesis focused on musculoskeletal knowledge related to adolescent idiopathic scoliosis from health professionals most likely to encounter this condition. He is currently a doctoral student in the same department under the supervision of Dr. Sylvie Le May, RN, PhD. His co-supervisor is Dr. Hubert Labelle, leader of the Research Group on Musculoskeletal Deformations and holder of the Motion Sciences Chair at the CHU Ste-Justine and the University of Montreal. Dr. Théroux’s research focuses on the efficacy of spinal manipulative therapy for back pain associated with adolescent idiopathic scoliosis.
**Canadian Chiropractic Research Agenda**

**Dr. Paul Carey** has been a practising chiropractor since 1967. He is a past president of the Ontario Chiropractic Association, the Canadian Chiropractic Association, and the World Federation of Chiropractic. He has been the president of the Canadian Chiropractic Protective Association since its inception in 1986. Dr. Carey was also one of the three co-chairs of the World Federation’s identity position statement of the chiropractic profession.

**Ms. Alison Dantas** joined the CCA as CEO in July, 2012 following an exemplary advocacy and management career in not-for-profit professional healthcare associations including positions as the Chief Executive Officer of the Ontario Association of Naturopathic Doctors and the Executive Director of the Association of Ontario Midwives. As well, Ms. Dantas is the recipient of awards from the Canadian Society of Association Executives and the Peel Institute. The Peel Rape Crisis Centre honoured her with its Remarkable Woman Award for significant contributions toward ending violence against women and children. She holds a Master’s degree from the University of Waterloo in Regional Planning and Resource Development.

**Dr. Simon French** is a Senior Research Fellow at the School of Health Sciences, University of Melbourne, supported by a research Fellowship from the Australian National Health and Medical Research Council. Simon has a clinical background as a chiropractor, and undertook a Master of Public Health (Monash University) while still in clinical practice. He commenced employment as a research academic in 2003, and completed his PhD at the Australasian Cochrane Centre in 2009. Simon conducts research in the area of knowledge translation in primary care with a focus on the management of musculoskeletal conditions, and also undertakes randomised trials of interventions relevant to primary care settings. Simon has over 40 publications in peer reviewed journals, and has obtained over AUD$2 million in research funding. He is also an Associate Editor of the journal *Chiropractic & Manual Therapies*.

**Dr. Jan Hartvigsen** is professor and head of the Research Unit for Clinical Biomechanics at University of Southern Denmark. He is also a Senior Researcher at the Nordic Institute of Chiropractic and Clinical Biomechanics. In addition he is the head of the Graduate Program for Physical Activity and Musculoskeletal Health at the PhD School at the Faculty of Health Sciences, USD. His research focus is on longitudinal studies dealing with spinal and musculoskeletal pain in the population. He has published RCTs in the area of conservative treatment of back and neck pain, musculoskeletal chest pain, and osteoarthritis of the hip. He has authored 90 peer-reviewed publications and has been active in national and international task forces and health technology assessment groups in the areas of spine pain, traumatic brain injury, and evaluation of musculoskeletal research.

**Dr. Samuel Howarth** is an Associate Professor, and currently holds the McMorland Family Research Chair in Mechanobiology at CMCC in Toronto, Ontario. He obtained his doctorate in 2011 from the Department of Kinesiology at the University of Waterloo with a specific focus on biomechanics. Dr. Howarth’s work has focused on identifying mechanisms and tolerances for low back tissue injury using *in vivo, in vitro*, and *in silico* methods. Collectively, these works have contributed to our understanding of the relationship between loading and injury potential in the lumbar spine. In his current position, Dr. Howarth continues to focus on the physical demands of daily living, its influence on low back function, dysfunction, stability, pain, and injury.

**Dr. Natalia Lishchyna** is currently serving as the President of the Ontario Chiropractic Association. She graduated from the Canadian Memorial Chiropractic College (DC) and Bournemouth University (MSc). She is a Fellow of the College of Chiropractic Clinical Sciences (Canada). Dr. Lishchyna is an Assistant Professor in the Department of Clinical Education at CMCC and has maintained a clinical practice over the last 15 years. She has published her research in the JCCA and the Journal of Chiropractic Education. She has been an active volunteer with the Peel Children’s Aid Society, Mississauga Halton Infection Control Network (served as Chair), and the Mississauga Halton Local Health Integration Network (LHIN).

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**Invitees**

**Dr. Paul Carey**, DC  
President  
Canadian Chiropractic Protective Association

**Ms. Alison Dantas**,  
CEO  
Canadian Chiropractic Association

**Dr. Simon French**,  
BAppSc (Chiropractic), MPH, PhD

**Dr. Jan Hartvigsen**,  
DC, PhD

**Dr. Samuel Howarth**,  
PhD

**Dr. Natalia Lishchyna**,  
DC  
President  
Ontario Chiropractic Association
Dr. Silvano Mior is the Senior Advisor to the President at CMCC and Research Scientist in the Department of Research. He is an Adjunct Professor, Faculty of Health Sciences, UOIT. He graduated from CMCC in 1980 and received his Fellowship in the College of Chiropractic Sciences in 1984. He completed his PhD in Health Services with a concentration in Outcomes and Evaluation from the Faculty of Medicine, University of Toronto in 2010. Dr. Mior has been a participant in research funded by the Ontario Ministry of Health and Long Term Care and CIHR. He was also seconded to the Ontario Ministry of Health and Long Term Care as a senior clinical consultant. His research interests are in the areas of clinical outcomes and program evaluation, health services, and assessing models of interdisciplinary collaborative practice.

Dr. John Riva is an MSc candidate in the Health Research Methodology program at McMaster University. In 2008, Dr. Riva was appointed as an Assistant Clinical Professor at McMaster University. He leads problem-based learning and musculoskeletal training sessions at the Michael G. DeGroote School of Medicine, has maintained a clinical practice for over 12 years, and is a clinical preceptor to students from McMaster University and the University of Toronto. His current research interests are related to integration of chiropractors into mainstream healthcare, predictors of prolonged disability and recovery, appropriateness of spinal imaging, transport truck driver health & safety, physical activity for diabetes, fibromyalgia management, and updating the Canadian clinical practice guideline for safe and effective use of opioids in the management of chronic pain. He has 13 peer-reviewed publications.

Dr. Richard Roy obtained his PhD in 2010. He now works in clinical practice and teaching at UQAM in the Science Faculty, Kinanthropology department. His past work has been on paraspinal cutaneous temperature. At present, he supervises an MSc student investigating oscillating percussion (repeated percussion). They have finished the validity and reliability study of the instrument, and will evaluate the validity and reliability within a clinical context, i.e., different chiropractors (n=6) and different patients (n=10) versus the initial inert model. They are currently preparing a study which will compare single percussion versus multiple percussions and multiple percussions with a variable frequency. Dr. Roy is also a member of the Continuing Education Committee of l’Ordre des chiropraticiens du Québec.

Dr. Howard Vernon graduated from CMCC in 1977, completed his Fellowship in Clinical Science in 1980 and received his PhD from the University of Glamorgan, Wales, UK, in 2003. Dr. Vernon is the author of over 100 peer-reviewed articles, as well as the editor of two textbooks. He is the creator of the Neck Disability Index, currently the gold standard instrument in the field. He is the Principal Investigator of an NIH-funded R01 clinical trial investigating the validity of a control cervical spine manipulation for use in neck pain studies. He is a past winner of the CCA Researcher of the Year. He is currently a Full Professor at CMCC where he has worked since 1977.

Dr. Jeff Warren is currently the Chair of the Board of the Canadian Chiropractic Association. He obtained his Bachelor of Science from the University of Toronto in 1977 and Doctor of Chiropractic from the Canadian Memorial Chiropractic College in 1981. He is currently studying for his Masters of Business Administration from Heriot Watt University. Dr. Warren served as President of the Alberta College and Association of Chiropractors from 2005-2007 and received the Chiropractor of the Year award in Alberta in 2009 which is Alberta’s highest award.

Dr. Heather Shearer graduated from CMCC in 2004, completed the CMCC graduate clinical sciences residency program in 2006 and Clinical Chiropractic Fellowship in 2007, and received her MSc in Medical Science from the University of Toronto in 2008. Her particular research interest includes the development of clinical prediction rules for recovery following musculoskeletal injuries. Dr. Shearer has worked as a Clinical Research Coordinator for the University Health Network Whiplash Intervention Trial, and was also a clinician at the Toronto Western Hospital WSIB Regional Evaluation Center. Dr. Shearer is currently the Clinical Research Manager for the development of the Minor Injury Treatment Protocol project in the Faculty of Health Sciences at UOIT.
Dr. André Bussières holds the Canadian Chiropractic Research Foundation (CCRF) Professorship in Rehabilitation Epidemiology at McGill University. He is an Assistant Professor at the School of Physical and Occupational Therapy in the Faculty of Medicine at McGill University and a professor in the Chiropractic Department at l’Université du Québec à Trois-Rivières. He has clinical training in nursing (U. Montréal, 1987) and chiropractic (CMCC, 1991), and completed an MSc in Kinesiology (UQTR, 2008), and a PhD in Population Health (U. Ottawa, 2012). He is a Fellow of the College of Chiropractic Scientists (Canada), and serves as Assistant Editor of the Journal of the Canadian Chiropractic Association. He leads the Clinical Practice Guideline Initiative. He received the 2012 Medal of Honor of l’Ordre des Chiropraticiens du Québec and the 2009 Canadian Chiropractic Association (CCA) Young Investigator Award.

Dr. Allan Gotlib has been the Editor of the Journal of the Canadian Chiropractic Association, a peer-reviewed scholarly scientific publication, for the past 27 years. He is a member of the World Association of Medical Editors, the American Medical Writers Association and the Canadian Pediatric Society. In 2002, he was elected to the Executive Committee for the Canadian Cochrane Network and Center. From 2003 to 2007, he was a member of the CIHR President’s Voluntary Sector Committee. In 2007, he received the Canadian Chiropractic Association Medal of Merit. In 2007-2008, he received the Homewood Professorship from the Canadian Memorial Chiropractic College. In 2012, Dr. Gotlib was appointed a Member of the Order of Canada.

Dr. Kent Stuber has a BSc in Cellular, Molecular & Microbial Biology, his DC from CMCC, and an MSc in Health and Social Care Research. He is an Associate Editor of the Journal of the Canadian Chiropractic Association and an Adjunct Professor in the Division of Graduate Education and Research at CMCC. He has published 20 research papers in over half a dozen peer-reviewed journals including JMPT and Spine on topics including sports injuries, diagnostic testing, back pain during pregnancy, nutrition and lumbar spinal stenosis.
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