

# 37th Annual Scientific Meeting

On-Site  
Program

# 2016

May 24

May 27

Vancouver, BC  
Canada

Hyatt  
Regency  
Vancouver



the CANADIAN PAIN SOCIETY  
la SOCIÉTÉ CANADIENNE de la DOULEUR

## **Canadian Pain Society / Société canadienne de la douleur**

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2016 **SCIENTIFIC  
PROGRAM  
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Chair, McGill University

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## SIG Meetings

### Education

Eloise Carr  
Ruth Dubin  
Tuesday May 24th / 4:30 PM - 6:00 PM  
Constable / Fourth Floor

### Interventional Pain

Harsha Shanthanna  
Tuesday May 24th / 4:30 PM - 6:00 PM  
Kensington / Fourth Floor

### Nursing Issues

Sheila O'Keefe-McCarthy  
Wednesday May 25th / 5:30 PM - 7:00 PM  
Constable / Fourth Floor

### Neuropathic Pain

Anuj Bhatia  
Wednesday May 25th / 5:30 PM - 7:00 PM  
Kensington / Fourth Floor

# CONFERENCE SCHEDULE AT A GLANCE

## PRE-CONFERENCE

### Tuesday, May 24

CPS Board Meeting  
(Board members and invited guests)  
1:00 PM - 4:00 PM  
Education SIG  
4:30 PM - 6:00 PM  
Interventional Pain SIG  
4:30 PM - 6:00 PM  
Cannabinoids in Pediatrics:  
Optimizing Clinical Care, Education  
and Research  
6:00 PM - 7:00 PM  
Welcome Reception  
6:30 PM - 8:00 PM

## DAY 1 - Wednesday, May 25

7:00 AM - 9:00 AM Breakfast  
7:30 AM - 8:45 AM Annual General Meeting  
8:45 AM - 9:00 AM Opening Remarks  
9:00 AM - 9:45 AM Mary Ellen Jeans Keynote  
9:45 AM - 10:00 AM Poster Pitches  
10:00 AM - 11:00 AM Poster Session  
11:00 AM - 12:30 PM Sessions  
12:30 PM - 1:30 PM Lunch / Posters / Tradeshow  
1:30 PM - 3:00 PM Sessions  
3:00 PM - 4:00 PM Coffee / Posters / Tradeshow  
4:00 PM - 5:30 PM Sessions  
5:30 PM - 7:00 PM Neuropathic SIG  
5:30 PM - 7:00 PM Nursing SIG

## DAY 2 - Thursday, May 26

7:00 AM - 8:30 AM Breakfast  
7:15 AM - 8:30 AM Symposia  
8:30 AM - 8:45 PM Opening Remarks  
8:45 AM - 9:30 AM Plenary Session  
9:30 AM - 10:00 AM Early Career Award Keynote  
10:00 AM - 11:00 AM Coffee/Posters/Tradeshow  
11:00 AM - 12:30 PM Sessions  
12:30 PM - 1:30 PM Lunch/Posters/Tradeshow  
1:30 PM - 3:00 PM Sessions  
3:00 PM - 4:00 PM Coffee/Posters/Tradeshow  
4:00 PM - 5:30 PM Hot Topics Session  
6:30 PM - 11:00 PM Annual Dinner, Awards  
and Entertainment

## DAY 3 - Friday, May 27

7:15 AM - 8:45 AM SPOR Chronic Pain Network  
Information Meeting  
7:30 AM - 8:45 AM Breakfast  
8:45 AM - 9:00 AM Opening Remarks  
9:00 AM - 9:45 AM Plenary Session  
9:45 AM - 10:30 AM Plenary Session  
10:30 AM - 11:00 AM Coffee  
11:00 AM - 12:30 PM Sessions  
2:00 PM - 7:00 PM Annual Family Physician  
Lunch Meeting

# General Information

## Annual Dinner Awards & Entertainment

Seating for the gala dinner is first come, first served and awards will be presented during dinner. Entertainment will be provided by Side One, a seriously rocking, jaw-droppingly talented band - bring your dancing shoes! Guests must have a ticket to attend this event. Tickets can be purchased at [www.canadianpainsociety.ca](http://www.canadianpainsociety.ca)

## Charging Station:

Charging Stations will be available throughout the venue, inside the exhibit area and at the back of breakout rooms. Make sure you bring your chargers with you to keep your tablets and laptops charged throughout the day - you will need them to access the presentations, abstracts and other materials online.

## Prize Draws & Tradeshow

The tradeshow consists of many exhibitors who have information on new products and services. Be sure to visit them while at the conference. Some exhibitors have prize draws at their booth. Bring your business card and be present in the tradeshow on Thursday when the draws will take place. For all draws you must be present to win.

## CME Credits

This program has been accredited by the college of Family Physicians of Canada and the BC Chapter for up to 15.5 main-pro credits. Please sign in at the registration desk each morning to qualify for credits.

## Poster Competition

Judging results for the poster boards will be announced on the morning of Friday May 27, 2016, during opening remarks.

# Conference Program

## PRE-CONFERENCE - Tuesday May 24, 2016

- 1:00 - 4:00 PM CPS Board Meeting / Tumer, Fourth Floor  
4:30 - 6:00 PM Education SIG Meeting / Constable, Fourth Floor  
4:30 - 6:00 PM Interventional Pain SIG Meeting / Kensington, Fourth Floor  
6:00 - 7:00 PM Cannabinoids in Pediatrics: towards optimizing collaborative research & clinical care / Turner  
6:30 - 8:00 PM Welcome Reception / Regency Ballroom, Third Floor

## DAY 1 - Wednesday May 25, 2016

- 7:00 - 9:00 AM **Breakfast** / Regency Ballroom, Third Floor
- 7:30 - 8:45 AM **CPS Annual General Meeting** / Plaza Ballroom, Second Floor
- 8:45 - 9:00 AM **Opening Remarks** / Plaza Ballroom, Second Floor
- 9:00 - 9:45 AM **KEYNOTE SPEAKER: MARY ELLEN JEANS LECTURE**  
Plaza Ballroom, Second Floor

### DRUGS AND PLACEBOS: WHAT'S THE DIFFERENCE?

Speaker: **Fabrizio Benedetti**, MD, Director, Center for Hypoxia, Plateau Rosa Labs, Professor, University of Turin Medical School, Neuroscience Department

#### Speaker Abstract:

As modern placebo research is digging into the details of the placebo phenomenon more and more, our knowledge about the impact of placebo effects on clinical trials and medical practice is increasingly growing. In the past few years, the study of placebo effects has provided a detailed framework of the many factors that are involved, such as brain mechanisms of expectation, anxiety, and reward, as well as a variety of learning phenomena, such as Pavlovian conditioning, cognitive and social learning. There is also some experimental evidence of different genetic variants in placebo responsiveness. The most productive models to better understand the neurobiology of the placebo effect are pain and Parkinson's disease. In these medical conditions, the neural networks that are involved have been identified: that is, opioid, cannabinoid, cholecystokinin, dopamine modulatory networks in pain and part of the basal ganglia circuitry in Parkinson's disease. Important clinical implications emerge from these recent advances in placebo research. First, as the placebo effect is basically a psychosocial context effect, these data indicate that different social stimuli, such as words and therapeutic rituals, may change the chemistry and circuitry of the patient's brain. Second, the mechanisms that are activated by placebos are the same as those activated by drugs, which suggests a cognitive/affective interference with drug action. Understanding similarities and differences between drugs and placebos represents an exciting scientific enterprise that will lead to better medical practice, better clinical trial designs, and better knowledge of human biology.

9:45 – 10:00 AM **Poster Pitches** / Plaza Ballroom, Second Floor

10:00– 11:00 AM **Poster Session** / Plaza Ballroom, Second Floor

11:00 – 12:30 PM **SESSION 101** / Georgia B, Second Floor

**OPIOID ANALGESICS:  
BRIDGING THE PRECLINICAL AND CLINICAL PERSPECTIVES**

Chair: **Tuan Trang**, PhD, University of Calgary

Speakers:

- **Lori Montgomery**, MD, CCFP, University of Calgary
- **Louis Gendron**, PhD, Université de Sherbrooke
- **Tuan Trang**, PhD, University of Calgary

**Symposium Abstract:**

Opioid analgesics are essential pharmacological tools for treating pain. The consumption of opioids is highest in Canada and the United States, and its increasing prevalence has resulted in a striking rise in opioid related deaths. Chronic opioid use can result in a loss of pain relieving effects (tolerance), paradoxical pain (hyperalgesia), and dependence. This workshop brings together basic scientists and clinicians to discuss recent advances in understanding the cellular underpinnings of these adverse opioid effects, and the clinical translation of such discoveries in patients.

**Learning Objectives:**

1. *Understand the clinical impact of opioid use and the implications for effective pain management*
2. *Gain insight into novel targets of opioid action in the CNS and their importance in producing adverse opioid effects*
3. *Identify potential new therapeutic strategies and current perspectives on opioid therapy*

**Managing adverse effects of opioid use in the chronic pain patient**

**Lori Montgomery**, MD, CCFP, Department of Family Medicine, University of Calgary, Alberta Health Services Calgary Pain Program

**The delta opioid receptor as a target to reduce morphine-induced tolerance**

**Louis Gendron**, PhD, Department of Pharmacology-Physiology, Faculté de médecine et des sciences de la santé, Université de Sherbrooke

**P2X7 receptor phosphorylation gates morphine analgesic tolerance**

**Tuan Trang**, PhD, Hotchkiss Brain Institute, University of Calgary

11:00 – 12:30 PM **SESSION 102** / Plaza A&B, Second Floor

**LARGE SCALE REGISTRIES AND DATABASES: HARNESSING “BIG DATA”  
IN THE STUDY OF PAIN**

Chair: **Mark A. Ware**, MBBS MRCP MSc, Quebec Pain Research Network, Canadian Consortium for the Investigation of Cannabinoids

Speakers:

- **Jennifer Stinson**, RN-EC, PhD, CPNP, The Hospital for Sick Children
- **Manon Choinière**, PhD, Université de Montréal
- **Mark A. Ware**, MBBS MRCP MSc, Quebec Pain Research Network, Canadian Consortium for the Investigation of Cannabinoids

### **Symposium Abstract:**

There is an increasing interest in the use of 'real world' data to understand the impact of pain across the lifespan. Technological advances in data capture and management using electronic medical records and mobile devices have allowed considerable access to people suffering with chronic pain to be able to systematically capture their experiences and responses to therapy. This symposium offers an opportunity to interact with researchers who have considerable experience in designing, developing and implementing registries in the pediatric and adult populations and around the medical use of cannabis. A wide range of pragmatic issues will be covered. This symposium will be of interest to anyone who is considering, or who is in the process of, setting up a registry; who wishes to know how registries can be accessed and used; and who is interested in the research implications in this relatively new approach to pain research and management.

### **Learning Objectives:**

1. *Explore practical issues in the implementation of large patient registries*
2. *Discuss challenges and opportunities in the utilization of registry data for research purposes*
3. *Reflect on ways to ensure that registry data is of sufficient quality and validity to enable collaborations between registries*

### **Development and Feasibility Testing of the Canadian Paediatric Chronic Pain (CPCPR) Registry Forms**

**Jennifer Stinson**, RN-EC, PhD, CPNP, Mary Jo Haddad Nursing Chair in Child Health Peter Lougheed CIHR New Investigator Scientist, Child Health Evaluative Sciences Nurse Practitioner, Chronic Pain Program The Hospital for Sick Children Associate Professor, Lawrence S. Bloomberg, Faculty of Nursing, University of Toronto

### **The Quebec Pain Registry: Development, implementation, and research potential of a registry of patients attending tertiary care multidisciplinary pain treatment centres**

**Manon Choinière**, PhD, Centre de recherche du Centre hospitalier de l'Université de Montréal, Department of Anesthesiology, Faculty of Medicine, Université de Montréal

### **Monitoring the medical use of cannabis with the Quebec Cannabis Registry**

**Mark A. Ware**, MBBS MRCP MSc, Centre Co-director, Quebec Pain Research Network Executive Director, Canadian Consortium for the Investigation of Cannabinoids

11:00 – 12:30 PM **SESSION 103** / Georgia A, Second Floor

### **GOOD NEWS IN ONTARIO: PARTNERING WITH GOVERNMENT TO ADDRESS CHRONIC PAIN**

Chair: **Fiona Campbell**, BSc, MD, FRCA, Hospital for Sick Children  
Speakers:

- **Garry Salisbury**, BSc, MD, Ontario Ministry of Health and Long Term Care
- **Fiona Campbell**, BSc, MD, FRCA, Hospital for Sick Children
- **Allan S. Gordon**, MD, FRCP(C), Wasser Pain Management Centre

### **Symposium Abstract:**

In Canada 1 in 5 people live with chronic pain including children. Access to comprehensive interdisciplinary care is the gold standard for those

with debilitating pain. However, there is a lack of these specialized clinics and most clinics have 1-2 year waiting lists. Furthermore, there is a lack of intensive rehabilitation programs for those most severely disabled by their pain and some patients have been sent to the United States to receive this care. Compounding this problem is the fact that community health care providers have little training in assessment and management of chronic pain and that there has been an opioid prescribing crisis in Ontario. Consumer groups have also been actively lobbying the provincial government for more chronic pain services for pediatric and adult populations. All of these factors created the perfect storm to facilitate the MOHLTC, OMA and clinicians from the pediatric and adult academic centres to come together to develop Pediatric and Adult Chronic Pain Advisory Networks. This session will describe the factors that lead to the development of the Networks, work to date, and future directions. Challenges and lessons learned will also be discussed.

### **Learning Objectives:**

1. Describe the factors leading to the collaboration between the Ministry of Health and Long Term Care and Health providers, and how the resultant Chronic Pain Network has informed change that significantly affects patients and populations.
2. Explain the progress of the Chronic Pain Advisory Network, with reference to the impact of new Ministry funding on access and capacity.
3. Articulate the progress of the Chronic Pain Advisory Network; with reference to impact on education, research and evaluation, and clinical care.

### **Chronic Pain Networks in Ontario: A Brief History of Collaboration Over Time**

**Garry Salisbury**, BSc, MD, Ontario Ministry of Health and Long Term Care

### **Pediatric Chronic Pain Advisory Network: Collaborating to improve clinical care, education and research**

**Fiona Campbell**, BSc, MD, FRCA, Department of Anesthesia and Pain Medicine Co-Director Pain Centre, Hospital for Sick Children Associate Professor, University of Toronto Co-Chair Pediatric Chronic Pain Advisory Network, MOHLTC Member Expert Panel on Ehlers Danlos Syndrome, MOHLTC

### **Ontario 2016: Chronic Pain at the Crossroads**

**Allan S. Gordon**, MD, FRCP(C), Neurologist and Director, Wasser Pain Management Centre, Sinai Health System Associate Professor, University of Toronto Co-Chair, Advisory Committee on Adult Chronic Pain, MOHLTC Ontario Chair, Advisory Board, PAIN ECHO Member Expert Panel on Ehlers Danlos Syndrome

11:00 – 12:30 PM **SESSION 104** / Plaza C, Second

### **PHYSIOLOGICAL INDICATORS OF PAIN: UNCOVERING THE BENEFITS AND CHALLENGES USING THE CONTEXT OF INFANCY**

Chair: **Rebecca Pillai Riddell**, PhD, CPsych, York University, Hospital for Sick Children, University of Toronto

Speakers:

- **Ruth Grunau**, PhD, The University of British Columbia
- **Liisa Holsti**, BSR, PhD, OT, The University of British Columbia
- **Jordana Waxman**, MSc, MA, York University

### **Symposium Abstract:**

Across the lifespan, the first step in managing pain is accurate assessment. Much work has been conducted using multi-modal assessment that integrates behavioural, state, and physiological indicators. However, literature has found divergence among different types of indicators. This symposium is aimed at clinicians and researchers who would benefit from a detailed discussion of what current physiological indices and techniques for capturing these indices provide to advance our understanding of pain experience. Infancy is an excellent developmental stage to use to stimulate discussion because, as a result of the lack of self-report, a plethora of work has been done on measurement of physiological indices in the pain context. Despite the proliferation and validation of multiple physiological indicators of infant pain, there has been a lack of consolidation in studies investigating pain experience using these various physiological variables. This lack of synthesis in pain research limits our ability to interpret, assess, and manage infant pain. The overall goals of this symposium are to discuss the divergence and convergence of early life responses to, and measures of early procedural pain using state-of-the-art physiological indices, such as functional magnetic imaging (fMRI), electroencephalography (EEG), near infrared spectroscopy (NIRS), and cardiac measures. The benefits and challenges of using these physiological indices in acute pain in preterm and term born infants will be discussed. The chair of the symposium will act as a discussant following the final talk to pose bigger picture questions regarding the measurement of physiological indices of pain and their role in future pain research. Key questions for discussion will encompass the lack of pragmatic and conceptual congruence between different indicators of pain (i.e. physiological, neurochemical, behavioural, cognitive, affective) across infancy.

### **Learning Objectives:**

1. *To apply an epistemological approach to understanding how our knowledge of physiological pain responses informs our beliefs about infant pain experience.*
2. *To consider progress, benefits and challenges in the study of infant pain using fMRI, EEG, NIRS, and cardiac measures.*
3. *To synthesize research investigating various physiological measures of infant pain, summarize research gaps, and recommend directions for future research and clinical practice utilizing physiological measures of infant pain.*

### **Do physiological responses inform “pain consciousness” in preterm infants?**

**Ruth Grunau**, PhD, Department of Pediatrics, The University of British Columbia

### **The pros and cons of monitoring brain blood flow using near infrared spectroscopy for advancing pain research in preterm infants**

**Liisa Holsti**, BSR, PhD, OT, Department of Occupational Science and Occupational Therapy, The University of British Columbia

### **A systematic review of cardiovascular indices of acute pain responding over infancy: Where we are and where we need to go**

**Jordana Waxman**, MSc, M.A., Department of Psychology, York University

12:30 – 1:30 PM **Lunch/Posters/Tradeshow** / Regency Ballroom, Third Floor

## **NOVEL STRATEGIES AIMED AT ADDRESSING COMMON CHRONIC PAIN PROBLEMS PATIENTS PRESENT WITH IN THE PRIMARY, TERTIARY AND PALLIATIVE CARE SETTINGS**

Chair: **Hance Clarke**, MD PhD FRCPC, Toronto General Hospital, University Health Network

Speakers:

- **Marc Klasa**, MD, CM, CCFP, McGill University, University of Alberta
- **Hance Clarke**, MD PhD FRCPC, Toronto General Hospital, University Health Network
- **Cindy Shobbrook**, NP (Adult), RN EC, MN, Waterloo-Wellington Community Care Access Centre, Hospice Wellington

### **Symposium Abstract:**

Given chronic pain affects from 20% to 35% of our Canadian population, opioid medications have become an essential part of daily life for many patients suffering from non-cancer pain. Treatment strategies, which implement physiotherapy, psychological and psychosocial interventions, are often required in combination with analgesic medications. However these are often either not readily available or affordable for patients. Patients are often left with their medication regimen given the inaccessibility of alternative pain treatments and many suffer often in silence with problems that ensue such as opioid induced constipation (OIC). This issue is rarely discussed and often unsatisfactorily managed in the primary care setting, in the acute pain postoperative setting, the tertiary care setting and during end of life care. This session will look at OIC in depth and provide novel data that point to improvements in clinical outcomes and quality of life for patients struggling with OIC.

### **Learning Objectives:**

1. *To examine similarities among chronic non cancer pain patients that use opioid analgesics regardless of the clinical setting*
2. *The use of opioid based medications by chronic pain patients often leads to physiological tolerance and patients commonly suffer from common side effects such as opioid induced constipation*
3. *To examine multidisciplinary approaches to identifying and treating opioid induced constipation peri-operatively and in the community.*

### **Improving Chronic Pain Practices in the Primary Care Setting**

**Marc Klasa**, MD, CM, CCFP, McGill University, University of Alberta

### **Pain Management in the Tertiary Care Setting and improving Perioperative Pain Practices**

**Hance Clarke**, MD PhD FRCPC, Director Pain Services/Staff Anesthesiologist, Medical Director Pain Research Unit, Department of Anesthesia and Pain Management, Toronto General Hospital, University Health Network

### **Opioid Therapy in Community-Based Non-Cancer Palliative Care – Pain, and Dyspnea Management in Neurodegenerative, End-Stage Cardiac and COPD Patients**

**Cindy Shobbrook**, NP (Adult), RN EC, MN, Waterloo-Wellington Community Care Access Centre, Hospice Wellington

*This symposia was co-developed with Astra Zeneca and was planned to achieve scientific integrity, objectivity and balance.*

### **CHASING MOVING TARGETS: CHALLENGES AND OPPORTUNITIES TO ENHANCE PAIN MANAGEMENT PRACTICES TARGETING HEALTHCARE PROFESSIONALS, FAMILIES AND POLICY MAKERS**

Chair: **Bonnie Stevens**, RN, PhD, FAAN, The Hospital for Sick Children

Speakers:

- **Bonnie Stevens**, RN, PhD, FAAN, The Hospital for Sick Children
- **Christine T. Chambers**, PhD, Dalhousie University and IWK Health Centre
- **Anna Taddio**, BScPharm, PhD, University of Toronto

#### **Symposium Abstract:**

Despite decades of research to establish effective pain-relieving interventions, inadequate pain management persists for acute procedural pain in hospital and community settings. Reversing this trend and enhancing pain assessment and management practices to improve individual and organizational outcomes requires novel knowledge translation strategies developed specifically for key groups of stakeholders. In this symposium, we will highlight research and knowledge translation projects designed to engage three different groups of stakeholders including healthcare professionals, families and policy makers in targeted practice change initiatives. Targeting is important as it allows for tailoring of key messages and knowledge translation approaches that will be most relevant and meaningful for the particular audiences. Implementation and intervention effectiveness outcomes to enhance pain practices and outcomes will be discussed.

#### **Learning Objectives:**

1. *To understand the importance of targeting 3 different groups of stakeholders, healthcare professionals, families and policy makers - in pain management practice change.*
2. *To describe effective knowledge translation strategies to effectively target health care professionals, families and policy makers to facilitate pain management practice change and consider how these could be applied to other knowledge to action gaps in pain care.*
3. *To describe opportunities and challenges in engaging and working with healthcare professionals, families and policy makers in pain management practice change initiatives.*

#### **Targeting Healthcare Professionals to Improve Pain Management Practices**

**Bonnie Stevens**, RN, PhD, FAAN, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto and Senior Scientist, The Hospital for Sick Children

#### **Targeting Families to Improve Pain Management Practices**

**Christine T. Chambers**, PhD, Dalhousie University and IWK Health Centre

#### **Targeting Policy Makers to Improve Pain Management Practices**

**Anna Taddio**, BScPharm, PhD, Leslie Dan Faculty of Pharmacy, University of Toronto

### **ADVANCES IN ACUTE PAIN RESEARCH: EVIDENCE IN IMPROVING PATIENT PAIN-RELATED OUTCOMES**

Chair: **Sheila O'Keefe-McCarthy**, BScN MN, PhD, Brock University

Speakers:

- **Celine Gelin**, BScN, MScN, PhD, McGill University
- **Mona Sawhney**, RN (EC), NP, PhD, Queen's University
- **Sheila O'Keefe-McCarthy**, BScN, MN, PhD, Brock University

**Symposium Abstract:**

Historically, much attention in pain science has focused on clinician's understanding of basic pain mechanisms, the complexity of nociception and sensitization and the development of persistent or chronic pain syndromes. This symposia will present current data on the latest acute pain research and discuss potential implications for pain assessment and management in clinical practice. Delegates will have the opportunity to hear from three Canadian researchers who examine acute pain within the acutely ill, post-operative and cardiovascular context.

**Learning Objectives:**

1. *To discuss recent developments in pain assessment methods in the critically ill adult patient population and translate how to apply them to ICU practice.*
2. *To describe current acute pain research conducted in post-operative arthroplasty patients and analyze potential implications for management strategies in clinical practice that supports use of adductor canal (AC) block and peri-articular infiltration (PI).*
3. *To describe nociceptive and neuropathic characteristics of acute cardiac pain and discuss future innovative research in examination of acute cardiac-related pain.*

**Effective Pain Assessments in Critically Ill Adult Patients- The Evidence and New Trends**

**Celine Gelin**, BScN, MScN, PhD, McGill University

**The Effect of Adductor Canal Nerve Block and Per-articular Infiltration in the Reduction of Pain Following Total Knee Arthroplasty**

**Mona Sawhney**, RN (EC), NP, PhD, Queen's University

**Characteristics of Acute Chest Pain in Men and Women with Acute Coronary Syndromes: A Complex Pain Presentation**

**Sheila O'Keefe-McCarthy**, BScN, MN, PhD, Brock University

1:30 - 3:00 PM **SESSION 108** / Plaza A&B, Second Floor

**COGNITIVE DYSFUNCTION, DISRUPTION AND BIASES IN PAIN**

Chair: **Melanie Noel**, PhD, University of Calgary and Alberta Children's Hospital Research Institute

Speakers:

- **David Seminowicz**, PhD, University of Maryland School of Dentistry
- **Melanie Noel**, PhD, University of Calgary and Alberta Children's Hospital Research Institute
- **Bruce Dick**, PhD, University of Alberta

**Symposium Abstract:**

As an evolutionary warning signal, pain by its very nature captures attention, engages retrieval of memories, and leads to learning, problem solving, and decision-making. Consequently, as a priority stimulus, pain can also serve to disrupt cognitive processes, which can further shape the pain experience. The field of pain research is establishing the important role of

cognitive dysfunction, disruption, and biases in trajectories of pain over time; however, underlying mechanisms are only beginning to be understood. Attentional and memory biases, expectancies, executive functioning and working memory disruption function at conscious and unconscious levels to influence the individual in pain. These cognitive processes are also targeted in and altered by pain treatments. Better understanding of the connection between cognition and pain could lead to improved treatment and address the growing epidemic of chronic pain in childhood and adulthood. This workshop will present the current state-of-the-science on the relationship between cognition (attention, expectancies, memory, executive functioning) and pain across childhood, adolescence, and adulthood. It will consist of a panel of scientists from Canada and the United States examining this topic using a variety of innovative methodologies and approaches (clinical, experimental, neuroimaging; quantitative, qualitative), populations (pediatric, adult; acute and chronic pain), and perspectives (neuroscience, clinical, developmental).

### **Learning Objectives:**

1. *Discuss how dysfunctional cognitive networks might contribute to the maintenance of chronic pain and how we can improve existing therapies or develop new ones based on what we have learned about cognitive network disruption in chronic pain.*
2. *Understand the role of children's and adults' (parents) memory biases in trajectories of pain over time as well as the potential for harnessing the fragility of memory in interventions for acute and chronic pain.*
3. *Discuss functional outcomes associated with pain's disruptive effects on cognitive processes.*

### **Neuroimaging Studies of Cognitive Network Dysfunction in Chronic Pain**

**David Seminowicz**, PhD, Department of Neural and Pain Sciences, University of Maryland School of Dentistry

### **Memory Biases for Pain**

**Melanie Noel**, PhD, Department of Psychology, University of Calgary and Alberta Children's Hospital Research Institute (Behaviour and the Developing Brain Theme)

### **Disruption of Cognitive Function In Individuals With Chronic Pain Across The Lifespan**

**Bruce Dick**, PhD, Departments of Anesthesiology and Pain Medicine, Psychiatry & Pediatrics, University of Alberta

3:00 - 4:00 PM **Coffee/Posters/Tradeshow** / Regency Ballroom, Third Floor

4:00 - 5:30 PM **SESSION 109** / Plaza C, Second Floor

### **PERSPECTIVES ON AND BEST PRACTICES FOR PATIENT ENGAGEMENT IN PAIN RESEARCH, CLINICAL PRACTICE AND HEALTH SYSTEMS IMPROVEMENT**

Chair: **Jennifer Stinson**, RN-EC, PhD, CPNP, The Hospital for Sick Children  
Speakers:

- **Patricia Poulin**, PhD, CPsych, The Ottawa Hospital Research Institute
- **Isabel Jordan**, BSc(H), Founding Member and Chair, Rare Diseases Foundation
- **Maria Hudspith**, MA (Educ), Pain BC

### **Symposium Abstract:**

Patient engagement is increasingly being seen as an essential element of research, knowledge translation and health system change. This session will provide diverse perspectives on patient engagement, examining it in the context of a national research initiative, patient and caregiver advocacy and empowerment, clinical practice, organizational development and systems transformation. An integrated theoretical model for patient engagement will be illustrated with examples from a diversity of initiatives in a variety of health care contexts. Panelists will discuss engagement theory and practice from three unique perspectives: a researcher, a caregiver and patient, and a community organizer/system strategist.

### **Learning Objectives:**

1. *Participants will learn about the CIHR framework for patient engagement through its application to a collaborative project to identify research priorities in chronic pain.*
2. *Participants will understand the wide depth and breadth of participatory opportunities that patient engagement can offer organizations, health care providers and researchers and how to effectively engage with the patients/caregivers in a meaningful way.*
3. *Participants will learn about the integrated, matrix model of patient engagement and understand its potential to foster change across many levels and domains.*

### **Patient engagement in the creation of a national chronic pain research agenda**

**Patricia Poulin**, PhD, CPsych, Clinical, Health and Rehabilitation Psychologist, The Ottawa Hospital Pain Clinic, Associate Scientist, The Ottawa Hospital Research Institute

### **Accelerating Improvement through Collaboration with Patients and Caregivers**

**Isabel Jordan**, BSc(H), Founding Member and Chair, Rare Diseases Foundation, Patient and Family Advocate

### **The Integrated, Matrix Model of Patient Engagement: An Approach to Systems Improvement, Social Change and Personal Transformation**

**Maria Hudspith**, MA (Educ), Executive Director, Pain BC

4:00 – 5:30 PM **SESSION 110** / Plaza A&B, Second Floor

### **I FEEL YOUR PAIN:**

#### **THE SOCIAL NEUROSCIENCE OF EMPATHY FOR PAIN AND TOUCH**

Chair: **Loren Martin**, PhD, University of Toronto Mississauga

Speakers:

- **Robert Bonin**, PhD, University of Toronto
- **Loren Martin**, PhD, University of Toronto Mississauga
- **Philip Jackson**, PhD, Université Laval

### **Symposium Abstract:**

It is well known that social context robustly affects pain levels and outcomes in chronic pain patients. Direct effects of varying social context on laboratory pain sensitivity have also been demonstrated, but prove to be complex. It is of considerable surprise to many that social contexts and social interactions affect pain sensitivity in laboratory animals—but such

observations have been made, and interest in the topic is growing. In particular, pain elicits behaviors in humans and nonhuman animals that serve as social cues. Pain behaviors serve a communicative function in humans, and this may be true as well in other animals. Increasingly, data supports the ability of social contact, empathy, social buffering, and social stress to modulate pain sensitivity and pain behavior in mice and rats. However, in order to understand and appreciate the social modulation of pain, studies in laboratory animals as well as humans need to be integrated.

This symposium will discuss the important influence of social interactions and environmental context on pain responses and empathic behaviour in mice and people. In addition to our findings, we will discuss issues related to the feasibility and conduct of animal as well as human studies examining questions pertinent to the social modulation of pain. Our goal is to engage clinicians with pain neuroscientists to address how basic and clinical scientists can best address these complex questions.

**Learning Objectives:**

1. Attendees will be able to discuss the different components of empathy in the context of pain across different species.
2. Attendees will be able to discuss the physiological underpinnings of physical social contact and their possible contribution to pain sensation.
3. Attendees will understand the many factors that can modulate brain responses of people facing others in pain.

**Modulation of pain processing by socially-relevant gentle touch**

**Robert Bonin**, PhD, Assistant Professor, University of Toronto, Leslie Dan Faculty of Pharmacy

**Empathy and affective communication in rodents**

**Loren Martin**, PhD, Assistant Professor, University of Toronto Mississauga, Departments Of Psychology and Cell Systems Biology

**The effect of vicarious pain exposure on the behavioural and cerebral responses to the suffering of others**

**Philip Jackson**, PhD, Full Professor, Université Laval, École de Psychologie

4:00 – 5:30 PM **SESSION 111** / Georgia B, Second Floor

**THE ROLE OF FAMILIES IN PAIN EXPERIENCES ACROSS THE LIFESPAN**

Chair: **Lucia Gagliese**, PhD, York University

Speakers:

- **Rebecca Pillai Riddell**, PhD, CPsych, York University, Hospital for Sick Children, University of Toronto
- **Kristen Higgins**, BScH, Dalhousie University, IWK Health Centre
- **Lucia Gagliese**, PhD, York University

**Symposium Abstract:**

Family members are key social influences on people in pain and can contribute to how pain and disability are managed. Additionally, family members of a person in pain may also be affected by that person's experiences. A number of theoretical models have addressed the ways that family members influence one another in pain (e.g., Palermo & Chambers, 2005; Sullivan, 2012). This symposium will examine the role that families play in the experience of pain in a number of different contexts.

We will discuss research in multiple types of pain (acute, chronic, cancer pain), examining the roles of different family members (children, parents, spouses). We will take a developmental approach to examining this topic, including research on pain across the lifespan from preschool to older adulthood. Three different talks will present examples of the research on this topic in different pain contexts: the role of caregivers in how preschoolers approach immunization pain; parental chronic pain and its effects on offspring; and the impact of cancer pain on marital relationships and spousal wellbeing in younger and older adults. Directions for future research in this area will be discussed. Future pain research will benefit from increased consideration of the role that family members play in pain experiences and management. Increased understanding of these influences will also assist in developing clinical interventions to better support all family members affected by pain.

**Learning Objectives:**

1. To develop an awareness of the existing literature on the role of various family members in pain experiences.
2. To learn about recent studies that highlight the role of family member's influences on pain experiences (children, parents, spouses).
3. To discuss how these influences differ across the lifespan.

**Preschoolers' Anticipation of Painful Procedures: The Relative Role of Parental and Individual Child Predictors**

**Rebecca Pillai Riddell**, PhD, CPsych, York University, Hospital for Sick Children, University of Toronto

**Offspring of Parents with Chronic Pain: A Systematic Review and Synthesis of Outcomes, and Future Directions**

**Kristen Higgins**, BScH, Dalhousie University, IWK Health Centre

**Marriage and Cancer Pain: Age-related Patterns in Relationship Satisfaction and Caregiver Strain**

**Lucia Gagliese**, PhD, York University, Ontario Cancer Institute, University Health Network, Mount Sinai Hospital, University of Toronto, Toronto General Research Institute

4:00 – 5:30 PM **SESSION 112** / Georgia A, Second Floor

**COMPLEX PELVIC PAIN IN WOMEN: THE BC EXPERIENCE**

Chair: **Mohamed Bedaiwy**, MD, PhD, FACOG, FRCSC, University of British Columbia

Speakers:

- **Christina Williams**, MD, FRCSC, BC Women's Centre for Pelvic Pain and Endometriosis
- **Catherine Allaire**, MDCM, FRCSC, BC Women's Centre for Pelvic Pain and Endometriosis,
- **Paul Yong**, MD, PhD, FRCSC, BC Women's Centre for Pelvic Pain and Endometriosis

**Symposium Abstract:**

Since 2011, the government of British Columbia has funded the BC Women's Centre for Pelvic Pain and Endometriosis, a tertiary referral centre and interdisciplinary clinic for women with pelvic pain ([womenspelvicpainendo.com](http://womenspelvicpainendo.com)). The centre integrates gynaecologic management

(including advanced laparoscopic endometriosis surgery) with pain education, pelvic physiotherapy, and psychological approaches to pain management. The goal of this symposium is to discuss recent advances and controversies in the pathophysiology, diagnosis, and treatment of complex pelvic pain in women. Talks will cover gynaecologic pelvic pain, non-gynaecologic pelvic pain, and sexual pain (dyspareunia). We will review the literature, results from our prospective research cohort (~1000 patients), and our clinical experience.

**Learning Objectives:**

1. To review gynaecologic, urologic, gastrointestinal, musculoskeletal, nervous system, and psychological contributors to pelvic pain in women.
2. To describe our interdisciplinary model for the care of women with pelvic pain and our 1 year outcomes.
3. To discuss recent research into the clinical aspects and pathophysiology of deep dyspareunia (pelvic pain with intercourse).

**Gynaecologic pelvic pain**

**Christina Williams**, MD, FRCSC, Gynaecologist, BC Women's Centre for Pelvic Pain and Endometriosis, Clinical Associate Professor, UBC Department of Obstetrics & Gynaecology

**Non-gynaecologic pelvic pain**

**Catherine Allaire**, MDCM, FRCSC, Gynaecologist and Medical Director, BC Women's Centre for Pelvic Pain and Endometriosis, Clinical Professor, UBC Department of Obstetrics & Gynaecology

**Dyspareunia**

**Paul Yong**, MD, PhD, FRCSC, Gynaecologist and Research Director, BC Women's Centre for Pelvic Pain and Endometriosis, Assistant Professor, UBC Department of Obstetrics & Gynaecology

5:30 – 7:00 PM **Nursing Issues SIG Meeting** / Constable, Fourth Floor

5:30 – 7:00 PM **Neuropathic Pain SIG Meeting** / Kensington, Fourth floor

**DAY 2 - Thursday May 26, 2016**

7:00 – 8:30 AM **Breakfast** / Regency Ballroom, Third Floor

7:15 – 8:30 AM **Symposia Unaccredited** / Plaza Ballroom, Second Floor

SYMPOSIUM

**OPIOIDS IN THE MANAGEMENT OF PAIN, MAINTAINING THE APPROPRIATE BALANCE CRISM (CANADIAN RESEARCH INITIATIVE ON SUBSTANCE MISUSE)-CIHR OPIOID WORKING GROUP (2014-2016)**

Chair: **Manon Choinière**, PhD, Université de Montréal

Speakers:

- **Mary Lynch**, MD, FRCPC, Dalhousie University
- **Hance Clarke**, MD, PhD, FRCPC, Toronto General Hospital, University Health Network
- **Dwight Moulin**, MD, FRCPC, Western University

**Symposium Abstract:**

The Opioid working group from CIHR, the CRISM (Canadian Research Initiative on Substance Misuse) published a commentary on the

Prevention of opioid misuse in 2015 (in Pain Research and Management). It was stated that we recognize: 1) the rise in morbidity and mortality associated with opioid misuse and the risk of addiction, 2) the right of a person with pain to have access to appropriate pain treatment (<http://www.iasp-pain.org/DeclarationofMontreal>, including nonpharmacotherapeutic approaches (e.g., physiotherapy, interdisciplinary care) 3) the need to provide access to other front line pharmacotherapeutic options, 4) we support the 2010 Canadian Guideline for the safe and effective use of opioids for chronic non-cancer pain. <http://nationalpaincentre.mcmaster.ca/opioid/>. However, we also deplore inadequate access to appropriate pain care in Canada (mainly in rural area or low income urban ones) and the absence of newer medications with high effectiveness and low harm. It is important to optimize pain management while addressing risk prevention.

### **Learning Objectives:**

1. *Decrypting fact and fiction about opioid phobia.*
2. *Optimal management of acute-post operative pain and chronic pain while minimizing risk of addiction.*
3. *Overview of Canadian Guidelines for Safe and Effective Use of Opioids in Chronic Non-Cancer Pain.*

### **The opioid pendulum, and the need for better pain care**

**Mary Lynch**, MD FRCPC, Professor Anesthesiology, Pain Medicine and Perioperative Care, Psychiatry Pharmacology, Dalhousie University

### **Acute Pain Prescriptions: Using the perioperative setting to identify/prevent addiction and facilitate change**

**Hance Clarke**, MD PhD FRCPC, Director Pain Services, Department of Anesthesia and Pain Management, Toronto General Hospital, University Health Network

### **Opioid management of neuropathic pain – guidelines and outcome**

**Dwight Moulin**, MD, FRCPC, Professor, Departments of Clinical Neurological Sciences and Oncology, Earl Russell Chair Pain Research, Western University

8:30 – 8:45 AM **Opening Remarks** / Plaza Ballroom, Second Floor

8:45 – 9:30 AM **PLENARY LECTURE** / Plaza Ballroom, Second Floor

### **DOES EXERCISE INCREASE OR DECREASE PAIN? UNDERLYING MECHANISMS AND CLINICAL IMPLICATIONS**

Speaker: **Kathleen Sluka**, PT, PhD, FAPTA, University of Iowa

#### **Symposium Abstract:**

Regular physical activity (exercise) can reduce pain in people with chronic musculoskeletal pain; whereas, unaccustomed exercise can exacerbate pain. This apparent dichotomy in pain response to physical activity is poorly understood, making exercise prescription for individuals with pain challenging. Dr. Sluka will present ongoing research examining the neurobiological mechanisms underlying the increased pain with an acute bout of exercise, and compare these to the mechanisms that decrease pain with regular physical activity using animal models of pain. She will translate these findings to clinical studies in people with chronic pain and provide clinical recommendations.

**TRANSITIONAL PAIN MEDICINE: PERIOPERATIVE CARE AS A MODEL FOR NOVEL CHRONIC PAIN TREATMENTS**

Speaker: **Hance Clarke**, MD PhD FRCPC, Director Pain Services/Staff Anesthesiologist, Medical Director Pain Research Unit, Department of Anesthesia and Pain Management, Toronto General Hospital, University Health Network

**Symposium Abstract:**

The role of the perioperative physician continues to evolve. Research over the past decades has identified risk factors that predispose patients to the development of chronic postsurgical pain. Dr. Clarke's program of research has taken the field of perioperative medicine to the next logical step, implementing strategies aimed not only at the reduction of acute pain, but also on effective strategies to modify/manage risk factors that are associated with the development of CPSP and long-term pain disability as a consequence of surgery/hospital interventions. Dr. Clarke will discuss the development and implementation of a Transitional Pain Program that enables close monitoring of pain, opioid medications and mental health vulnerabilities that place certain patients at a higher risk of developing chronic postsurgical pain. Beyond in-hospital interventions, he is working to scale the Transitional Pain Program post-discharge, involving community partners to tackle the current public health crises of pain and opioid addiction. Current inappropriate perioperative practice habits will be discussed and key changes in policies suggested.

10:00 – 11:00 AM **Coffee/Posters/Tradeshow** / Regency Ballroom, Third Floor

11:00 – 12:30 PM **SESSION 201** / Georgia A, Second Floor

**OVER-THE-COUNTER TREATMENTS IN CHILDREN AND ADOLESCENTS WITH EVERY DAY, RECURRENT AND CHRONIC PAIN: PERSPECTIVES FROM CANADA AND NORWAY**

Chair: **Jennifer Stinson**, RN-EC, CPNP, PhD, The Hospital for Sick Children  
Speakers:

- **Sølvi Helseth**, RN, PhD, Oslo and Akershus University College
- **Siv Skarstein**, RN, PhD candidate, Oslo and Akershus University College
- **Jennifer Stinson**, RN-EC, CPNP, PhD, The Hospital for Sick Children

**Symposium Abstract:**

Little is known about the use of over-the-counter (OTC) and complementary and alternative treatments in children and adolescents for every day, recurrent and chronic pain problems. Pain is most often managed in the school and home setting and by primary care practitioners, while a small proportion are referred to specialized multidisciplinary pain clinics. These patients often use OTC oral and topical medications to manage pain while they seek specialized treatment. It is essential that we understand the reasons and patterns of use of these therapies so that health care providers working in a variety of settings can provide appropriate education and guidance. Furthermore, no work to date has examined whether there are differences in use by country. This workshop will outline several studies in Canada and Norway that have recently examined these issues and discuss implications of this work and future directions for research.

### **Learning Objectives:**

1. Understand the reasons for and pattern of use of OTC and complementary and alternative treatments used for everyday, recurrent and chronic pain in community and clinical samples of children and youth.
2. Discuss similarities and differences between Canadian and Norwegian studies.
3. Discuss implications for practice and future areas of research.

### **Understanding the perspective and use of OTCs in a general adolescent population in Norway**

**Sølvi Helseth**, RN, PhD, Oslo and Akershus University College

### **Identifying the characteristics and knowledge about life experiences and Quality of Life (QOL) in adolescents with a high consume of over-the-counter analgesics (OTCAs)**

**Siv Skarstein**, RN, PhD candidate, Oslo and Akershus University College

### **Understanding the Use of Over-the-Counter Pain Treatments in Adolescents with Chronic Pain: Perspectives of Adolescents with Chronic Pain and Their Primary Caregivers**

**Jennifer Stinson**, RN-EC, CPNP, PhD, The Hospital for Sick Children Lawrence S. Bloomberg, Faculty of Nursing, University of Toronto

11:00 – 12:30 PM **SESSION 202** / Plaza C, Second Floor

### **PERSISTENT POSTOPERATIVE NEUROPATHIC PAIN FOLLOWING SPINE SURGERY**

Chair: **Mohammed F. Shamji**, MD, PhD, FRCSC, University of Toronto

Speakers:

- **Philip Peng**, MBBS, FRCPC, University of Toronto
- **Anuj Bhatia**, MBBS, FRCPC University of Toronto
- **Mohammed F. Shamji**, MD, PhD, FRCSC, University of Toronto

### **Symposium Abstract:**

Persistent postoperative neuropathic pain (PPNP) occurs in a significant fraction of patients following structurally corrective spinal surgery. Preoperative identification of patients prone to such condition has proven challenging, and consequently the attendant pain, disability, and economic impact of this disease is substantial. This symposium will seek to educate clinicians about the epidemiology and diagnosis of PPNP as well as interventional and surgical solutions to provide for improved quality of life.

### **Learning Objectives:**

1. To review the prevalence, etiology, and assessment of the patient with PPNP.
2. To define the indications and efficacy of interventional procedures for relieving PPNP following spine surgery.
3. To review the indications, targets, and efficacy for spinal cord stimulation in patients with PPNP.

### **Overview of the epidemiology, etiology and evaluation**

**Philip Peng**, MBBS, FRCPC, University of Toronto - Department of Anesthesia Toronto Western Hospital - Staff Anesthesiologist Health Network and Mount Sinai Hospital - Director, Anesthesia Chronic Pain Program

### **Interventional Procedures for patients with PPNP following spine surgery**

**Anuj Bhatia**, MBBS, FRCPC University of Toronto - Department of Anesthesia Toronto Western Hospital - Staff Anesthesiologist

### **Spinal cord stimulation for pain after spinal surgery**

**Mohammed F. Shamji**, MD, PhD, FRCSC, University of Toronto - Department of Surgery University of Toronto - Institute of Biomaterials and Biomedical Engineering Toronto Western Hospital - Staff Neurosurgeon Techna Research Institute - Affiliate Scientist

11:00 – 12:30 PM **SESSION 203** / Plaza A&B, Second Floor

### **SUPRASPINAL MECHANISMS CONTRIBUTING TO CHRONIC PAIN**

Chair: **Laura S. Stone**, PhD, McGill University

Speakers:

- **David A. Seminowicz**, PhD, University of Maryland School of Dentistry
- **Marco Martina**, PhD, MD, Northwestern University School of Medicine
- **Laura S. Stone**, PhD, McGill University

#### **Symposium Abstract:**

Changes in brain structure and cortical function have been reported in many chronic pain conditions. Affected brain regions may include the prefrontal cortex, the amygdala and the nucleus accumbens; regions that are associated with pain-related co-morbidities such as depression, anxiety and impaired emotional decision-making ability. While much has been learned at the level of the dorsal root ganglia and the spinal cord, to date very little is known about mechanisms underlying pain-related structural and functional brain abnormalities. The goal of this session is to highlight recent work investigating pain-related neuroplasticity at the systems, cellular and molecular levels in supraspinal structures. Dr. Seminowicz will begin the session by providing a broad overview of current research in neuroplasticity in supraspinal structures in chronic pain followed by a discussion of how rodent neuroimaging studies can supplement the findings from human neuroimaging studies. Dr. Martina will address the involvement of the limbic system in chronic pain and focus on the prefrontal cortex and the nucleus accumbens. Dr. Stone will discuss the role of epigenetic regulation of gene expression in supraspinal structures in chronic pain. Speakers will ensure that each presentation is accessible to individuals from a wide range of backgrounds and expertise. 30 minutes will be reserved for an interactive question and answer period following the presentations.

#### **Learning Objectives:**

1. Discuss the recent developments and theories in brain imaging of chronic pain.
2. Examine changes in synaptic transmission in supraspinal structures associated with chronic pain.
3. Review the emerging field of pain neuroepigenetics and the role of epigenetics in chronic pain.

#### **Functional MRI studies in rodents to uncover the brain circuitry of chronic pain**

**David A. Seminowicz**, PhD, Assistant Professor, Department of Neural & Pain Sciences, University of Maryland School of Dentistry

#### **The involvement of the limbic system in chronic pain**

**Marco Martina**, PhD, MD, Associate Professor, Department of Physiology, Northwestern University School of Medicine

#### **Epigenetic regulation of supraspinal neuroplasticity in chronic pain**

**Laura S. Stone**, PhD, Associate Professor, McGill University, Alan Edwards Centre for Research on Pain, Faculty of Dentistry

## **CHRONIC PAIN HURTS THE POCKETBOOK, TOO. UNDERSTANDING THE ECONOMIC IMPACT OF CHRONIC PAIN FOR THE INDIVIDUAL AND THE GOVERNMENT PAYER.**

Chair: **Mary-Ellen Hogan**, BScPhm, PharmD, MSc, University of Toronto  
Speakers:

- **Mary-Ellen Hogan**, BScPhm, PharmD, MSc, University of Toronto
- **Cornelius (Neels) Groenewald**, MB, ChB, University of Washington
- **Manon Choinière**, PhD, Université de Montréal

### **Symposium Abstract:**

There is a large economic cost associated with chronic pain, in addition to its physical, emotional, and social impacts. Despite this, little information on the cost of chronic pain is available. Understanding how much is spent on chronic pain can help organizations plan and coordinate care, inform priorities for research and expose disparities in care across subgroups or regions. Cost estimates also provide reference data for cost-effectiveness and cost-utility analyses which are important in the evaluation of new programs or technologies to manage chronic pain. We will provide attendees with an overview of measurement and costing methodology for cost-of-illness studies and the application to chronic pain. We will present results of recent research from Canada and the United States on the cost of chronic pain in adult and pediatric populations. Our research includes comprehensive costing data from the point of view of the individual, the government payer and society. We used different approaches to answer similar questions and we will compare and contrast these methods and design issues including: using patient-reported data versus large administrative datasets, patient selection or case identification, healthcare setting and data analysis. We will also discuss the application of this research to policy, planning and cost-effectiveness studies.

### **Learning Objectives:**

1. Describe what a cost-of-illness study is, and recognize issues related to measurement and costing methodology.
2. Summarize the results of recent cost-of-illness studies with different perspectives, settings and methodologies.
3. Understand the magnitude and determinants of costs associated with chronic pain.

### **The cost of healthcare for Ontarians with chronic pain**

**Mary-Ellen Hogan**, BScPhm, PharmD, MSc, Leslie Dan Faculty of Pharmacy, University of Toronto

### **The cost of pediatric pain in the United States**

**Cornelius (Neels) Groenewald**, MB, ChB, University of Washington

### **Magnitude and determinants of chronic pain costs**

**Manon Choinière**, PhD, Centre de recherche du Centre hospitalier de l'Université de Montréal; Department of Anesthesiology, Faculty of Medicine, Université de Montréal

### **NERVE INJURY AND PAIN; PERIPHERAL AND CENTRAL PERSPECTIVES**

Chair: **Josiane C.S. Mapplebeck**, BSc, The Hospital for Sick Children

Speakers:

- **Mohammed F. Shamji**, MD, MSc, PhD, FRCSC, The University of Toronto
- **Reza Sharif-Naeini**, MSc, PhD, McGill University
- **Josiane C.S. Mapplebeck**, BSc, The Hospital for Sick Children

#### **Symposium Abstract:**

Recently, significant progress has been made in understanding the molecular and cellular mechanisms underlying nerve injury-induced pain in preclinical rodent models. In this symposium, we will discuss the latest integrative research on the peripheral and central influences on neuropathic pain. Dr. Mohammed F. Shamji will present his research on the peripheral mechanisms mediating inflammatory neuropathic pain, including the role of peripheral monocyte lineage cells. Dr. Reza Sharif-Naeini will present data on a novel central cellular mechanism for touch-evoked pain after nerve injury. Josiane C.S. Mapplebeck will address sex differences in the spinal mechanisms mediating mechanical hypersensitivity resulting from nerve injury. This symposium will highlight the disparate array of cellular and molecular mechanisms that interplay following injury to nerves and the challenge this complexity creates in therapeutic development.

#### **Learning Objectives:**

1. *Learn about the peripheral pathophysiology of inflammatory neuropathic pain and advancements in therapeutic development.*
2. *Learn about a novel central mechanism which gates touch-evoked mechanical pain resulting from nerve injury.*
3. *Learn about sex differences in the spinal mechanisms mediating neuropathic pain.*

#### **Peripheral mechanisms of inflammatory neuropathic pain**

**Mohammed F. Shamji**, MD, MSc, PhD, FRCSC, Toronto Western Hospital, The Hospital for Sick Children, The University of Toronto

#### **Parvalbumin neurons as ventral gate-keepers of touch-evoked pain after nerve injury**

**Reza Sharif-Naeini**, MSc, PhD, McGill University

#### **Sex differences in the spinal mechanisms mediating neuropathic pain**

**Josiane C.S. Mapplebeck**, BSc, The Hospital for Sick Children, The University of Toronto

#### **Trainee Workshop:**

#### **THE PATH OF LEAST RESISTANCE IN ACADEMIA AND BEYOND**

Chair: **Sarah Rosen**, BSc, PhD Candidate, McGill University, Trainee Representative, Canadian Pain Society

Speakers:

- **Alexandra T. Greenhill**, MD, The Greenhill Group
- **Loren Martin, PhD**, University of Toronto Mississauga
- **Chrystal Palaty**, PhD, Metaphase Health Research Consulting Inc.

### **Symposium Abstract:**

This workshop is geared towards trainee members of CPS, but all members are welcome to attend. Research trainees develop a multitude of skills during their academic training. Their training equips them with the tools to succeed in a variety of positions, however little emphasis is placed on career options outside of academia. Many academics go on to create technology companies, apps, and small businesses. However, it is difficult for an academic faculty member or clinician, without any first-hand experience, to give guidance on how to navigate into the world of entrepreneurship and industry. Therefore, this workshop consists of a diverse panel: an academic faculty member, an MD with a start-up tech company, and a scientific consultant. Each speaker will present their chosen career path, daily routine, and positive and negative components of their position. There will be 30 minutes at the end for questions and networking.

### **Learning Objectives:**

1. Gain insight into career options for those with an advanced degree.
2. Learn how to dynamically apply skillsets developed during research training.

### **Physicians in Health Care Leadership Roles and Tech Start-ups**

**Alexandra T. Greenhill**, MD, CEO and Co-founder of myBestHelper.com, Principal The Greenhill Group

### **What NOT to expect when you're expecting (an academic job)**

**Loren Martin**, PhD, Assistant Professor, Canada Research Chair Tier II in Translational Pain Research, Department of Psychology, University of Toronto Mississauga

### **Consulting as an alternative (or an add-on) to an academic career**

**Chrystal Palaty**, PhD, Owner and Principal Consultant Metaphase Health Research Consulting Inc.

1:30 – 3:00 PM **SESSION 207** / Plaza C, Second Floor

### **AN UPDATE ON NOVEL USES OF PATIENT-REPORTED OUTCOMES (PROS) FOR ASSESSMENT, PREVENTION, AND REHABILITATION OF PAIN PROBLEMS**

Chair: **David Walton**, BScPT, MSc, PhD, Western University

Speakers:

- **David Walton**, BScPT, MSc, PhD, Western University
- **Jordan Miller**, MScPT, PhD (cand.), McMaster University
- **Joy MacDermid**, BScPT, PhD, Western University

### **Symposium Abstract:**

Pain is an inherently invisible experience, meaning the current 'gold standard' is patient report of their experience. Patient-Reported Outcomes (PROs) are endorsed as key components of clinical research and treatment, but not all are created equal. PROs can be used for diagnosis, prognosis, theranosis or evaluation, with each type requiring different measurement properties. The field of PRO development, validation, and implementation is wide and difficult to understand for even those intimate with measurement theory. In this session, 3 experts in clinical measurement of pain and pain-related disability will present pragmatic information on up-to-date evidence regarding new and established PROs. Participants will leave with greater understanding of the purpose, development, implementation and interpretation of

key PROs with concrete evidence they can immediately apply and a greater understanding of how to critically appraise new pain-related PROs as they become available.

**Learning Objectives:**

1. Be able to select, apply and interpret patient-reported outcome for pain using a common-sense framework.
2. Apply and interpret two new PROs for 1) predicting and 2) quantifying recovery from acute musculoskeletal injury.
3. Describe the concept of theranosis and how it can be used for more informed clinical treatment decisions for patients with pain.

**Predicting and Measuring Recovery from Acute Musculoskeletal Trauma**

**David Walton**, BScPT, MSc, PhD, Assistant Professor, School of Physical Therapy, Western University

**Theranosis for Rehabilitation: What it is and how to apply it in clinic**

**Jordan Miller**, MScPT, PhD (cand.), School of Physical Therapy, McMaster University

**Translation and implementation of PROs for comprehensive evaluation of patient status**

**Joy MacDermid**, BScPT, PhD, Associate Professor, School of Physical Therapy, Western University, Co-Director, Clinical Research Lab, Hand and Upper Limb Centre, St. Joseph's Hospital

1:30 – 3:00 PM **SESSION 208** / Georgia B, Second Floor

**TRANSITION FROM ACUTE TO CHRONIC PAIN SURGERY IN CHILDREN AND ADULTS: WHAT WE KNOW AND WHERE WE NEED TO GO**

Chair: **Joel Katz**, PhD, York University and Toronto General Hospital

Speakers:

- **Jennifer Rabbitts**, MBChB, University of Washington and Seattle Children's Hospital
- **Jill Chorney**, PhD CPsych, IWK and Dalhousie University
- **Brittany Rosenbloom**, MSc, York University and The Hospital for Sick Children

**Symposium Abstract:**

Chronic post-surgical pain (CPSP) is a serious adverse effect of surgery defined as pain that persists for at least two months after surgery. The one-year incidence of CPSP in adults varies with procedure and is generally accepted to be moderate-to-severe in 5-10%. Less is known about pediatric CPSP; recent studies indicate it develops in 20-50% of children 12 months after major surgery. CPSP is associated with longer recovery and increased health care costs. For children it is also associated with disruptions in normal childhood development. Although we are far from being able to predict with certainty who will develop CPSP, a biopsychosocial model helps to better understand the circumstances that lead to the development of chronic pain. Intrapersonal (e.g., pre-operative pain, anxiety, and sleep patterns) and interpersonal variables (e.g., parental pain catastrophizing) play strong roles in surgical outcomes. Knowledge of the risk and protective factors that are associated with CPSP will allow for the development of interventions that target modifiable variables. Overall the aims of this symposium are to (1) examine biomedical, psychosocial, and behavioural risk factors for chronic

post-surgical pain, (2) present trajectories for pain following surgery, and (3) evaluate evidence-based interventions for the prevention or management of CPSP.

**Learning Objectives:**

1. To become familiar with common trajectories of postoperative pain.
2. To understand the role of sleep, anxiety, and physical activity, in pain and recovery from surgery.
3. To describe common psychological predictors of and interventions for chronic post-surgical pain.

**The longitudinal impact of sleep on pain and health outcomes in children after surgery**

**Jennifer Rabbitts**, MChB, University of Washington and Seattle Children's Hospital

**Psychological predictors of, and interventions for postoperative pain in children and adolescents**

**Jill Chorney**, PhD C Psych, IWK and Dalhousie University

**Biopsychosocial predictors of chronic post-surgical pain in adults**

**Brittany Rosenbloom**, MSc, York University and The Hospital for Sick Children

3:00 - 4:00 PM **Coffee/Posters/Tradeshow** / Regency Ballroom, Third Floor

4:00 - 5:30 PM **SESSION 209** / Georgia B, Second Floor

## **Due to unforeseen circumstances, this session has been cancelled.**

### **SPINAL CORD STIMULATION FOR THE TREATMENT OF NEUROPATHIC PAIN**

Chair: **Cecile de Vos**, PhD, Medisch Spectrum Twente Hospital and McGill University

Speakers:

- **Mohammed F. Shamji**, MD, PhD, FRCSC, Toronto Western Hospital and University of Toronto
- **Cecile C. de Vos**, PhD, Medisch Spectrum Twente Hospital and McGill University
- **Rui V. Duarte**, PhD, University of Birmingham

#### **Evidence for the analgesic effects of spinal cord stimulation**

**Mohammed F. Shamji**, MD, PhD, FRCSC, Toronto Western Hospital and University of Toronto

#### **What are the benefits and draw backs of new spinal cord stimulation settings?**

**Cecile C. de Vos**, PhD, Medisch Spectrum Twente Hospital and McGill University

#### **What are the benefits and draw backs of new neurostimulation targets?**

**Rui V. Duarte**, PhD, University of Birmingham

### **HOT TOPICS SESSION**

Chair: **Jeffrey S. Mogil**, PhD, Alan Edwards Centre for Pain Research, McGill University

Speakers:

- **Mark Bichin**, BSc, University of British Columbia
- **Mary Ellen Hogan**, BScPhm, PharmD, MSc, University of Toronto
- **Josiane Mapplebeck**, BSc, Hospital for Sick Children
- **K.S. Lichtenwalter**, PhD Candidate, McGill University
- **Veronique Gougeon**, MSc, Sherbrooke University, école de réadaptation
- **Paula Forgeron**, RN, MN, PhD, University of Ottawa

#### **Early pain exposure and region specific brain cortical thickness interact to predict executive function at 8yrs in children born very preterm**

Mark Bichin, BSc, University of British Columbia; Cecil My Chau, Manon Ranger, Steven P. Miller, Amanmeet Garg, Mirza F. Beg, Kevin Fitzpatrick, Bruce Bjornson, Adele Diamond, Anne R. Synnes, Ruth E Grunau

#### **Pain-related medication use in adults 65 years and older with chronic pain**

Mary Ellen Hogan, BScPhm, PharmD, MSc, University of Toronto; Anna Taddio, Joel Katz, Vibhuti Shah, Murray Kran

#### **Sex differences in the involvement of Microglia and KCC2 in neuropathic pain**

Josiane C. S. Mapplebeck, BSc, Hospital for Sick Children; Orla Moriarty, Simon Beggs, YuShan Tu, Jeffrey S. Mogil, Michael W. Salter

#### **Deciphering the role of melanocortin 1 receptor in pain through single nucleotide polymorphisms**

K.S. Lichtenwalter, Ph.D. Candidate, McGill University; R.N. Lichtenwalter, G.D. Slade, R. Dubner, R.B. Fillingim, J.D. Greenspan, R. Ohrbach, C. Knott, W. Maixner, L.B. Diatchenko

#### **Assessment of central pain processing and autonomic responses in women with provoked vestibulodynia**

Véronique Gougeon, Msc, Sherbrooke University, école de réadaptation; Serge Marchand, Annie Morin, Guillaume Léonard, Isabelle Girard, Guy Waddell, Yves-André Bureau, Mélanie Morin

#### **Friendships of teens with chronic pain: how do they compare with friendships of healthy teens?**

Paula Forgeron, RN, MN, PhD, University of Ottawa; Christine Chambers, Janice Cohen, Bruce Dick, Christine Lamontagne, G. Allen Finley

### **TAKING THE PAIN OUT OF STUDYING PAIN EXPRESSION: TOWARD ABBREVIATED MEASUREMENT SYSTEMS**

Chair: **Kenneth M. Prkachin**, PhD, University of Northern BC

Speakers:

- **Kenneth M. Prkachin**, PhD, Professor, University of Northern BC
- **Joshua A. Rash**, MSc, PhD Candidate, University of Calgary
- **Ahmed Ashraf**, PhD, University Health Network, University of Toronto

### **Symposium Abstract:**

Several decades of research have established the value of measures of facial expression in the assessment of pain. Studies of humans across the lifespan and in experimental and clinical settings have identified facial actions that covary with and appear to carry specific information about the intensive aspects of pain. Animal studies suggest the presence of homologous expressions in other species. Despite considerable evidence supporting the value of pain assessment via facial expression, applications of facial measurement have been limited in both research and clinical settings primarily because obtaining them is resource-intensive. Highly-trained human observers are still required. Assessment protocols typically involve offline assessment using video recordings played in stop action or frame-by-frame modes, dramatically increasing the amount of time required to quantify outcomes.

This symposium focuses on two abbreviated measurement systems, the Index of Facial Pain Expression, an observational system requiring human observers and automated facial analysis, a computer-based approach arising from the field of affective computing.

The Index of Facial Pain Expression (IFPE) is a new technique that has been designed to accelerate assessment of human pain expression. It is an observational procedure based on the literature that has characterized pain expression. Following a manual, trainees first learn the characteristic changes produced by four pain-related facial actions. Trainees practice against a set of criterion video recordings and receive feedback about their performance. A final test establishes their reliability against criterion scoring, using several conventional reliability metrics.

Researchers and clinicians interested in assessing pain expression have long held out the hope that computer-assisted automated systems could supplement or replace human observers. Applications of advances in computer-vision from the field of affective computing have now shown that the dream of automated computer analysis of facial expression is now feasible. Recent advances toward the development of automated analysis of pain expression will also be presented.

### **Learning Objectives:**

1. *To gain exposure to the IFPE, including the facial action units reliably associated with pain and their scoring.*
2. *To understand the principles of measuring pain expression with the IFPE, its demonstrable measurement properties and the feasibility of the existing training protocol.*
3. *To understand how computer-vision techniques have been applied to decoding pain expression, to appreciate the progress that has been made and the prospects they hold for further basic and clinical research and practice.*

### **Development, structure and principles of the Index of Facial Pain Expression**

**Kenneth M. Prkachin**, PhD, Professor, Department of Psychology, University of Northern BC

### **Effectiveness and outcomes of Index of Facial Pain Expression training**

**Joshua A. Rash**, MSc, PhD Candidate, Department of Psychology, University of Calgary

## Use of the Index of Facial Pain Expression in investigation of critically ill patients with brain injury

Ahmed Ashraf, PhD, Post-doctoral fellow, Toronto Rehab Institute, University Health Network, University of Toronto

4:00 – 5:30 PM **SESSION 212** / Georgia A, Second Floor

### LEGAL ISSUES AND NEUROETHICS OF BRAIN-IMAGING BASED “PAIN-O-METERS”: FRIEND OR FOE?

Chair: Karen Davis, PhD, Toronto Western Research Institute

Speakers:

- Karen Davis, PhD, Toronto Western Research Institute
- Tor Wager, PhD, University of Colorado Boulder
- Amanda Pustilnik, BA, JD, Harvard Law School and University of Maryland School of Law

#### Symposium Abstract:

The inherent subjective nature of pain can be a roadblock to confirming its existence. This clinical challenge imposes a hardship for patients to “prove” they have chronic pain without an objective measure acceptable by insurance providers and the courts. Thus, “pain-o-meter” objective tests of pain based on brain imaging has thus become sought after. This workshop will present 1) an overview of the capabilities and limitations of fMRI for this purpose, individual differences, new pain theories for consideration for test development (“dynamic pain connectome” and a brain “pain switch”), and ethical issues pertaining to false negative findings, and the impact on free will and privacy, 2) more advanced technological approaches (e.g., using machine learning and multivoxel pattern theory) that could hold promise for developing pain-o-meter tests, and 3) insight into how the legal system and courts view pain, the brain, admissible evidence, and the impact of pain-o-meter tests on policy.

#### Learning Objectives:

1. To understand the societal need to develop a brain imaging-based objective measure of pain (i.e., a “pain-o-meter”), and will be aware of the capabilities and limitations of current brain imaging technologies and potential future developments to establish such a test.
2. To gain insight into the complexities of shared brain resources for pain and suffering (emotion).
3. To have an understanding of the legal framework, and objective measures of pain with which claims of chronic pain are assessed.

#### Towards a brain imaging-based pain-o-meter test: Capabilities and limitations of fMRI

Karen Davis, PhD, Toronto Western Research Institute, University Health Network, University of Toronto

#### Neuroimaging of pain and emotional harm: Implications for law and policy

Tor Wager, PhD, University of Colorado Boulder

#### Legal Paradigms and Pain-o-meters

Amanda Pustilnik, BA, JD, Harvard Law School and University of Maryland School of Law

7:00 – 11:00 PM **Annual Dinner, Awards & Entertainment** / Regency Ballroom, Third Floor

## **DAY 3 - Friday May 27, 2016**

7:30 – 8:45 AM **Breakfast** / Plaza Ballroom, Second Floor

7:15 – 8:45 AM Kensington, Fourth Floor

### **SPOR CHRONIC PAIN NETWORK INFORMATION MEETING**

Meeting Chair: **Norm Buckley**

8:45 – 9:00 AM **Opening Remarks & Poster Award Announcements**

Plaza Ballroom, Second Floor

9:00 – 9:45 AM **PLENARY LECTURE** / Plaza Ballroom

### **ETHICAL IMPLICATIONS OF INNOVATIONS IN CLINICAL TRIAL DESIGN AND CONDUCT**

Speaker: **Michael Rowbotham**, MD, Scientific Director, California Pacific Medical Center Research Institute, Treasurer, International Association for the Study of Pain, Adjunct Professor of Anesthesia, UCSF, Attending Physician, UCSF Pain Management Center, Emeritus Professor of Clinical Neurology, UCSF

#### **Symposium Abstract:**

In the past decade, a variety of novel clinical trial designs have entered widespread use, such as the EERW (Enriched Enrollment Randomized Withdrawal) design and adaptive trial designs. All share goals of reducing the placebo effect, reducing sample size requirements, and shortening the time from 'first-in-man' study to final registration trial. Most large registration trials are international efforts, and narrow subject enrollment time windows puts pressure on sites to rapidly screen and enroll subjects. The magnitude of fraudulent enrollment, either through intentional misrepresentation by subjects or study site personnel, remains unknown but puts trial validity and subject safety at risk. Finally, success in finding and validating objective biomarkers that can be used to more precisely target patients most likely to benefit lags far behind cancer therapy, where it is the norm. Practical and ethical aspects of all three themes will be reviewed.

9:45 – 10:30 AM **PLENARY LECTURE** / Plaza Ballroom, Second Floor

### **"LISTENING" & "TALKING" TO NEURONS: CLINICAL IMPLICATIONS OF GLIAL DYSREGULATION OF PAIN, OPIOID ACTIONS & DRUGS OF ABUSE MOVING FROM CONCEPT TO CLINICAL TRIALS!**

Speaker: **Linda Watkins**, PhD, Distinguished Professor in the Department of Psychology and Neuroscience, and Center for Neuroscience, University of Colorado-Boulder

#### **Symposium Abstract:**

Work over the past 25 years has challenged classical views of pain and opioid actions as being mediated solely by neurons. Glia are key players in chronic pain, compromising the opioid efficacy for pain control, enhancing tolerance and dependence/withdrawal, and contributing to drug reward from opioids and other abused drugs. Further, glia can be "primed" so to contribute to pain chronification.

Intriguingly, the glial activation receptor creating neuroinflammation under conditions of chronic pain is the same receptor that is activated by opioids and other abused drugs, unique from the neuronal opioid receptor. Indeed, clinically-relevant therapeutics targeting this glial activation receptor in particular or glially-drive neuroinflammation more generally have shown remarkable efficacy as stand alone treatments for neuropathic pain, improving the clinical utility of opioids and suppressing drug abuse. As such therapeutics are rapidly moving toward clinical trials, translation to humans of data from rodents, horses, and pet dogs is approaching.

10:30 – 11:00 AM **Coffee Break** / Plaza Hallway, Second Floor

11:00 – 12:30 PM **SESSION 301** / Georgia B, Second Floor

### **VIRTUAL REALITY AND PAIN: A NEW FRONTIER OR SMOKE AND MIRRORS?**

Chair: **Jeffrey I. Gold**, PhD, University of Southern California; Children's Hospital of Los Angeles

Speakers:

- **Bernie Garrett**, PhD, University of British Columbia
- **Diane Gromala**, PhD, Simon Fraser University
- **Jeffrey I. Gold**, PhD, University of Southern California; Children's Hospital of Los Angeles

#### **Symposium Abstract:**

Virtual Reality (VR) involves an artificial three-dimensional (3D) environment that is experienced by a person through sensory stimuli (usually visual, aural and often touch) delivered by a computer and in which one's actions partially determine what happens in the environment. The sense of immersion in an VR environment is achieved through visual and auditory stimuli that simulate 3D visual and auditory cues available in the real world. VR environments are hypothesized to reduce pain via non-pharmacologic attentional and distractive mechanisms, although the exact mechanisms remain unclear. The neuromatrix theory suggests that pain is a multidimensional experience produced by "neurosignature" patterns of impulses generated by a widely distributed neural network termed the "body-self neuromatrix" in the brain. VR therapy may work by dampening the acuity of the pain modulation system by acting on the signaling pathways of the neuromatrix, producing analgesia. The use of VR for pain management is in its infancy. This symposium will provide a review of the evidence for and against VR as an adjunctive therapy for acute and chronic pain in adults and children.

#### **Learning Objectives:**

1. Summarize evidence regarding the efficacy of VR therapy as an adjunctive measure for acute pain management in adults.
2. List two distinct approaches of using VR specifically for chronic pain self-management in adults.
3. Discuss the use of video games and immersive virtual reality (VR) technology for procedural pain management for children.

#### **Virtual Reality for acute pain management in adults: what is the evidence?**

**Bernie Garrett**, PhD, Associate Professor, School of Nursing, University of British Columbia

## **Is Virtual Reality useful for chronic pain management and self-management in adults: the challenges?**

**Diane Gromala**, PhD, Professor and Canada Research Chair in Computational Technologies for Transforming Pain at Simon Fraser University

## **Does Virtual Reality to decrease pain and distress in children**

**Jeffrey I. Gold**, PhD, Professor of Anesthesiology and Pediatrics, Keck School of Medicine, University of Southern California; Director, Pediatric Pain Management Clinic and Children's Outcomes, Research and Evaluation at Children's Hospital of Los Angeles

11:00 – 12:30 PM **SESSION 302** / Plaza A&B, Second Floor

## **FROM PAST TO FUTURE: QST TO JEDI MIND TRICKS**

Chair: **Serge Marchand**, PhD, Université de Sherbrooke

Speakers:

- **Serge Marchand**, PhD, Université de Sherbrooke
- **Pam Squire**, MD, UBC Okanagan Interventional Pain Clinic
- **Owen Williamson**, MD, Kelowna General Hospital,

### **Symposium Abstract:**

Chronic pain is a complex phenomenon and two patients with an apparent similar clinical tableau could in fact result from totally different mechanisms that will not respond to the same treatment. The most important challenge is to find a way to better target patients who will respond to a specific treatment. Being able to phenotype chronic pain patients based on the mechanisms involved in their pathology seems to be the best way to reduce the trial-error process of current pain treatment algorithms. Too often published papers describe the common symptoms of patients with these mechanisms and outline the pathophysiology but fail to describe how to perform an examination that would document the presence or absence of these mechanisms. Recent studies have highlighted the fact that relatively simple quantitative sensory tests (QST) are able to identify/distinguish between central excitatory (temporal summation) or inhibitory (Conditioned Pain Modulation) deficits in patients suffering from chronic pain. Other examination techniques can demonstrate body perception disturbance. This workshop will demonstrate how to use standardized tools to demonstrate these physical examination techniques.

### **Learning Objectives:**

1. *Identify the neurophysiological basis of excitatory and inhibitory pain mechanisms and the factor modulating these mechanisms in healthy subjects and patients suffering from chronic pain.*
2. *To demonstrate semi-quantitative methods of eliciting sensory signs of neuropathic pain using bedside quantitative sensory testing (QST). The workshop will specifically demonstrate methods useful for the documentation of sensory loss, gain and central sensitization.*
3. *To demonstrate simple clinical methods for exploring and explaining distorted body perceptions.*

### **Excitatory and inhibitory mechanisms: from the lab to the clinic**

**Serge Marchand**, PhD, Université de Sherbrooke, Faculté de médecine et des sciences de la santé, Département de chirurgie, service de neurochirurgie, Centre de recherche du CHUS

### **Examination techniques for sensory loss, gain and central sensitization**

**Pam Squire**, MD, Clinical Assistant Professor UBC Okanagan Interventional Pain Clinic

### **Examination techniques for distorted body perceptions**

**Owen Williamson**, MD, Kelowna General Hospital, Okanagan Interventional Pain Clinic, JPOCSC Pain Clinic

11:00 – 12:30 PM **SESSION 303** / Georgia A, Second Floor

### **ADDRESSING THE RISING EPIDEMIC OF MATERNAL PRESCRIPTION OPIOID USE AND ASSOCIATED NEONATAL CONSEQUENCES**

Chair: **Marsha Campbell-Yeo**, PhD, MN, NNP-BC, RN, Dalhousie University, IWK Health Centre

Speakers:

- **Tim F. Oberlander**, MD, FRCPC, University of British Columbia.
- **Marsha Campbell-Yeo**, PhD, MN, NNP-BC, RN, Dalhousie University, IWK Health Centre
- **Lenora Marcellus**, PhD, MN, RN, University of Victoria

#### **Symposium Abstract:**

There is a rising epidemic in the numbers of child bearing women taking prescription opioids, currently more than one-third compared to previous studies reporting only 6-7% of pregnant women. Major risks of prenatal opioid exposure include birth defects, altered brain development, and neonatal abstinence syndrome (NAS). Neonatal Abstinence Syndrome (NAS) has become one of the fastest growing reasons for neonatal hospital admissions. Over the past ten years (2004-2013), NAS incidence has increased 4-fold and the median length of stay for NAS increased from 13 to 19 days, thus leading to 7-fold increases in NICU-days attributed to NAS. Initial data suggest that recent increases in NAS may have resulted from increased use of prescription opioids rather than illicit drugs. There is a need for all care providers across a diverse care spectrum including general care and specialties encompassing pain management, obstetrics, and pediatrics to be aware of the consequences of prenatal opioid exposures, appropriate treatment of mothers and their newborns as well as the often complex medical and social issues associated with these families. The overall aim of this session will be to identify challenges and potential solutions to better manage opioid using women and their exposed newborns during pregnancy and following birth.

#### **Learning Objectives:**

1. Review the current incidence of maternal opioid use and associated neonatal consequences in Canada and worldwide.
2. Review our current understanding of the impact of maternal mental health on neonatal neurobehavior, how in utero exposure to antidepressants, in addition to opioids, also contributes and management strategies that support optimal maternal mental and neonatal developmental health.
3. Review and discuss the current evidence regarding the management of opioid exposed neonates diagnosed with neonatal abstinence syndrome.

### **Mother's mood matters: Considerations for the care of newborns with exposure to opioids, antidepressants and antenatal maternal mood disturbances**

**Tim F. Oberlander**, MD, FRCPC, Senior Clinician Scientist, CFRI. R. Howard Webster Professorship in Brain Imaging and Early Child Development, Division of Developmental Pediatrics, Department of Pediatrics, University of British Columbia. Developmental Pediatrician, BC Children's Hospital and BC Women's Hospital & Health Centre Attending Physician, Complex Pain Service, BC Children's Hospital and BC Women's Hospital & Health Centre

### **Evolving Evidence for Care in Mothers' Arms: Does This Apply to NAS?**

**Marsha Campbell-Yeo**, PhD, MN, NNP-BC, RN, Assistant Professor and Clinician Scientist, School of Nursing, Dalhousie University and Centre for Pediatric Pain, IWK Health Centre

### **Innovative approaches to providing prenatal care for women who use substances**

**Lenora Marcellus**, PhD, MN, RN, Associate Professor and Associate Director, Undergraduate Education, University of Victoria

11:00 – 12:30 PM **SESSION 304** / Plaza C, Second Floor

### **NEW INSIGHTS INTO NEUROPATHIC PAIN IN BREAST CANCER**

Chair: **Lynn R. Gauthier**, PhD, Université Laval

Speakers:

- **Faraj Abdallah**, MD, St. Michael's Hospital
- **Lynn R. Gauthier**, PhD, Université Laval
- **Patricia Poulin**, PhD, The Ottawa Hospital Pain Clinic, University of Ottawa

#### **Symposium Abstract:**

Breast cancer is the most commonly diagnosed cancer among Canadian women. With increased focus on screening and advances in treatments, survival rates have improved dramatically. Unfortunately, many breast cancer survivors may be left with lasting treatment-related pain long after their cancer has been resected. Neuropathic pain may be especially common and it is associated with substantial disability and distress. It may also be particularly refractory to pharmacologic management. There remain many gaps in our knowledge about its development and which measurement tools should be used to assess neuropathic pain in this population. Thus, a better understanding of neuropathic pain in breast cancer, including novel prevention and inter-disciplinary management strategies, is critical. The overall aim of this symposium is to present new research into the prevention, development, and management of neuropathic pain in breast cancer.

#### **Learning Objectives:**

1. To examine whether perioperative anesthetic management for breast cancer surgery can play a role in preventing the development of neuropathic pain.
2. To describe what we know and what we need to know about age-related patterns in the development of chemotherapy-induced peripheral neuropathy in women with breast cancer.
3. To learn about the current state of knowledge on the inter-disciplinary management of chronic neuropathic pain among breast cancer survivors as well as proposed novel approaches.

**Integrating nerve blocks into the anesthetic management for breast cancer surgery: The potential protective effect of the paravertebral block against the development of neuropathic pain.**

**Faraj Abdallah**, MD, Scientist, the Li Ka Shing Knowledge Institute  
Assistant Professor, Department of Anesthesia, University of Toronto Staff  
Anesthesiologist, St. Michael's Hospital

**Age-related patterns in the development and impact of chemotherapy-induced peripheral neuropathy in women with breast cancer**

**Lynn R. Gauthier**, PhD, Professeur Adjoint, Département de médecine familiale et de médecine d'urgence, Faculté de médecine, Université Laval

**Interdisciplinary, Cognitive Behavioural and Mindfulness-Based Interventions to Support the Management of Chronic Neuropathic Pain Among Breast Cancer Survivors**

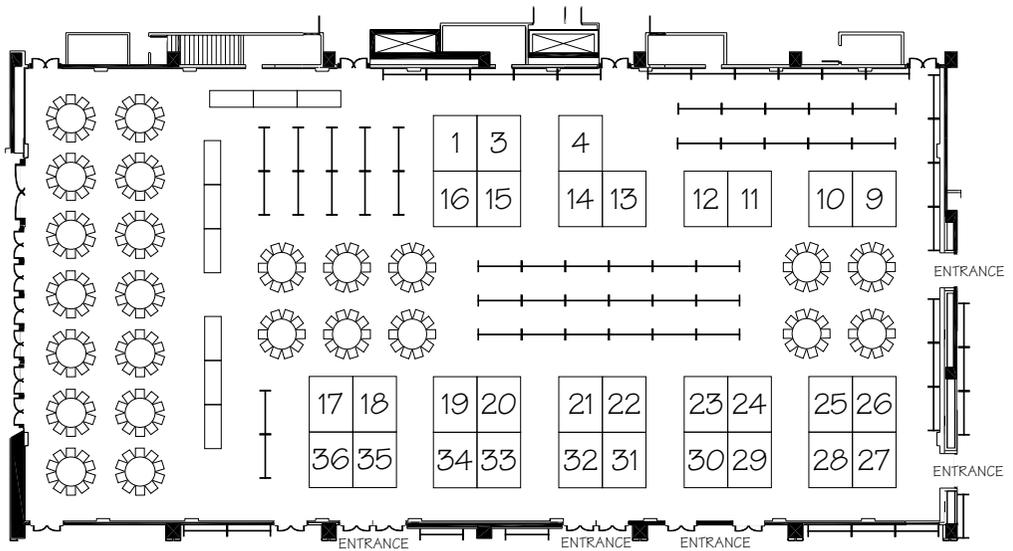
**Patricia Poulin**, PhD, Associate Scientist, The Ottawa Hospital Research Institute Clinical, Health, and Rehabilitation Psychologist, The Ottawa Hospital Pain Clinic Clinical Professor, School of Psychology and Department of Anesthesia, University of Ottawa

**2:00 - 7:00 PM** Kensington, Fourth Floor

**ANNUAL CANADIAN COLLEGE OF FAMILY PHYSICIANS LUNCH MEETING**

Meeting Chair: **Maureen Desmarais**

# Exhibit Area



## Booth Organization

1	CPS
3	Canadian Pain Coalition
4	BTNX
9	DTI - Diros Technology Inc.
10	MedReleaf
11	Mylan
12	Aurora Cannabis
13	Canadian Virtual Hospice
14	MCRCI
15	Life Is Now
16	CannTrust Inc.
17	Astra Zeneca
18	Michael G. DeGroot National Pain Centre
19	Purdue Pharma
20	Bedrocan Canada
21	Ethypharm

## Booth Organization

22	It Doesn't Have to Hurt
23	Quebec Pain Research Network
24	Tilray
25	CanniMed Ltd.
26	Opioid Education Partnership
27	Aspen Medical Products
28	TRIMEDIC
29	Merck
30	Canadian Institutes of Health Research
31	College of Family Physicians
32	CBI Health Group
33	Greenleaf Medical Clinic
34	Mettrum
35	Medtronic
36	Medisca

### **BOOTH 1**

CPS

**Contact:** Emma Flood

**T:** 416.494.1440 x 221

**E:** eflood@canadianpainsociety.ca

The CPS is a society of scientists and health professionals who have a vested interest in pain research and management. As a chapter of the IASP, the CPS supports the treatment of pain as a basic human right and is currently advocating for a Canadian National Pain Strategy.

### **BOOTH 4**

BTNX

**Contact:** Mike Murphy

**T:** 905.730.5681

**E:** Mike@btnx.com

BTNX Inc. specializes in the manufacture and distribution of point-of-care in vitro diagnostics. Our Rapid Response™ tests provide healthcare practitioners with accurate results they can trust.

### **BOOTH 10**

MedReleaf

**Contact:** Alex Revich

**T:** 289.317.1012

**E:** arevich@medreleaf.com

MedReleaf is a fully licensed Canadian medical cannabis producer and distributor. Through tireless clinical research, and in concert with the Canadian medical community, we are dedicated to leading the way in the discovery of, and education on, its medical and therapeutic benefits. We are setting The Medical Grade Standard™

### **BOOTH 3**

Canadian Pain Coalition

**Contact:** Lynn Cooper

**T:** 905.404.9545

**E:** office@canadianpaincoalition.ca

CPC is a partnership of pain consumer groups, health professionals and scientists with a goal of promoting sustained improvement in treating and managing pain for CPC is a partnership of pain consumer groups, health professionals and scientists with a goal of promoting sustained improvement in treating and managing pain for Canadians

### **BOOTH 9**

DTI - Diros Technology Inc.

**Contact:** Peter Darnos

**T:** 905.415.3440

**E:** pdarnos@dirostech.com

Manufacturer of the world renowned OWL Radiofrequency (RF) Products. Diros' OWL RF Generators, Probes, Cannulae, and GD-pads have set the standard, offering Radiofrequency Pain Management & Neurosurgical Solutions.

### **BOOTH 11**

Mylan

**Contact:** Karrie Dohnal

**T:** 416.236.2631

**E:** Karrie.Dohnal@mylan.ca

Mylan is a global pharmaceutical company committed to setting new standards in healthcare. We offer a growing portfolio of around 1,400 generic pharmaceuticals and several brand medications. Our workforce of approximately 30,000 people is dedicated to creating better health for a better world, one person at a time. Learn more at mylan.com.

### **BOOTH 12**

Aurora Cannabis

**Contact:** Danielle Igra

**T:** 778.990.8584

**E:** danielle@auroramj.com

Aurora Cannabis is a community minded, Canadian owned and operated company with a 52,000 sq ft production facility near Canmore, Alberta. Cultivating, harvesting, and selling Canadian Medical Marijuana, Aurora is your best chance to experience the healing power of nature.

### **BOOTH 14**

MCRCI

**Contact:** Sarah Donald

**T:** 604.566.9391

**E:** sarah@mcrci.com

MCRCI assists patients by arranging consultations with our MDs, guiding patients through the process of becoming legal users, and providing information and advice in the use of marijuana as medicine.

### **BOOTH 16**

CannTrust Inc.

**Contact:** Robyn Rabinovich

**T:** 647.872.2310

**E:** rrabinovich@canntrust.ca

CannTrust™ brings over 40 years of pharmacy and healthcare experience to the medical cannabis industry and applies this expertise to produce quality medical cannabis.

### **BOOTH 13**

Canadian Virtual Hospice

**Contact:** Marissa Ambalina

**T:** 204.478.1758

**E:** marissa@virtualhospice.ca

The Canadian Virtual Hospice ([www.virtualhospice.ca](http://www.virtualhospice.ca)) is Canada's most comprehensive source for online information and support on advanced illness, palliative and end-of-life care, loss and grief. We provide patients, families, health care providers, educators and researchers with evidence-based information and tools to improve quality care and patient/family experience.

### **BOOTH 15**

Life Is Now

**Contact:** Neil Pearson

**T:** 250.486.5056

**E:** neil@lifeisnow.ca

Life Is Now Pain Care is a health care technology company, providing innovative education, resources and tools for effective pain self care.

### **BOOTH 17**

AstraZeneca

**Contact:** Danielle Gillis

**T:** 905.803.4889

**E:** danielle.gillis@astrazeneca.com

AstraZeneca is a global, innovation-driven biopharmaceutical business with a primary focus on the discovery, development and commercialization of prescription medicines for gastrointestinal, cardiovascular, neuroscience, respiratory and inflammation, oncology and infectious disease.

### **BOOTH 18**

Michael G. DeGroot National Pain Centre and Michael G. DeGroot Institute for Pain Research and Care

**Contact:** Dale Tomlinson

**T:** 905.525.9140 x 22743

**E:** dtomlins@mcmaster.ca

Our missions: Improve the management of pain through dissemination of best practice information; use persistent post-surgical pain to explore chronic pain, and provide unique learning opportunities.

### **BOOTH 20**

Bedrocan Canada

**Contact:** Chris Murray

**T:** 855.558.9333 x 300

**E:** chris@tweed.com

Bedrocan Canada: Producer of standardized whole-flower medical cannabis used by thousands of patients in seven countries. Our focus is on research, accredited CME and patient affordability.

### **BOOTH 29**

It Doesn't Have to Hurt

**Contact:** Justine Dol

**T:** 902.470.6769

**E:** justine.dol@iwk.nshealth.ca

#ItDoesntHaveToHurt is an initiative in partnership with Erica Ehm's YummyMummyClub.ca to use social media to get research evidence about children's pain management directly to parents.

### **BOOTH 19**

Purdue Pharma

**Contact:** Michelle Girard

**T:** 905.420.6400

**E:** michelle.girard@purdue.ca

Purdue Pharma is dedicated to developing and providing innovative medicines for patients and health care professionals and to supporting quality education for the safe use of its products. Purdue Pharma se consacre au développement et à la mise en marché de traitements innovants pour les patients et les professionnels de la santé ainsi qu'au soutien d'une formation de qualité pour l'utilisation sécuritaire de ses produits.

### **BOOTH 21**

Ethypharm

**Contact:** Antoine Poncy

**T:** 215.246.3427

**E:** poncy.antoine@ethypharmusa.com

Ethypharm is specialized in the development, registration and commercial manufacturing of complex drug formulations with a special focus on scheduled drugs. Ethypharm currently markets M-ESLON (morphine sulfate extended release capsule) in Canada and will soon be introducing M-ESLON Immediate Release Capsules.

### **BOOTH 23**

Quebec Pain Research Network

**Contact:** Nicolas Beaudet

**T:** 819.821.8000 x 70530

**E:** nicolas.beaudet@qprn.ca

The mission of the Network is to contribute through basic, clinical, evaluative and epidemiological research to the improvement of the quality of life of Quebecers who suffer from pain. For more information, visit us at booth 23.

### **BOOTH 24**

Tilray

**Contact:** Jade Pover

**T:** 250.327.1634

**E:** jade.pover@tilray.ca

Tilray is a Licensed Producer of medical cannabis committed to working with Canadian patients and Health Canada to produce exceptional strains that adhere to the MMPR.

### **BOOTH 25**

CanniMed Ltd.

**Contact:** Caitlin Gill

**T:** 306.975.1207

**E:** cmg@prairieplant.com

CanniMed Ltd. was established in 2013 to provide Canadian patients with access to a standardized and trusted supply of pharmaceutical-grade cannabis.

### **BOOTH 26**

Opioid Education Partnership

**Contact:** Feng Chang

**T:** 519.888.4567 x 21321

**E:** feng.cheng@uwaterloo.ca

Opioid Education Partnership provides an interactive program for physicians and pharmacists to learn about opioid misuse and advance collaborative care in opioid management.

### **BOOTH 27**

Aspen Medical Products

**Contact:** Daniel M. Pugliese

**T:** 815.814.2081

**E:** dpugliese@aspemp.com

Aspen Medical Products is a leader in the development of innovative spinal bracing for post-trauma stabilization, pre-and-post surgical stabilization, pain management and long-term patient care. Aspen Medical Products offers multiple orthotic options that provide unsurpassed motion restriction, superior comfort and an economic advantage, encouraging better patient compliance.

### **BOOTH 28**

TRIMEDIC

**Contact:** Marty Tenenbaum

**T:** 905.738.7272 x 204

**E:** mtenenbaum@trimedinc.com

Trimed specializes in providing high quality medical devices, supplies and instruments. Our unique products are used in physician offices, multi-practice clinics and hospitals. Trimed has a specific focus on: Point-Of-Care Testing & DOA; General Practitioners

### **BOOTH 29**

Merck

**Contact:** Debra Manning

**T:** 514.428.3477

**E:** debra.manning@merck.com

Today's Merck is a global healthcare leader working to help the world be well. For more information about our operations in Canada, visit [www.merck.ca](http://www.merck.ca).

### **BOOTH 30**

Canadian Institutes of Health Research -  
Institute of Musculoskeletal Health and  
Arthritis

**Contact:** Nicole Mardis

**T:** 204.272.3181

**E:** nicole.mardis@umanitoba.ca

The CIHR Institute of Musculoskeletal Health and Arthritis is the Canadian federal government's funding body for strategic initiatives in musculoskeletal, skin and oral health research in Canada.

### **BOOTH 32**

CBI Health Group

**Contact:** Adam Cornett

**T:** 250.383.3638 x 116

**E:** acornett@cbi.ca

CBI Health Group is Canada's largest community healthcare provider, dedicated to comprehensive healthcare services that improve the health and enrich the lives of Canadians.

### **BOOTH 34**

Mettrum

**Contact:** Grant Koehler

**T:** 519.575.8504

**E:** gkoehler@mettrum.com

Mettrum Ltd. is a licensed producer and vendor of medical cannabis. Mettrum is committed to helping physicians and their patients responsibly consider medical cannabis as a viable treatment option.

### **BOOTH 31**

College of Family Physicians

**Contact:** Maureen Desmarais

**T:** 905.629.0900 x 215

**E:** mkd@cfpc.ca

The College of Family Physicians of Canada (CFPC) represents more than 34,000 members across the country. It is the professional organization responsible for establishing standards for the training and certification of family physicians. The College provides quality services, supports family medicine teaching and research, and advocates on behalf of family physicians and the specialty of family medicine.

### **BOOTH 33**

Greenleaf Medical Clinic

**Contact:** Fonda Betts

**T:** 1.877.513.4769

**E:** fonda@medicalmarijuana.ca

The Greenleaf Medical Clinic, founded in 2011, assesses patients across Canada for their eligibility into Health Canada's Marihuana for Medical Purposes Regulations (MMPR) program.

### **BOOTH 35**

Medtronic

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**T:** 905.460.3745

**E:** geetha.bala@medtronic.com

Medtronic is the world's leading medical technology company, providing life-long solutions that alleviate pain and extend life for people with chronic pain and neurological disorders.

**BOOTH 36**

Medisca

**Contact:** Rheema DeGuzman

**T:** 514.333.7811 x 1352

**E:** rdeguzman@medisca.com

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the CANADIAN PAIN SOCIETY  
la SOCIÉTÉ CANADIENNE de la DOULEUR

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**2017**

**38<sup>TH</sup> ANNUAL  
SCIENTIFIC MEETING  
CANADIAN PAIN SOCIETY**



Credit: Scott Munn

**TUESDAY MAY 23 –  
FRIDAY MAY 26 2017**

**MARRIOTT HARBOURFRONT, HALIFAX, NS**

**2018**

**39<sup>TH</sup> ANNUAL  
SCIENTIFIC MEETING  
CANADIAN PAIN SOCIETY**



Credit: © Parc Jean-Drapeau, Denis Labine

**TUESDAY MAY 22 –  
FRIDAY MAY 25 2018**

**HÔTEL BONAVENTURE, MONTRÉAL, QC**



the CANADIAN PAIN SOCIETY  
la SOCIÉTÉ CANADIENNE de la DOULEUR

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Société canadienne de la douleur**

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