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- EXECUTIVE SUMMARY -

Pain Program Annual Report 2015

The year 2015 was pivotal in the history of the Western Pain Program. Dwight Moulin took on a third and final term as the Earl Russell Chair with a promise to change the research mandate from neuropathic pain to musculoskeletal pain. The focus on neuropathic pain has served us well over the past 10 years. With the support of the Canadian Pain Society, we provided the nucleus for Canadian Consensus Guidelines for the pharmacological management of neuropathic pain and citations indicate they have had a substantial impact on pain management. The original guidelines paper published in 2007 has been cited more than 250 times and the revised guidelines published in 2014 have already been cited 35 times. Our national Neuropathic Pain Database (NePDAT) continues to flourish with 5 papers published or in press and 3 further papers submitted for publication. In keeping with the transition to a musculoskeletal research focus, the annual Earl Russell Trainee Grant Award for 2015 went to Anusha Ratneswaran who is a PhD student in the lab of Dr. Frank Beier - Canada Research Chair in Musculoskeletal Research at Western. Their project involves pharmacological inhibition of osteoarthritis in a rat model. On the clinical side, we will be supporting research in chronic neck and back pain including the studies of Dr. David Walton and Dr. Eldon Loh on whiplash-associated neck pain.

Our programs in undergraduate and postgraduate pain education continue to evolve and impact pain management. Our undergraduate Pain Medicine Course in 4th year is part of the newly established Integration and Transition Course. New topics include: pain in primary care, chronic pain in the elderly, the role of cannabinoids in pain management and the critical issue of pain assessment and management in the addicted patient.

There are also clinical highlights to report. We have been deficient in the management of pediatric pain but as of 2015, this is no longer the case! With support from the Ministry of Health, a Pediatric Pain Service was established at Children’s Hospital of Western Ontario. This is a multidisciplinary clinic involving psychologists, social workers, and physicians including Dr. Raju Poolacherla – an anesthesiologist who has specialized training in pediatric pain.

Dwight Moulin, M.D., FRCP(C), Earl Russell Chair, Western Pain Program
Face Page
Dr. Qutaiba Tawfic, Assistant Professor in the Department of Anesthesia and Perioperative Medicine, illustrates relevant anatomy for a patient in the Fluoroscopy Suite in the St. Joseph’s Health Care Pain Clinic.

- SCIENTIFIC ADVISORY BOARD MEMBERS -

**Dr. Geoff Bellingham** completed residency in anesthesia and perioperative medicine at Western University. This was followed by a fellowship in chronic pain at the University of Toronto at the Wasser Pain Management Centre. Dr. Bellingham’s focus during the fellowship was on the use of ultrasound guidance for interventional pain management in addition to other established interventional pain management techniques using fluoroscopy. Currently, he holds pain clinics in which patients are managed using pharmacotherapy in addition to using other resources available such as psychotherapy and physiotherapy. Interventions using ultrasound are integrated into these clinics and separate interventional days are held at the pain clinic’s dedicated fluoroscopy suite. Dr. Bellingham is also the present program director of the Chronic Pain Fellowship and is presently working to establish a Royal College accredited Pain Medicine Residency program.

**Dr. Collin Clarke** is an Assistant Professor in the Department of Anesthesia and Perioperative Medicine at Western University. Following the Completion of his anesthesia residency at Western University, Collin completed an Interventional Pain Management at Duke University Medical Centre in North Carolina. During his fellowship, he focused primarily on the management of Complex Regional Pain as well as fluoroscopically guided interventions for the management of spinal mediated pain syndromes. Currently, he operates a pain clinic out of St. Joseph’s Health Care that involves both pharmacotherapy as well as a variety of interventions for treatment and management of a variety of pain syndromes. His research interests focus on functional imaging for the interpretation of pain pathways. He continues as the Chair of Chronic Pain Section for the Canadian Anesthesia Society.
Heather Getty earned her Ph.D. in Adult Clinical Psychology at the University of Windsor. Her training including her Pre-doctoral Residency at the London Health Sciences Centre has involved work in both traditional mental health treatment settings and in clinical health psychology programs for the treatment of chronic sleep and pain disorders. She was Postdoctoral Fellow in the Pain/Anxiety program at St. Joseph’s Health Care 2002-2005 where she researched psychosocial predictors of disability among individuals with chronic pain. She conducts treatment, research and education at the St. Joseph’s Health Care Pain Management Program.

Gloria Gilbert, Gloria continues her involvement with the Western Interdisciplinary Pain Program as a community representative. A physiotherapy graduate of both McGill University and Western, Gloria opened the first private physiotherapy practice in London in 1982. Although she is no longer accepting new patients, Gloria consults on medico-legal matters (personal injury) and has continued to develop community-based education initiatives for both patients and their health providers. A long anticipated website Don’t Go to The Ouch will launch in the summer of 2016. Gloria continues to explore the probability that a cohort of patients with persistent post traumatic neck pain have also sustained a mild traumatic brain injury (mTBI) - compromising rehabilitation efforts. Her inter-disciplinary team has expanded to include occupational therapists, optometrists and speech-language pathologists. Gloria is the newsletter editor and Executive member of (CAPM), Canadian Academy of Pain Management (www.canadianapm.com) and is credentialed as a Fellow of both the American and Canadian Academies. She is also a Life Member of the Canadian Physiotherapy Association.

Dr. Patricia Morley-Forster is a Professor of Anesthesiology and Perioperative Medicine at Western University. In February 2002, she was appointed as the inaugural Earl Russell Chair of Pain Research and Medical Director of the Comprehensive Pain Clinic at St. Joseph’s Health Care London. Past research in the area of pain has been on the use of non-steroidal anti-inflammatory medication for postoperative pain relief and PCA opioids in labour analgesia. From 1990-2000, she was the Director of Obstetric Anesthesia at Western University before undertaking fellowship training in cancer pain management and chronic pain at the Wasser Clinic in Toronto. She is keenly interested in education in Pain Management and is the Chair of the Royal College Working Group in Pain Medicine, a committee that has established a two-year accredited residency in Pain Medicine. Current research and clinical interests are neuropathic pain, acute pain management in chronic pain patients and topical analgesics.
Dr. Dwight Moulin is a Professor in the Departments of Clinical Neurological Sciences and Oncology and the Earl Russell Chair of the Pain Medicine Program at Western University. He is also the Medical Director of Pain and Symptom Management at the London Regional Cancer Program in London, Ontario. His research interests include randomized controlled trials to determine the role of opioid analgesics in the management of chronic pain and observational studies to assess the impact of chronic pain in a variety of chronic neurological disorders. Current research projects include the role of intravenous lidocaine in the treatment of chronic pain and long term outcome of the management of neuropathic pain. He has chaired the Neuropathic Pain Special Interest Group of the Canadian Pain Society since 2005 and was the lead author of national consensus guidelines for the management of neuropathic pain in Canada.

Dr. Warren Nielson is an Adjunct Professor of Psychology at Western University. His research interests are in psychological factors associated with chronic pain, particularly in relation to Rheumatoid Arthritis, Osteoarthritis and Fibromyalgia Syndrome. He is also a member of the Canadian Scleroderma Research Group and on the Editorial Board of the Journal of Pain. Current studies focus on factors that influence outcomes of multidisciplinary treatment programs and motivational factors in pain self-management. Dr. Nielson is a Fellow of the Canadian Psychological Association.

Keith St. Lawrence focused his research on developing imaging methods for studying brain function under normal and disease conditions. I have a particular interest in near-infrared spectroscopy and magnetic resonance imaging since these modalities are non-invasive and extremely safe. As such, they can be adapted to a variety of applications ranging from functional brain mapping to early detection of brain ischemia. In terms of pain imaging, our team has been a leader in the application of a novel MRI-based blood flow technique for mapping the neural correlates of pain. Our current research focus is on using this technique to study the longitudinal changes in brain activation associated with chronic pain.
MISSION -

- To provide exemplary clinical care in prevention and treatment of debilitating pain states
- To continually improve pain management through research and education

VISION -

The Interdisciplinary Pain Program at Western University identifies the study of pain as a priority that bridges academic disciplines. Integrating the fields of acute and chronic pain will encourage the development of new paradigms for prevention and treatment of chronic pain. Individuals with persistent chronic pain will be provided with timely access to an academic, research-focused facility with linkages to the community to promote continuity of care.

VALUES -

- We understand that each individual’s experience of pain is unique, affecting their work, their life and relationships in a complex manner.

- We believe in a broad interdisciplinary perspective on the understanding and treatment of pain.

- We value evidence-based practice.

- We support the ongoing search for and dissemination of knowledge in pain management.
- AWARDS -

**Eldon Loh**


**David Walton**

2014-2015 2-year tenure as Secretary for Education SIG of International Association for the Study of Pain.

2015-2016 Modeling the Transition from Acute to Chronic Pain Using Stress-System Dysregulation as a Framework. Canadian Pain Society Early Career Research Award.

**Robert Teasell**


- RESEARCH FUNDING -

**Collin Clarke**

Clarke C, Canadian Institutes of Health Research. Development of a Perfusion MRI Technique to Investigate Longitudinal Effects of Chronic Pain on Brain Function, April 2012 – April 2016, $558,534 (co-investigator at Western)

**Eldon Loh**


**Patricia Morley-Forster**


Morley-Forster PK. Internal Research Fund – Dept. of Anaesthesia and Perioperative Medicine. Serum Ketamine Levels after Low-dose Oral Ketamine for Chronic Neuropathic Pain, 2014 – 2015, $10,000.00 (co-investigator at Western)

**Dwight Moulin**

Moulin DE. Canadian Institutes of Health Research. Development of a Perfusion MRI Technique to Investigate Longitudinal Effects of Chronic Pain on Brain Function, 2012 – 2016, $558,534 (co-investigator at Western)
### Moulin DE

- **CIHR – Patient-Oriented Research Program, Nova Scotia Health Research Fund, Dalhousie University.** Methadone for Neuropathic Pain – Double-Blind, Randomized, Controlled Trial, 2013 – 2016, $602,633 (co-investigator at Western)

- **Pfizer Canada Inc. Neuropathic Pain Database (NePDAT) – Long Term Study of the Outcome of Chronic Neuropathic Pain in Primary Care, 2013 – 2015, $500,000 (co-investigator at Western)

- **Management of Chronic Neuropathic Pain Syndromes: A Network Meta-Analysis.** Canadian Institutes of Health Research, April 2014 – April 2015, $100,000 (co-investigator at Western)

- **The Risk of Community-Acquired Pneumonia Among Immunosuppressive Opioid Users.** Canadian Institutes of Health Research, June 2014 – June 2016, $112,034 (co-investigator at Western)

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### Warren Nielson

Canadian Institutes of Health Research, Emerging Team Grant: Rare Diseases. “Emerging Team: The Scleroderma Patient-Centered Intervention Network” Brett Thombs, $1,500,000 (in addition to $205,000 partner funding from McGill University Faculty of Medicine ($125,000), the Lady Davis Institute for Medical Research of the Jewish General Hospital ($75,000) and the Scleroderma Association of British Columbia, 2012-2017 ($5,000), (principal investigator)

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### Frank Prato

NSERC Discovery Grant. Biological effects of Weak Extremely Low Frequency Magnetic Fields, 2014-2019, $210,000

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### Keith St. Lawrence

St. Lawrence K. Development of a Perfusion MRI Technique to Investigate Longitudinal Effects of Chronic Pain on Brain Function. Canadian Institutes of Health Research, April 2012 – 2016, $558,534 (principle investigator)

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### David Walton


- PUBLICATIONS -

**Peer-Reviewed Articles**


- PUBLICATIONS -

Non-Peer Reviewed


Mehta S, Loh E, Walton DM.


Abstracts


Mehta S, Rice D, Serrato J, Janzen S, Getty G, Shapiro AP, Morley-Forster PK, Sequeira K, Teasell R. Mood and disability among a subgroup of chronic pain individuals with high experiential avoidance and


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- **NATIONAL AND INTERNATIONAL PRESENTATIONS AND WORKSHOPS** –

**Clarke C**. Moderator at Canadian Anesthesia Society Chronic Pain Section. June 21, 2015. Ottawa

**Clarke C**. Instructor at Canadian Society of Anesthesia, Annual Meeting. June 21, 2015. Ottawa

**Clarke C**. Instructor at Toronto Western Hospital Pain Medicine Workshop. April 18-19, 2015. Toronto.


Levine A, Parrent AG, MacDougall K., Successful long-term nerve root stimulation for chronic neuropathic pain: a real world, single centre canadian experience. INS International Neuromodulation Society World Congress, Montreal, Quebec, June, 2015


Racine, M., Comment gérer les personnalités difficiles: Bref survol sur les troubles de la personnalité en contexte de soins., Midis conférences, Unité de médecine familiale de l’hôpital Charles LeMoyne, Saint-Lambert, Quebec, October 2015


Tawfic QA. "Progression from acute to chronic pain: can we stop it? CME, Department of Anesthesia, Southlake Regional Health Centre, ON, Canada. Nov.18th,2015.


<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Conference/Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walton DM.</td>
<td>Triangulating the pain experience for improved clinical decisions. Brain-U: Updates on understanding pain and the brain, University of Western Sydney, Australia. 2015.</td>
<td></td>
</tr>
<tr>
<td>Walton DM.</td>
<td>The Satisfaction and Recovery Index as a new generic measure of health-related satisfaction: development and preliminary validation.</td>
<td>Podium presentation, World Confederation of Physical Therapy World Congress Singapore. 2015</td>
</tr>
</tbody>
</table>
- UNDERGRADUATE EDUCATION PROGRAM -

The Western Pain Program continues to be very active in pain education at the undergraduate level. The Pain Medicine Course is part of the newly established Integration and Transition Course delivered in 4th year. This course involves 10 seminars given over a total of 15 hours. New topics include pain in primary care, chronic pain in the elderly, the role of cannabinoids in pain management and the critical issue of pain assessment and management in the addicted patient. Competency in this course is being assessed by an examination involving 30 multiple choice questions.

- POSTGRADUATE / FELLOW EDUCATION PROGRAM -

Clinical Pain Rounds are held quarterly for Residents, Fellows and Faculty. The format involves 2 case presentations and a thorough discussion of management by a multidisciplinary team including Anaesthesiology, Neurosurgery, Psychology and Rehabilitative Medicine. This continues to be an excellent educational forum for discussion of particularly challenging cases in pain management.

Western University carries the distinction of initiating the Royal College Pain Medicine Subspecialty Program. The first two residents in this program in Canada will complete their fellowship training in 2016. Dr. Geoff Bellingham is the Program Director at Western and has established a very solid foundation for training in pain research and management at the Royal College level.

- CONTINUING MEDICAL EDUCATION PROGRAM -

The westernpain.ca website continues to be very informative and user friendly. The history of the Western Pain Program including the establishment of the Earl Russell Chair in Pain Management is on the website. Various pain rounds, the annual reports of the Western Pain Program and the awardees of the Earl Russell Trainee Grant competitions are also included in the Western Pain website with regular updates.

Interdisciplinary pain rounds (held monthly) and conferences continue to be very popular and are held in the Thompson Amphitheatre at St. Joseph’s Hospital. A list of seminar topics and lectures follows.
- INTERDISCIPLINARY PAIN ROUNDS AND CONFERENCES 2015 –

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>February 25</td>
<td>Mindfulness meditation – what it is and how it can help our patients with chronic pain. Partridge K.</td>
<td>Interdisciplinary Pain Rounds.</td>
<td>London, Ontario</td>
</tr>
<tr>
<td>April 22</td>
<td>Chronic pelvic pain and sacral neuromodulation. Elterman D.</td>
<td>Interdisciplinary Pain Rounds.</td>
<td>London, Ontario</td>
</tr>
<tr>
<td>May 27</td>
<td>Psychological distress among chronic pain vs. rheumatoid arthritis individuals. Mehta S.</td>
<td>Interdisciplinary Pain Rounds.</td>
<td>London, Ontario</td>
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<td>September 23</td>
<td>Treatment resistant CRPS: To amputate or not to amputate. Cassidy C and Viana R.</td>
<td>Interdisciplinary Pain Rounds.</td>
<td>London, Ontario</td>
</tr>
<tr>
<td>October 28</td>
<td>The implementation of a transitional pain service. Clarke H.</td>
<td>Interdisciplinary Pain Rounds.</td>
<td>London, Ontario</td>
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