



## Allevio Experts Materials

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## Allevio Experts Team Members Bios – Spring 2016

### **Medical Director: Dr. Kevin J. Smith – Anesthesia, Pain Management**

- Dr. Smith is our leading Chronic Pain expert and our Medical Director.
- Qualified as an expert witness on Chronic pain in court and has a 10+ year career in the space.
- General Anesthesiology at Rouge Valley Health System, consultant in acute and chronic pain management: particular interest in diagnosis and management of spinal pain.
- Dr. Smith is seasoned, tested, and clear-speaking.

Areas of interest: complex chronic pain conditions, neuropathic pain, spinal pain

### **Dr. Mark Friedlander – Anesthesia, Pain Management**

- Anesthesiologist actively practicing General Anesthesia at North York General Hospital and Pain Management at Allevio.
- Clinical and Research Fellow in Anesthesia and Pain Management
- Qualified as an expert witness, 8+ years experience.

Areas of interest: chronic pain, neuropathic pain, fibromyalgia

### **Dr. Michael Gofeld - Anesthesia, Pain Management**

- Staff Anesthesiologist, Department of Anesthesia, St. Michael's Hospital
- Assistant Professor, Anesthesia, University of Toronto
- President and Chairman of Board, American Academy of Pain Medicine Ultrasonography
- Current Headache and Pain Reports (Section Editor) and associate Editor for Pain Practice Regional Anesthesia and Pain Medicine

Areas of interest: complex chronic pain conditions, neuropathic pain, spinal pain

### **Dr. Harsha Malempati – Orthopedic Surgery (Spine and General Orthopedics)**

- Dr. Malempati collaborates closely with the Allevio Clinical team.
- Appointments at Sunnybrook Health Sciences Centre and MacKenzie Health-Richmond Hill.
- Practice includes orthopaedic trauma, spine trauma, and all adult elective spine pathologies.
- Published author in spine surgery.

Areas of interest: orthopedic injuries, spinal trauma, spinal pain



**Dr. Latham – Orthopedic Surgery (Foot and Ankle)**

- Specialist Orthopedic Surgeon; he completed a fellowship in hip and knee surgery in 2007, followed by a fellowship in foot and ankle surgery at Toronto Western Hospital.
- Full-time active staff at the Scarborough Hospital and privileged at Toronto Western Hospital.
- Published author in foot and ankle surgery. Trains fellows from the University of Toronto at Scarborough Hospital.

Areas of interest: foot and ankle injuries

**Dr. Rahul Pathak – Neurology, Interventional Pain Management**

- Specialty training in Neurology and Interventional Pain Management.
- Consultant in interventional pain management at Allevio Pain Management Clinic in Toronto

Areas of interest: migraines, chronic pain, neurological / pain complaints

**Dr. Allan Swayze – Psychiatry**

- Currently a consultant Psychiatrist at North York General Hospital.
- Assistant Professor of Psychiatry for the University of Toronto since 1977.
- He is an experienced independent medical assessor in both plaintiff and defence work and is trial tested.

Areas of interest: chronic pain, post traumatic stress, depression, anxiety, conversion disorders, CAT

**Dr. Matthew Plant – Plastic Surgeon**

- Full time Plastic Surgeon for Orillia Soldiers' Memorial Hospital and provides emergency coverage at Rouge Valley Health.
- Seminar Leader at the University of Toronto
- Director of Plastic Surgery for the Clearview Institute.

Areas of interest: all hand and wrist injuries, scarring, burns, peripheral nerve injuries, bed sores

For more information or referrals, call Alyssa Cooper at (416)840 5990 ex 24  
alyssa.cooper@allevioclinic.com



## Allevio Experts Fees for Services

### Independent Assessment Fees:

Report type	Fee	Loss	Documentation	Pre accident history
<b>Basic Chronic Pain assessment</b>	\$3950.00	MVA < 2 years	Standard	Unremarkable
<b>Intermediate Chronic Pain assessment</b>	\$4725.00.00	MVA 2+ years	Moderate	Positive but not complex / extensive
<b>Complex Chronic Pain assessment</b>	\$5775.00	MVA / CAT Personal injury Med/Mal	Extensive	Significant / complex
<b>Minor Injury Guideline Report/rebuttal</b>	\$950.00			
<b>Psychiatry and Neuropsychology assessments</b>	\$6250.00 +			
<b>CAT determination</b>	7000.00 +			
<b>Paper review / Addendum / Other</b>	\$500 /hr			



### **Treating Physician reports and Integrated Pain Management**

<b>Report type</b>	<b>Fee</b>	<b>Covers</b>	<b>Documentation</b>
<b>Treating Physician report</b>	\$500-\$1000	Treatment questions	Our clinical notes and record
<b>Treating Physician Medical Legal report</b>	\$500/hr	Diagnosis, Treatment, Prognosis, Causation, Benefits etc.	CNR's plus any additional provided documentation
<b>MIG report</b>	\$950.00	Minor Injury Guideline	Questionnaire, interview and examination
<b>3 week Pain Management Educational Program</b>	\$6200.00	Education, psychoeducation, support, self management	CNR's Outcome measures Reports



### **Allevio Experts Deposit and Cancellation Policy**

1. Unless waived, a deposit of \$2000 is required for all regular assessments and paper reviews
2. Deposit is forfeited for cancellation < 5 business days' notice, or when criteria for credit are not met (see #3).
3. Deposit is credited to next booking, IF following conditions are met:
  - Appointment cancelled with greater than 5 business days' notice, and
  - Appointment filled by same firm, and
  - Brief and pain questionnaire are available at least 5 business days in advance.
4. Exceptional consideration is given for:
  - Unexpected illness (i.e. too much pain is not an acceptable cancellation)
  - Family or personal emergency
  - At discretion of Allevio Experts

**Kevin J Smith, MD, FRCPC**

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North York, Ontario M3B 3S6

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Experts@AllevioClinic.com

**EMPLOYMENT**

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<b>Allevio Pain Management Clinic</b> Chair Medical Advisory Committee, Medical Director	2011 - Present
<b>Rouge Valley Health System – Ajax and Pickering &amp; Centenary</b> Department of Anesthesia, Active Staff	2004 - Present
<b>Ajax Anesthesia Pain Clinic</b> Director, Chronic pain management	2004 - Present
<b>Ontario Shores Mental Health Centre</b> Department of Anesthesia, Active Staff	2004 - Present
<b>The Scarborough Hospitals – General Division</b> Department of Anesthesia, Courtesy Staff	2003 - 2011
<b>Advanced Cardiac Life Support Instructor</b> Instruct health care providers in the skills of emergency resuscitation	2001 - 2004

**EDUCATION**

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<b>Schulich School of Business</b> Physician Leadership Development Program, OMA Masters Certificate	2012 - 2013
<b>The Centre for Clinical Leadership</b> Anesthesia Leadership Initiative, Peter Minich MD	2010
<b>University of Toronto</b> Physician Leadership Program, Health Policy, Management & Evaluation,	2008
<b>McMaster University</b> Department of Anesthesia, Residency Program	1998 - 2003
<b>University of Calgary</b> Faculty of Medicine, Medical Degree	1995 - 1998
<b>University of Calgary</b> Faculty of Management	1994 - 1995
<b>University of Alberta</b> Bachelor of Science, Major - Biological Sciences	1990 - 1994
<b>Western Canada High School</b> Advanced High School Diploma, International Baccalaureate Program	1987 - 1990



## PROFESSIONAL AFFILIATION

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<b>McMaster University, Department of Anesthesia</b> Assistant Clinical Professor - Adjunct	2011 - Present
<b>College of Physicians and Surgeons of Ontario</b> OHPIP Facility Assessor	2012 - 2013
<b>Promed Evaluations</b> Independent Medical Evaluations, Chronic Pain	2010 - 2013
<b>Access Rehab</b> Independent Medical Evaluations, Chronic Pain	2010 - 2013
<b>Allied Med Trauma Evaluations</b> Independent Medical Evaluations, Chronic Pain	2006 - 2011
<b>Regain Health Pain Management Program</b> Clinical Director	2006 - 2010
<b>The Shapero Markham Headache and Pain Treatment Centre</b> Chronic pain consultant; diagnostic interventional pain management	2008 - 2009
<b>The Rehab Centre, Dr. A. Kachooie</b> Chronic pain consultant	2004
<b>The Scarborough Hospital</b> Independent chronic pain practice	2003 - 2004

## COMMITTEES/INVOLVEMENT

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• Physician Payment Review Board, Vice Chair	2014 - Present
• Negotiations Committee, OMA	2013 - Present
• Physician Services Committee, OMA-MOHLTC	2013 - Present
• Chronic Pain Working Group, C-Chair, OMA-MOHLTC	2013 - Present
• Physician Payment Review Board, OMA Member	2012 - Present
• Education and Prevention Committee, Co-Chair, OMA-MOHLTC	2011 - Present
• OMA Section on Anesthesiology, Executive member	2009 - Present
• Surgical Program Clinical Quality Committee, RVHS	2009 - Present
• Negotiations Team 2012, OMA, Interviewee	2012
• Flow Improvement Team, Ajax Hospital	2008 - 2009
• OMA Section on Anesthesiology, Tariff Chair	2006 - 2009
• Department of Anesthesia, Treasurer, Ajax Hospital	2005 - 2009
• Physician Services and Payment Committee, OMA-MOHLTC	2008
• Director, Acute Pain Service, Scarborough General	2003 - 2004

## MEMBERSHIP

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- American Society of Regional Anesthesia and Pain Medicine
- Canadian Anesthesiologists' Society
- College of Physicians and Surgeons of Ontario
- Ontario Medical Association
- Royal College of Physicians and Surgeons of Canada

## ACADEMIC OPPORTUNITIES

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- |   |                       |
|---|-----------------------|
| • ACLS, Sunnybrook HSC  | April 2011            |
| • Centre for Clinical Leadership, Peter Minich                  | September 2010        |
| • HPME, University of Toronto                                   | October/November 2008 |
| • Training on Radiofrequency Procedures, Sunnybrook             | August 2006           |
| • Dr. Gil Faclier, Sunnybrook, Invasive Chronic Pain Procedures | June 2006             |
| • Peripheral nerve blocks, Toronto Western Hospital             | October 2004          |
| • Botox for pain management, Dr. Ian Finkelstein                | December 2004         |
| • ACLS Instructor's Course                                      | 2001                  |
| • ACLS  | 2011, 1998            |
| • ATLS  | April 1999            |

*References available upon request*



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240 Duncan Mill Road Suite 101  
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Telephone: (416) 840-5990 Fax: (647) 427-4100

## INDEPENDENT CHRONIC PAIN ASSESSMENT

### FOR:

Mr. XXX

### RE:

First Lastname

Date of Birth:

Date of Accident:

Date of Assessment:

Date of Report:

### ASSESSOR:

Dr. Kevin J. Smith, M.D., F.R.C.P. (C)

Anesthesiology & Chronic Pain Management

**INDEPENDENT CHRONIC PAIN ASSESSMENT:**

Dear Mr. XX

**PREAMBLE:**

This is to certify that I, Dr. Kevin Smith, am a licensed medical practitioner in the Province of Ontario. I am a specialist in Anesthesiology by virtue of a fellowship with the Royal College of Physicians and Surgeons of Canada. I obtained my medical degree at the University of Calgary in 1998 and completed specialty training in Anesthesiology at McMaster University in 2003. In addition to my practice in General Anesthesiology at Rouge Valley Health System, I am a consultant in acute and chronic pain management and have particular interest in the diagnosis and management of spinal pain. I am the Medical Director and a staff consultant of the Allevio Pain Management Clinic, as well as the Ajax Pain Clinic (at Rouge Valley Health), providing the assessment and management of chronic pain conditions. I dedicate 60-80% of my practice towards clinical care and 20-40% towards administrative and political responsibilities and medico-legal assessment.

This third party assessment was performed at the office of Allevio Pain Management, 942 - 275 Slater Street, Ottawa, Ontario, K1P 5H9.

The client understands the nature and purpose of this independent medical evaluation. The assessor/client relationship was explained and was fully understood. Verbal consent for release of this report was obtained. The client's identity was confirmed with her driver's license.

The history outlined below was related to me during this assessment. The documentation forwarded to me was also reviewed and is listed in the appendix, with a description of specifically relevant items summarized below under "Summary of Relevant Documentation."

It should be noted that this report is based upon the presumed truthfulness of the client. If there have been distortions or inaccuracies in the client's reporting, diagnostic impressions and conclusions could be altered.

The client has been advised that upon request a copy of this report can be forwarded by the client's lawyer to the primary family physician to consider any medical recommendations made during this assessment.

Please note that the term **possible** in this report is referring to an anticipated outcome or result of less than 50% and the term **probable** is referring to an anticipated outcome or result of greater than 50%.

A signed Form 53 (Acknowledgment of Expert's Duty) and full CV are attached.

**INSTRUCTIONS PROVIDED:**

I have been instructed to review the documentation forwarded to me, assess this client, and provide a detailed chronic pain report summarizing my findings and opinion.

**NATURE OF OPINION SOUGHT:**

I have been asked to perform this assessment specifically to address the issues of diagnosis, prognosis, whether the client is employable, whether the client requires assistance with housekeeping activities and treatment recommendations as they relate to the motor vehicle accident on the indicated date of loss.

**DOCUMENTATION PROVIDED:**

See appendix

**DOCUMENTATION REVIEWED:**

Affidavit of Documents 1:

1. CNR's Dr. (GP)
  - Regular visits between 2008 and 2011 pre-accident – mostly related to HTN, peri-menopausal symptoms
  - October 4, 2010 – back pain, note "LBP 7 months ago"

- January 3, 2011 – MVA, driver struck by a truck passenger side, neck and back pain most of the night.
  - January 4, 2011 – X-ray – mild spondylosis C5-6, mild degenerative changes and spondylosis L3-4 and L4-5, with mild facet degenerative L4-5 and L5-S1.
  - July 13, 2011 – physiotherapy and massage ongoing, left forearm pain, neck pain,
  - September 13, 2011– feels down since MVA, can't complete previous activities, referral for psychology/CBT
  - December 13, 2011 – note indicating that she fell down at home, bruised right forearm and lower back. No more improvement with physio.
2. December 21, 2011 Psychology assessment Dr.
- Complaints of neck pain, left arm pain, low back pain, left leg, headaches, poor sleep.
  - Adjustment disorder, rule out depressive disorder and generalized anxiety disorder
  - Psychotherapy recommended, Treatment plan for 10 sessions
  - Tests results felt to be valid
3. CNR's Physiotherapy Clinic
- January 19, 2011 intake – lower back pain, wrist pain, neck pain, upper back pain
  - February 2, 2011 assessment report – lower back pain, left wrist hand pain, neck pain. Plan – neck and back exercise program, cardio program, education, modalities.
4. Updated CNR's Dr.
- February 14, 2011 MRI lumbar spine – minimal disc bulges at L4-5 and L3-4
  - January 24, 2012 EMG – limited as she refused the nerve conduction, EMG normal.
5. CNR's Dr. Psychologist – copy of report and treatment plans and handwritten progress notes
6. April 10, 2012 IE Multidisciplinary of Dr. XX (re IRB)
- Complaints were recorded as: lower back, neck pain, numbness in left hand, headaches. FAE results were felt to represent inconsistent effort.

- Psychology results indicate – Pain Disorder, adjustment disorder, vehicle related anxiety. Psychologist felt that she would have difficulty with employment, caregiving and housekeeping as a result of her pain and fatigue but no substantial inability to perform employment.
- Opinion was that she does not suffer a substantial inability to perform pre accident employment.

7. May 22, 2012 IE Psychiatry of Dr. XX

- Dr. XX is of the opinion that she remains with a substantial inability with carrying out her job. She is encouraged to use pacing and continue to attempt pre accident

Second Supplementary Affidavit of documents:

1. April 4, 2013 Psychology progress report Dr. Psychologist – despite treatment her depression and anxiety continues to be in the severe range - 16 additional sessions recommended.
2. May 30, 2013 IE OT IHA (OCF-18 for assistive devices)
  - Assistive device is not felt to be reasonable, as it does not address neck position, a bookstand is recommended. In addition, a pain management program is recommended.

Third Supplementary:

1. October 3, 2013 Progress report Physiotherapy (Tab 5) – report indicates that there has been no significant improvement with treatment. An MRI to further investigate symptoms is recommended.
2. Updated CNR's Dr. XX
  - August 13, 2012 General rehabilitation clinic consult report Dr. XX – Clinical impression of myofascial pain with active trigger points in the trapezius muscles, ongoing muscular low back pain, WAD II. Chronic pain. Pain management strategies discussed including medication, swimming, physiotherapy and education.
  - August 21, 2013 right big toe x-ray – OA changes

Fourth Supplementary:

1. CNR's Dr. XX Sports Medicine – January 20, 2014 – Ongoing reports of: chronic neck and shoulder pain, low back pain radiating left leg. MRI right ankle, may benefit from cortisone injections in peroneal and post tibial area.
2. January 31, 2014 EMG re left CTS – normal

#### Fifth Supplementary

1. Updated CNR's Dr. XX
  - February 21, 2014 MRI right ankle – Achilles tendinopathy. Synovitis within the retrocalcaneal bursa.
  - April 2, 2014 – right ankle pain worse than left, swelling
2. File from The Gym Club – gym membership and visits dates
3. Updated CNR's The Hospital
  - March 27, 2009 ER record – presenting with atypical chest pain
  - June 14, 2009 ER record – presenting complaint of upper extremity pain, left hand swelling and pain, ?carpal tunnel
  - January 7, 2011 X-rays left forearm, left hand and left wrist
  - January 17, 2011 ER record – MVC 2 weeks ago, right forearm injury, x-rays no fracture
  - January 17, 2011 X-ray left forearm and wrist – no fracture or dislocation
  - February 14, 2011 MRI lumbar spine – minimal disc bulges at L4-5 and L3-4
  - May 8, 2013 EMG re numbness in left hand – normal
4. November 26, 2014 OT report
  - Ongoing: right lower leg pain and lower back pain
  - Recommendation to continue biweekly OT, assistive device personal training, psychology, chiropody
5. CNR's Independent Case Management Services
6. Updated CNR's Dr. XX
  - June 11, 2014 MRI right ankle – retrocalcaneal lobulated bursal fluid with surrounding soft tissue edema and internal synovitis as well as suspected small erosion anterior to the calcaneal insertion of the Achilles tendon
7. CNR's Psychological Services
8. Updated CNR's Dr. XX



- September 11, 2014 MRI cervical spine – small disc protrusion at C4-5, C5-6 and C6-7

9. January 8, 2015 IME Dr. XX

- Documents and treatment summary reviewed in detail
- Dr. XX's opinion questions role of MVA with forearm pain and hand numbness, documents indicate it was not immediate
- He opinions that knee pain is not accident related as well as left ankle and foot pain
- Conclusion that Chronic pain syndrome triggered by MVA interfering with all aspects of life

Additional documentation:

1. CNR Dr. XX

- 2014-2015 Multiple entries re: right ankle synovitis
- Feb 11, 2015 Synovitis R ankle, possible medial meniscal tear L knee
- Mar 30, 2015 Low back pain, radiation L leg, L ankle, L knee, L ankle tender central plantar fascia
- April 29, 2015 pain L ankle, getting worse on R side; Cervical whiplash, plantar fasciitis, Achilles tendinitis; bone scan relatively normal
- Bone scan April 1, 2015 – minimal increased uptake lower left SI joint, probably represents degenerative bony change, slight increased uptake left knee possible enthesopathy, abnormal moderate increased uptake plantar left calcaneus suggestive of plantar fasciitis, minimal increased uptake posterosuperior right calcaneus suggestive of minimal enthesopathy at achilles tendon insertion
- MRI Left Knee March 26, 2015 – mild chronic MCL sprain, medial and patellofemoral compartment chondropathy, mild strain proximal medial gastrocnemius, lobulated fluid signal likely related to small ganglion or previous capsular injury
- MRI Right Ankle June 11, 2014 – retrocalcaneal lobulated bursal fluid with soft tissue edema and internal synovitis, suspected small erosion Achilles tendon

2. May 14, 2015 OT Update Report – severe increase in pain since last visit, pain and swelling left ankle and knee pain, excruciating pain sole of her left foot prevented from

walking safely in her home; cane ordered immediately; recommended OT every 1-2 weeks in home; attending Dr. for psychological and reports benefit; participating in personal training– Dr. put on hold and recommended physiotherapy for increase in pain.

3. Hospital CNR 2008 to present

- Mental Health Department notes
- December 1, 2014 – consultation – diagnosis major depressive episode with anxious features secondary to some significant changes in her life over past 3 years, rule out generalized anxiety disorder.

**HISTORY OF PRESENT INJURY AND TREATMENT COURSE:**

This client is a XX year-old right-handed woman who was involved in a motor vehicle accident on. She was the seatbelted driver of a Toyota with her two daughters that was struck on the passenger side by a truck in a T-bone fashion. The airbags did not deploy. The car was eventually repaired for several thousand dollars.

The client did not lose consciousness. Immediate symptoms and obvious injuries sustained include dizziness. After paramedics arrived she was found to have elevated blood pressure. Her daughters were quite upset so she preferred to return home to attend to their needs. By that evening she developed neck and back pain with some discomfort in her left arm, so she attended her Family Doctor, Dr. XX, the following day. She was sent for x-rays and referred for physiotherapy, which she initiated about one week later. She explained that the x-ray reported a small fracture on the left wrist, later re-assessed and told there was no fracture.

Since then, the client attended therapy for more than two years overall, with only short-lived benefit.

Dr. XX has managed her medications, including initiation of anti-depressants approximately three years ago. She has struggled with side effects from various medications, but reports that the anti-depressants helped somewhat.

She consulted with several physicians over the subsequent years, including Dr. XX for right ankle pain that developed approximately 1½ years ago. An MRI reported some synovitis, and she subsequently had a cortisone injection that exacerbated the pain. She recently attended a bone scan, but she is unaware of the results.

She then consulted with Dr. XX for the ankle and was informed that nothing could be done, apparently sent for tests for the liver.

She has had personal training at her home twice weekly for the past two years, with some subtle benefit, recently exacerbating her back pain and recently advised to cease training until another MRI is completed to rule out a possible compressed nerve.

She is pending approval for additional physiotherapy based on Dr. XX's recommendation.

She started seeing Dr. XX for psychotherapy several years ago, reporting some benefit with visits approximately every 2 weeks or as needed. Within the past year she also started seeing a Psychiatrist, Dr., attending approximately every 1-2 weeks for medical management and counseling, with some benefit.

She is currently on the wait list for the Chronic Pain Program at The Ottawa Hospital.

Investigations:

- January 4, 2011 – X-ray – mild spondylosis C5-6, mild degen changes and spondylosis L3-4 and L4-5, with mild facet degen L4-5 and L5-S1.
- January 7, 2011 X-rays left forearm, left hand and left wrist
- January 17, 2011 X-ray left forearm and wrist – no fracture or dislocation
- January 17, 2011 ER record – MVC 2 weeks ago, forearm injury, x-rays no fracture
- February 14, 2011 MRI lumbar spine – minimal disc bulges at L4-5 and L3-4 June 11, 2014
- June 11, 2014 MRI right ankle– retrocalcaneal lobulated bursal fluid with soft tissue edema and internal synovitis, suspected small erosion Achilles tendon
- September 11, 2014 MRI cervical spine – small disc protrusion at C4-5, C5-6 and C6-7
- Bone scan April 1, 2015 – minimal increased uptake lower left SI joint, probably represents degenerative bony change, slight increased uptake left knee possible enthesopathy, abnormal moderate increased uptake plantar left calcaneus suggestive of plantar fasciitis, minimal increased uptake posterosuperior right calcaneus suggestive of minimal enthesopathy at achilles tendon insertion

- MRI Left Knee March 26, 2015 – mild chronic MCL sprain, medial and patellofemoral compartment chondropathy, mild strain proximal medial gastrocnemius, lobulated fluid signal likely related to small ganglion or previous capsular injury

The client reports that her overall condition has declined since the accident with newer pain sites developing over time. She indicated that the left knee pain developed perhaps one year after the accident, and the right ankle pain perhaps 1 ½ years ago, explaining that because of her back pain and left leg radiation she was limping and that may have resulted in the knee and ankle pains. She reports that she has not had anything helpful for the pain per se, even though the depression is somewhat better on treatment.

#### **PREVIOUS ACCIDENT AND PAST MEDICAL HISTORY:**

The client reports being involved in no previous motor vehicle accidents and no major injuries. There is an otherwise unremarkable pre-accident medical history, notably without a reported history of chronic pain, depression or anxiety. She has pre-accident hypertension treated with medication and one episode of chest pain and hand pain that occurred in 2009. She explained that she was under a great deal of stress at that time due to concern over her family's safety in Lebanon and reported that she was likely depressed at the time; she did not require treatment and improved spontaneously, with no documented complaints of depression in Dr. XX's pre-accident notes. She also explained that prior to presenting to ER for the left arm pain she had been cleaning her son's room and pushed on his bed and strained the arm, resolving after a couple of days with Tylenol. She denied pre-accident back, neck or arm pain in the year prior to the accident, and she denies any pre-accident restrictions of any kind. She does not smoke and drinks alcohol seldom. Past surgeries include a C-section for her 6<sup>th</sup> child.

Reported medications include recent Xenical to lose weight, Zopiclone, Naproxen 500 mg OD, Bupropion, Robaxacet or Tylenol ES 6-8 per day, Coversyl and Voltaren gel 1-2 times per day. Previously attempted medications for pain control include Lyrica, discontinued due to stomach upset. Allergies are reported to no medications.

**SOCIAL HISTORY:**

The client was born in Iran and immigrated to Canada in 1991. She was educated to grade 12 and received 1/2 year of post-secondary education in Law, discontinued when she fled due to war. She lives with her husband of 30 years in their own home. Their relationship is significantly strained since the date of loss due to loss of intimacy due to pain. They have six children, with five living at home. The parental relationship is strained due to feeling short and impatient with them and less interested in participating in activities with them.

Socially, the client was previously active with family and friends. She enjoyed visiting friends often, working and cooking at the family restaurant, walking and participating in religious theatre in their community. Although not regular, she went to the gym on occasion to exercise, but she was very physically active at the gym in approximately 2008. Much of her time was spent managing their large family. Since the date of loss, the social activities have decreased significantly. This is due to persistent pain, loss of interest and feeling like being alone. She spends most of her day at home, feeling anxious and nervous with most activities and “screaming too much,” reporting that that was never her personality prior to the accident.

**FUNCTIONAL ENQUIRY:**

The client's weight has increased since the date of loss by 18-20 kilograms. The client's sleeping habits have worsened since the date of loss. She previously slept 7 restful hours per night, not requiring a sleep aid, but now sleeps 4-5 hours per night, waking 1-2 times due to pain. The client does not feel rested in the morning and spends 1-2 hours during the day resting due to pain. Concentration and memory have been somewhat worse. She does not have nightmares about the accident. She does not still feels scared to drive. The client's mood is described as sad, nervous, fatigued, irritable, angry, frustrated, unable to cope and wanting to be alone, somewhat improved on medication but still symptomatic. She has undergone extensive psychological counseling with Dr. XX, with some reported benefit, and has been attending a Psychiatrist as well.

**ACTIVITIES OF DAILY LIVING:**

The client reports usually being independent with self-care, including dressing, bathing and showering, but occasionally has difficulty changing her clothes or removing her shirt during flare-ups.

With respect to homemaking duties, she was fully independent prior to the accident without restrictions. She was the primary caregiver of the family and household, “taking care of everything.” Since the accident she has had to rely on her children and husband much more, reporting that two of her children take some time off work in order to help her. She has been provided some assistive devices through her Occupational Therapist, which help her manage chores. She has been getting OT help for approximately 3 years, finding it helpful. She is now capable of managing some dusting, vacuuming, dishes, folding laundry and light cooking. She finds it difficult to stand for long such that she cannot prepare full meals as she had before the accident. She requires frequent breaks in order to pace herself. She requires help with cleaning the bathroom, mopping, lifting laundry, making beds and all outdoor chores such as shoveling, lawn care and gardening.

With respect to care-giving duties, her children are independent, between ages 23 and 11. She reported having the greatest difficulty with her youngest daughter as she was still young at the time of the accident (and present in the vehicle) and the client was unable to maintain the same relationship with her personally or physically, such as being unable to lift or carry her any longer.

**OCCUPATIONAL HISTORY/STATUS:**

At the time of the accident, the client was working as an owner operator of the family restaurant, working 35 hours per week. They had run the business for more than 14 years. Demands of the employment included managing and assisting with cooking or shopping. Following the accident, the client has been unable to resume this work. She attempted to return to the restaurant on a few occasions to check on things, but she has felt too much pain, anxiety or loss of interest to stay or

help in any meaningful way. Due to financial strain and difficulty finding and affording chefs, they were forced to close the business approximately one year ago.

The client is currently not working. The client reports that she is focusing on trying to get healthier and feel better, hoping to return to work some day. As she feels unable to manage most chores at home without frequent breaks to pace herself, she feels incapable of returning to work.

### **CURRENT STATUS INCLUDING SYMPTOMS IN ORDER OF SEVERITY:**

The American Medical Association (AMA) guides to the evaluation of permanent impairment recommends that assessments for disability due to pain include reproducible methodologies to evaluate the severity of pain, activity restrictions, emotional distress and pain behaviours. Due to the complex interaction of physiological, psychological and social factors associated with musculoskeletal and, specifically, spinal disorders, it is difficult to evaluate these disorders through traditional biomedical techniques. As a consequence of this complexity, and because pain and disability are the most significant issues for injured patients, the evaluation of functional status is essential in the treatment of chronic disabling musculoskeletal disorders [Anagnostis et al]. Patient self-report is one means being increasingly relied upon to evaluate functional status. To incorporate these factors into this assessment, the client completed the following questionnaires:

#### **a. Pain Disability Questionnaire (PDQ)**

The PDQ [Anagnostis et al] is a simple and quick methodology for measuring the degree of impact that pain has on a person's ability to perform essential life activities, including housework, personal care, basic physical activities and social and recreational activities. The level of disability increases as the total point score out of 150 increases. The score can be divided into a physical component (out of 90 points) and a psychological component (out of 60 points).

The client scored the following:

Physical score	60/90 (Items 1-7, 12-13; Score >22/90 is above normal range)
Psychosocial score	50/60 (Items 8-11, 14-15; Score >15/60 is above normal range)



Total score                      110/150 (Score > 37/150 is above normal range)

This result suggests a finding consistent with Chronic Disabling Musculoskeletal Disorder (CDMD). Scores consistent with the CDMD group (range 72-120) are associated with a severe level of pain-related disability that has not responded to primary and secondary levels of treatment.

b. Pain Scores

The client reports overall pain levels ranging from 4/10 at its best to 9/10 at its worst, with an average pain score of 7/10.

Reported pain scores of 6-7 are considered moderately severe, 8-9 are considered severe and 10 is considered extremely severe or equivalent to the worst pain ever experienced by the individual. Most people report being able to generally cope with pain intensities up to 5-6, at which point function, quality of life and capacity to cope begin to deteriorate when the average pain is in this range or higher.

The following details the pain sites, in order of severity from worst to least.

- Low back pain

Described as intermittent but nearly daily lower left-sided back pain characterized as sharp, shooting and burning, radiating from the left low back to the left anterior thigh and knee. There is seldom numbness in the left foot. The pain is aggravated by prolonged sitting beyond 1-2 hours (requiring change in position), standing from a seated position, lifting, bending, walking more than 15-20 minutes, standing more than 15-25 minutes (initially only a few moments after the accident), climbing stairs and stress. The pain is alleviated by medication, rest and sleep. There is no associated bowel or bladder incontinence.

- Neck pain

Described as intermittent but nearly daily posterior neck pain characterized as hot/burning, notably with bending or leaning forward with the neck, such as while reading. The pain used to radiate from the neck to the right side of the head with numbness, since resolved and moving to the left side of the head, since resolving approximately 6 months ago. There was some left arm heaviness and pain that resolved approximately one year ago, with intermittent numbness and tingling of the fingers diffusely. The pain is aggravated by looking up, looking down, turning the head, reading and stress. The pain is alleviated by medication, sleep and rest.

- Right ankle pain, recently left ankle pain

Described as sharp and burning, developing perhaps 1½ years ago and diagnosed with synovitis. She then developed some left sided ankle and foot pain, burning on the bottom of the left foot. She is pending a new MRI to rule out nerve compression and has had a bone scan recently to look for sites of inflammation.

- Left knee pain

Described as intermittent left-sided knee pain characterized as sharp, with bending in particular.

c. Neuropathic Pain Questionnaires

a. DN4:

The DN4 questionnaire scored 5/10 based on one point for each of the following items related to neck and left arm pain: ☒ burning, ☐ painful cold, ☐ electric shocks, ☒ tingling, ☐ pins and needles, ☒ numbness, ☐ itching, ☒ hypoesthesia to touch, ☒ hypoesthesia to prick, ☐ brushing allodynia.

A score of at least 5/10 is generally consistent with neuropathic pain.

**PHYSICAL EXAMINATION:**

The client appeared well-groomed with a slightly limping and unsupported gait upon entering the examination room. Reported height was 165 centimetres and weight 80 kilograms. She appeared comfortable while sitting, but shifted approximately every 20-30 minutes, and moved to the examination table with visible discomfort, reporting that the back was very sore. Once standing, she stood for a few moments and stepped carefully, reporting that the pain is always worse until she makes a few steps. The affect appeared somewhat flat. She was extremely well-spoken, cooperative and forthcoming.

Examination of the head and neck revealed a very stiff posture, somewhat forward flexed. The temporalis, frontalis, masseter and occipitalis muscles were nontender. The occipital groove was nontender at the region of the greater and lesser occipital nerve bilaterally. There was tenderness to the trapezius and paracervical muscles on the left primarily (mild on the right), with some hypertonicity of the left trapezius muscle. Parathoracic muscles were tender on the left. Periscapular muscles were tender on the left. Range of motion of the cervical spine demonstrated flexion (chin to chest wall 5-6 cm), extension to 0-5 degrees, leftwards rotation to 45 degrees, rightwards rotation to 20-30 degrees, left lateral flexion to 15-20 degrees and right lateral flexion to 15-20 degrees. Spurling's maneuver was positive for left neck and trapezius/periscapular pain, not down the left arm. She complained of increasingly numb fingers of the left hand through the examination.

Examination of the upper extremities revealed slightly reduced light touch and normal grip/motor testing to the left arm, with reduced pin-prick diffusely through the left arm from deltoid to fingers compared to normal findings on the right. Biceps reflex was 1+, reduced, on the left, and 2+ on the right. Triceps reflex was 2+, normal, bilaterally. Range of motion of the shoulders was reduced for abduction to 120 degrees actively, 150 degrees passively and restricted mostly on the left due to increasing neck and shoulder pain, and external rotation to 75 degrees on the right and 60-75 degrees on the left. The appearance of the arms was normal, specifically no muscle wasting, swelling or discolouration.

Examination of the back revealed normal alignment and tender paralumbar musculature on the left. Flexion was fingertips to mid thigh, extension was to 0-5 degrees and lateral flexion was to

10-15 degrees bilaterally. Pain was reported with lateral flexion, extension and flexion, worst with extension or trying to bend beyond the thigh. The peri-sacroiliac soft tissue was very tender on the left. Provocative testing of the sacroiliac joints using the FABER maneuver revealed positive findings to the left joint for sacroiliac pain, and contralateral left severe back pain on testing the right joint. The lateral hips were nontender at the trochanters.

Lower extremity neurological examination was normal to light touch, pin prick and motor testing. Knee jerk testing was 2+, normal. Ankle jerk reflex was 2+, normal. Leg raise testing was normal bilaterally, limited by back pain only, associated with negative ankle dorsiflexion sign. The appearance of the legs was normal, specifically no muscle wasting, swelling or discolouration.

The left knee was tender medial to the patella with seemingly unrestricted flexion and extension. The left ankle was tender postero-laterally with seemingly unrestricted range. There was tenderness along the lateral and plantar surface of the calcaneus and the plantar fascia.

This client demonstrated the following observable pain behaviours:

- Facial grimacing with examination
- Holding or supporting the back after examination
- Limping gait
- Frequent shifting of posture or position
- Extremely slow movements and caution putting weight on the left leg after prolonged sitting

In consideration with the general assessment for this client, these pain behaviours are consistent with the diagnoses summarized below.

### **DIAGNOSIS AND DISCUSSION:**

As my opinion is based solely upon information provided in the supplied documentation, the client's personal report and today's assessment, I reserve the right to revisit my opinion if further information should become available.

On the basis of the history, physical examination and review of the Medical Brief, this client has the following diagnoses:

- Chronic pain syndrome (with mixed musculoskeletal and neuropathic features) associated with:
  - Sleep disruption
  - Psychological/emotional disturbance
- Chronic musculoskeletal neck pain due to:
  - Mechanical, possible facetogenic, pain
  - Myofascial pain
  - Possible discogenic or radicular pain
  - Possible left shoulder injury not yet defined
- Chronic musculoskeletal low back pain due to:
  - Left sacroiliac joint pain
  - Mechanical, possible facetogenic, pain
  - Myofascial pain
- Neuropathic pain – left arm
- Chronic left knee pain, not yet fully defined
- Chronic ankle pain, not yet fully defined
  - Probable left plantar fasciitis
  - Right ankle synovitis with Achilles tendinopathy

The musculoskeletal spinal injuries may involve tearing and disruption of the soft tissues and there is often damage to the discs or facet joints. This type of pathology has been shown in humans and in animal studies. Although reported incidences vary, there is a high incidence of progression from acute whiplash injury to chronic pain. A series of reviews in 2011 concluded that approximately 50% of whiplash patients progress to chronic pain, and 10-20% will develop

moderate to severe pain syndromes. This is probably due to a variety of factors, including facet joint injury, central sensitization (see below), stress response and psychosocial and sociocultural factors. [Jull et al]

There are also features of neuropathic pain characterized by the abnormal neurological findings in the left arm and reported burning pain with numbness and tingling. This will make future care more difficult as this client has both neuropathic pain as well as musculoskeletal pain to treat.

In addition, this client has gone on to develop the features of a chronic pain syndrome. Although definitions vary, a chronic pain syndrome is generally said to exist where the pain has been present for more than 3-6 months (or beyond the expected healing time), is intrusive in nature, is usually associated with sleep disruption and mood changes, and interferes with most of the patient's activities (usually reflected as a 50% or more reduction in global function).

A chronic pain syndrome starts off with acute pain. As a result of the acute pain impulses, there are secondary changes in the spinal cord and brain that is known as central sensitization. As a result of this, pain becomes more diffuse and typically no longer follows a dermatomal pattern. There is secondary disuse in the musculoskeletal system. There are often associated psychological and emotional difficulties and a characteristic sleep disturbance.

A chronic pain syndrome often causes long-term disability. Adapted from a 2005 report of the American College of Occupational & Environmental Medicine, the Treasury Board of Canada Secretariat reports the probability that employees will return to any form of employment following an absence from work for illness or injury decreases from 50% at 3 months, to 20% after 6 months and 2% or less after 12 months. This is consistent with patients suffering from chronic pain syndrome.

In my opinion this client meets all the features of a chronic pain syndrome, complicated by a co-existing mood disorder.

The client reported a depressed mood since the date of loss and has reported a significant amount of social and emotional upset as a result of this motor vehicle accident. She has been diagnosed and treated for depression and anxiety, both medically and psychotherapeutically. This will have a deleterious effect on social, marital, professional and recreational activities as well as aggravate the severity of chronic pain. In fact, co-existing clinical depression/anxiety is known to adversely affect the quality of chronic pain, the ability to cope with chronic pain as well as the efficacy of treatment. Furthermore, without adequate treatment for depression/anxiety, chronic pain will be permanent despite other treatments discussed. Ongoing psychological and psychiatric treatment is recommended, preferably in association with a multidisciplinary pain management program as summarized below.

As a result of the chronic pain, this client has developed a sleep disruption resulting in a non-restorative and broken sleep pattern. Sleep disorders are known to worsen the degree of chronic pain as well as treatment efficacy in patients with chronic pain.

### **PROGNOSIS:**

Based on the chronicity and severity of the signs and symptoms, the prognosis for recovery to pre-accident levels of function from these diagnoses is poor.

In addition, this client will have permanent chronic pain and associated functional impairments. The chronic pain syndrome involves a combination of both physical injuries as well as a strong psychosocial component in terms of the ability to cope with the development of these injuries and with life with chronic pain. Engaging in high impact physical and recreational activity will be difficult and will aggravate the pain. Social and familial relationships tend to progressively worsen over the years. This is consistent with the client's reported and documented post-accident condition.

*Q: Are you able to state that "it is more probable than not" that a future event will occur?*

Yes, it is probable that a future event will occur, meaning that the client will probably experience either continuous pain or flare-ups in pain due to the accident-related diagnoses.

**CAUSALITY:**

With some discussion below, these diagnoses are causally related to the motor vehicle accident on the date of loss.

The painful symptoms reported were not present prior to the accident and all developed at the time or soon after the accident, including the left arm pain (x-ray January 7, 2011 to rule out fracture). The injuries are consistent with the mechanism of injury. The persistence and severity of these painful injuries has resulted in the development of the chronic pain syndrome, complicated by a mood disorder.

As the ankle and knee pain developed much later, it is probable that they developed as a result of the chronic limp, which is directly related to the accident-related back pain, notably left sacroiliac joint pain. Therefore the ankle and knee pain are probably indirectly causally related to the accident.

*Q: Are there any medical conditions or injuries which existed prior to the motor vehicle accident which have an effect on the client's current medical condition? If so, what are the conditions or injuries and what effect do they have on her current medical condition?*

No, there were no significant predisposing factors. This client had no meaningful pre-accident symptoms and led an unrestricted lifestyle socially, recreationally and professionally.

She clarified that the left arm symptoms reported in 2009 (see ER visit from June 14, 2009) were likely related to an arm or wrist strain while pushing her son's bedroom furniture, and the symptoms resolved within a few days with no subsequent pain or restriction. This is consistent with the absence of these symptoms in Dr. XX's records.

Other than one mention of back pain in Dr. XXr's clinical records on October, 2010, her pre-accident visits are primarily related to hypertension and peri-menopausal symptoms. Given the presence of mild facet and disc degenerative changes on the x-ray from January, 2011, there was



pre-existing degenerative changes (which are very common and often asymptomatic). At most, these changes possibly resulted in mild pre-disposition to developing back pain from the accident. However, it is highly improbable that she would have spontaneously developed chronic back pain had the accident not occurred. The presence of these degenerative changes are clinically insignificant in many patients, and there is no relationship between these changes and the accident-related left sacroiliac joint pain, which is the predominant cause of her current back pain and referred leg symptoms.

**DISABILITY:**

*Q: Please address the following issues with respect to each impairment: the nature of the impairment, the permanence of the impairment, the specific function that is impaired, the importance of the specific function to the person, and whether the impairment was directly or indirectly sustained as the result of the accident?*

These diagnoses result in impairments that restrict the following important functions: prolonged walking, sitting, standing, repetitive bending/pushing/pulling, heavy lifting, high impact physical activities (for example, running, jumping) and extension, flexion or rotation of the neck. These impairments are serious and permanent and have been continuous since the accident.

The relatively high score on the psychosocial score of the pain questionnaire is consistent with a significant degree of impairment due to ongoing psychosocial changes.

*Q: Was the impairment causally related to the accident on the above date of loss?*

Yes, see above discussion of causality.

*Q: Please provide an opinion with respect to whether the impairment has been continuous since the accident.*

Yes, the impairment has been continuous since the accident.

*Q: Please provide an opinion with respect to whether the impairment of function interferes with the client's usual activities of daily living?*

When considered together in the context of a chronic pain condition, these diagnoses result in impairment that effect the client's ability to maintain activities of daily living, including personal care (at times requiring her husband's help to remove shirts), driving (due to pain with prolonged sitting), cooking (due to difficulty standing or bending), leisure/recreational activities and social activities that require the use of the above-noted functions that were normally engaged in at the time of the accident. This includes being unable to return to community theatre.

*Q: Please provide an opinion with respect to whether the function impaired is necessary for the client to provide his own care or well-being?*

Yes, the functions impaired are required for the client to provide self-care, including bathing, dressing and self-grooming. Although she sometimes requires her husband's help to remove shirts, she manages independently with most self-care activities most of the time.

*Q: Please provide an opinion with respect to whether the function impaired impacts upon the client's ability to engage in homemaking/housekeeping activities?*

The client has limitations to perform homemaking duties requiring heavy lifting, repetitive bending and prolonged standing or walking, and she should avoid the heaviest chores such as shoveling and lawn care.

*Q: Subject to the client reasonably participating in the recommended treatment of the impairment, is the impairment expected to improve?*

Based on the client's current condition, and without stabilization of pain and function, it is probable that the condition and resulting impairment will continue to deteriorate. Subject to the client reasonably participating in the recommended treatment (below), it is possible that the

client's symptoms will be better controlled, but it is probable that the impairment will not significantly improve due to the chronicity and severity of the diagnoses.

**EMPLOYABILITY:**

*Q: Please provide an opinion with respect to whether the client's injuries, sustained in the motor vehicle accident, prevent her from engaging in any form of employment for which she may be reasonably suited by way of education, training and experience? If you are of the opinion that the client is now limited in vocational options, please state so and discuss the limitations. Please also advise if you believe the client has suffered a loss of competitive advantage in any employment field she may ultimately be able to work in and the types of restrictions she will have on any occupation ultimately chosen.*

This client was previously self-employed with her husband in the management and operations of their restaurant. Demands include many of the important functions that are currently restricted. Based on this client's current restrictions, she will have permanent impairment restricting her ability to maintain working in her chosen profession at pre-accident levels, therefore limiting her vocational options. Given the severe global impact of the chronic pain syndrome with mood disorder on Mrs. Rida, including deconditioning, poor sleep, altered concentration/attention and mood changes, she will be unable to sustain any form of productive employment in the foreseeable future.

She reported, however, maintaining hope of working again if her condition were to improve. While it remains improbable that her symptoms will improve enough to sustain productive employment after this long, additional treatments may provide improved pain severity and stability such that she could consider non-competitive employment or non-vocational activities.

**FUTURE MEDICAL TREATMENT AND RECOMMENDATIONS:**

*Q: Please provide an opinion with respect to whether the client would benefit from any further testing, examination or treatment?*

The following are recommended to attempt to stabilize current pain and function and to possibly delay further deterioration:

- Medical options for the family doctor to consider include multimodal anti-neuropathic analgesia, including: Nortriptyline 10-20 mg nightly; Gabapentin 100 mg to 600 mg. These can help to stabilize the pain and sleep-wake cycle without the side effects of opioid analgesia;
- Aquatherapy, swimming and a supervised low impact aerobic exercise program is recommended for stabilization and long-term management of this pain condition;
- Assistive device:
  - Cane to help avoid chronic limping
  - Orthotics or proper footwear for plantar fasciitis and Achilles tendinitis
- Referral to an Interventional Pain Clinic to consider interventional treatment options to help stabilize the pain and enable less pain with more rehabilitative efforts, including:
  - Diagnostic sacroiliac joint (SIJ)-pain assessment to objectively document SIJ-mediated pain, which can also help determine a possible treatment option to stabilize ongoing mechanical back pain;

Sacroiliac joint pain is often associated with chronic low back pain and tends to remain chronic without further treatment. Diagnostic sacroiliac injections can help to determine if the sacroiliac joints specifically are contributing to the pain. A negative result would imply that the pain generator is more likely from an alternate source, such as myofascial tissue, intervertebral disc, facet joints or neuropathic in nature. Noninvasive treatments include swimming/Aquatherapy and wearing a sacroiliac belt during activity, which helps to stabilize the pelvis and decrease pain. This pain may possibly improve with concurrent treatment of back pain from alternate pain generators. Occasionally sacroiliac injection with

corticosteroid, prolotherapy or radiofrequency neurotomy is necessary for control of persistent symptoms. Osteopathic and chiropractic treatment appear particularly beneficial for sacroiliac pain.

- Diagnostic facet-pain assessment to objectively document facet-mediated pain, which can also help determine a possible treatment option to stabilize ongoing mechanical neck and/or back pain;

Based on the characteristics and location of spinal pain, it is possible that the pain is generated from the facet joints of the spine. A diagnostic facet-pain assessment provides a more objective and evidence-based method of determining if the facet joints are the source of pain generation. A diagnostic facet-pain assessment can be valuable in the determination of prognosis for mechanical spinal pain (with respect to symptom control). A negative result would suggest that the pain generator is more likely from an alternate source, such as myofascial tissue, intervertebral disc, sacroiliac joint or neuropathic in nature. In addition, it is useful in providing some direction for possible treatment options for post-whiplash or strain injuries.

- Lidocaine +/- ketamine infusions for medically-resistant neuropathic pain;
- Possible epidural steroid injections for radicular pain;

Based on the description of ongoing pain radiating down the left arm, supported by physical examination and findings reported on MRI (small herniations), it may be reasonable to consider a trial of fluoroscopically-guided epidural steroid injections. These injections can possibly improve the painful symptoms of spinal pain and limb pain due to underlying disc disease with nerve root impingement or radiculitis. If efficacious, these treatments can be repeated every 3-6 months as required.

- Referral to a multidisciplinary pain management program, addressing physical, psychological and self-management issues concurrently. Multidisciplinary rehabilitation is recommended for the treatment of chronic pain by several authoritative bodies, including the College of Physicians and Surgeons of Ontario, American Society of Anesthesiologists and the International Association for the Study of Pain. Goals of multidisciplinary care include both subjective outcomes as well as objective functional outcomes (e.g. return to work). The physical component would be a reconditioning program that focuses on improving strength, endurance and flexibility of the upper and lower extremities, cervical and lumbar spine regions and core stability as well as lower impact cardiovascular and respiratory conditioning. This needs to be carried out in a supervised and progressive manner in order to be effective. The overall objective is to stabilize both the pain condition and level of function. This client would be a strong candidate for a multidisciplinary pain management program. Unfortunately there are few publically funded multidisciplinary pain management programs in Ontario, but a coordinated effort amongst providers addressing each area of need would be appropriate.
- Physical therapy for various joint and tendon diagnoses
- Further investigations, if not already complete:
  - Left shoulder ultrasound

This concludes the Independent Chronic Pain Assessment on your client. Please feel free to contact my office for clarification of any of the materials presented.

Yours sincerely,

K. Smith, M.D., F.R.C.P. (C)

**REFERENCES:**

The following references have been used in support of opinions in this assessment. This list is not all-inclusive and may be updated from time to time.

1. Anagnostis et al. The Pain Disability Questionnaire – A New Psychometrically Sound Measure for Chronic Musculoskeletal Disorders. *Spine* 2004; 29(20):2290-2302.
2. Miller's Anesthesia, 8th edition. Anesthesia and Treatment of Chronic Pain.
3. Ashburn M et al. Management of chronic pain. *Lancet* 1999; 353:1865-69.
4. Treasury Board of Canada Secretariat: [www.tbs-sct.gc.ca/hrh/dmi-igi/wds-mst/disability-incapacite07-eng.asp#Toc279132210](http://www.tbs-sct.gc.ca/hrh/dmi-igi/wds-mst/disability-incapacite07-eng.asp#Toc279132210); adapted from the American College of Occupational & Environmental Medicine, Preventing Needless Work Disability by Helping People Stay Employed, 2005.
5. Jull, G et al. Toward Lessening the Rate of Transition of Acute Whiplash to a Chronic Disorder. *Spine* 2011; 36:S173–S174.
6. Carroll, L. Beliefs and Expectations for Recovery, Coping, and Depression in Whiplash-Associated Disorders: Lessening the Transition to Chronicity. *Spine* 2011; 36:S250–S256.
7. Curatolo, M et al. The Role of Tissue Damage in Whiplash-Associated Disorders: Discussion Paper 1. *Spine* 2011; 36:S309–S315.
8. Sterling, M et al. Potential Processes Involved in the Initiation and Maintenance of Whiplash-Associated Disorders: Discussion Paper 3. *Spine* 2011; 36:S322–S329.
9. Sterling, M et al. Prognosis After Whiplash Injury: Where to From Here? Discussion Paper 4. *Spine* 2011; 36:S330–S334.
10. Jull, G et al. Toward Optimal Early Management After Whiplash Injury to Lessen the Rate of Transition to Chronicity: Discussion Paper 5. *Spine* 2011; 36:S335–S342.

11. CPSO. Evidence-Based Recommendations for Medical Management of Non-Malignant Pain. Reference Guide for Clinicians. November 2000.
12. Manchikanti, L et al. Comprehensive Evidence-Based Guidelines for Interventional Techniques in the Management of Chronic Spinal Pain. *Pain Physician* 2009; 12:699-802.
13. Practice Guidelines for Chronic Pain Management. An updated Report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. *Anesthesiology* 2010; 112:810-33.
14. Mailis A et al. Evidence-based guideline for neuropathic pain interventional treatments: Spinal cord stimulation, intravenous infusions, epidural injections and nerve blocks. *Pain Res Manage* 2012; 17(3):150-158.
15. Moulin D et al. Pharmacological management of chronic neuropathic pain – Consensus statement and guidelines from the Canadian Pain Society. *Pain Res Manage* 2007; 12(1):13-21.



Court File No.

**ONTARIO  
SUPERIOR COURT OF JUSTICE**

B E T W E E N:

Plaintiff

And

Defendants

**ACKNOWLEDGMENT OF EXPERT'S DUTY**

1. My name is Dr. Kevin Smith. I live at Toronto, in the Province of Ontario.
2. I have been engaged by or on behalf of \_\_\_\_\_ to provide evidence in relation to the above-noted court proceeding.
3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:
  - (a) To provide opinion evidence that is fair, objective and non-partisan;
  - (b) To provide opinion evidence that is related only to matters that are within my area of expertise; and
  - (c) To provide such additional assistance as the court may reasonably require, to determine a matter in issue.
4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

Date: April 27, 2015    Signature: \_\_\_\_\_  
Dr. Kevin Smith

Mark Friedlander, MB, ChB, FRCPC

101-240 Duncan Mill Road  
North York, Ontario M3B 3S6  
Tel: 416-840-5990 ext. 24  
Fax: 647-427-4100  
Experts@AllevioClinic.com



## EMPLOYMENT

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### *Current Appointments*

Allevio Pain Management Clinic, Toronto, Ontario Consultant, Chronic Pain Management	2013 - Present
Independent Medical Assessor for Chronic Pain	2008 - Present
Pinnacle Health Centre, Richmond Hill, Ontario Consultant, Chronic Pain Management	2005 - Present
University of Toronto, Department of Anesthesia, Toronto, Ontario Continued Medical Education Committee	2000 - Present
University of Toronto, Faculty of Medicine, Toronto, Ontario Assistant Professor	1992 - Present
North York General Hospital, Toronto, Ontario Staff Anesthesiologist	1992 - Present
North York General Hospital, Toronto, Ontario Consultant, Chronic Pain Management	1992 - Present
Controversies in Perioperative Medicine Anesthesia Conferences Co-director	1998 - Present

### *Past Appointments*

North York General Hospital, Toronto, Ontario Medical Director, Pain Management Service	1992 - 2006
North York General Hospital, Toronto, Ontario Director, Obstetric Anesthesia	1995 - 2000
North York General Hospital, Toronto, Ontario Search Committee, Chief of Anesthesia,	2006
Ontario Medical Association Member at Large, Executive of the Section of Anesthesia,	2005 - 2007
North York General Hospital, Toronto, Ontario Committee Member: Obstetric Planning Committee Committee Member: Maternal Newborn Program Committee Member: Pediatric Surgery Advisory Committee	1992 - 1996

Ontario Medical Association Chair, Environment Committee, Anesthesia Section,	2006 - 2010
North York General Hospital, Toronto, Ontario Business Manager, Department Anesthesia	2000 - 2013
North York General Hospital, Toronto, Ontario PACU committee	2006 - 2011
North York General Hospital, Toronto, Ontario Operating Room Coordinator	2008 - 2012
Toronto General Hospital, University of Toronto, Toronto, Ontario Staff Anesthesiologist Cross-Appointment: Director, Dept. Obstetrics, Gynecology and Neonatology Director and Founder, Acute Pain Service Director, Obstetric Anesthesia Coordinator, Resident Electives in Pain Management	1991 - 1992
Toronto General Hospital, Toronto, Ontario Joint Practice Committee, Obstetrics and Gynecology Prenatal Teacher, Childbirth Education	1991 - 1992
Acute Pain and Anesthesia Research Investigator	1990 - 2000

## LICENSURE

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• General License, Province of Ontario, Canada.	1987
• Medical License, Province of Saskatchewan, Canada	1985
• Medical License, State of Washington, USA	1984
• Medical Council of Canada Evaluating Examination (MSS)	1984
• Medical License General Medical Council of Great Britain	1983
• Medical License Republic of South Africa.	1983
• Visa Qualifying Examination (VQE) USA.	1983
• ECFMG Certification, USA.	1982

## EDUCATION – PROFESSIONAL DEGREES AND DIPLOMAS

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• Fellow of the Royal College of Physicians of Canada (Anesthesia)	1990
• Licentiate of Medical Council of Canada (LMCC)	1986
• Federated Licensing Examination (FLEX, FWA 80) USA	1983
• Bachelor Medicine & Surgery (MB,ChB), University of Cape Town, South Africa	1981

## ACHIEVEMENTS & ACTIVITIES

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• Co-Director, Controversies in Perioperative Medicine Anesthesia Conferences in France/Italy/Spain	1998, 2000, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015
• Organised Acute Pain service (1991-93) at two major Toronto Hospitals:	
○ Toronto General Hospital	1990-1992

- North York General Hospital 1992-2006
- Established Continuous Epidural Analgesia on wards North York General Hospital 1994
- Protocol for Epidural Narcotic Analgesia in Obstetrics, North York General Hospital 1994
- Visiting Teacher and Clinical Anesthesiologist, Face to Face Mission, Ekaterinberg, Russia 2000
- Volunteer, Teaching and Clinical Anesthesiologist, Interplast Humanitarian Organisation,
  - Cusco, Peru 2006
  - My Tho, Vietnam 2007
  - Quy Nhon, Vietnam 2008, 2009
  - Ecuador 2010
- Health through Peace, University of Toronto 2008  
effort to bring together medical students from Middle Eastern Countries
- Mentor, Medical Students, University of Toronto 2007 - Present
- Conference assistant (assistance with organizing and moderating) Anesthetic Practice  
(annual conference of the University of Toronto, Dept Anesthesia and annual Onatrio  
Anesthesiologists Meeting.)
- Private Surgical Clinic consultant including Herzig Eye Institute, Clinics of Dr. J. Starr,  
Cumberland Clinic, Digestive Health Clinic

## MEDICO-LEGAL AND CONSULTING WORK

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- Canadian Medical Protection Association: 1994  
Pre-Trial assessment of ability to defend malpractice allegation involving  
consultant and resident anaesthetists
- Consultant pain management expert in Coroner's inquiry in Maternal death 1995
- Consultant investigator in allegations of physician incompetence in 1996  
Northern community hospital
- Expert Consultant in many cases of medical litigation both for defendants and plaintiffs
- Review of Pain Management for Windsor Regional Hospital and the Windsor area 2007  
Review and Report undertaken on behalf of the Hay Group Medical Consultants
- CMPA Expert witness Case of Halothane Hepatitis 2009

## MEMBERSHIP

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- Canadian Anesthesiologist's Society
- American Society of Anesthesiologists
- Member The International Spine Intervention Society
- Ontario Medical Association
- Medical Staff Association, North York General Hospital
- Member: International Spine Intervention Society
- MOCOMP (Maintenance of Competence of the Royal College Of Physicians  
and Surgeons of Canada)

## ANESTHESIA AND PAIN MANAGEMENT TRAINING

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- Clinical and Research Fellow in Anesthesia and Pain Management 1990 - 1991  
Toronto General Hospital  
Clinical responsibilities included the development and management of the Acute Pain Service, clinical anaesthesia including Cardiac, Thoracic, General and Gynaecological Surgery, Liver and Lung Transplant. Responsible for the coordination of Obstetric Anaesthesia Services between a large Anaesthesia Department and a busy Teaching Obstetric Unit.
- Resident training in Anesthesia, University of Toronto 1987 - 1990
  - Mt. Sinai Hospital June-Dec. 1987
  - Wellesley Hospital. Jan.-June 1988
  - St. Michael's Hospital July-Dec. 1988
  - Hospital for Sick Children Jan.-June 1989
  - Sunnybrook Medical Centre. July-Dec. 1989
  - Clinical Research Resident, Toronto General Hospital. Jan.-June 1990
- Resident, Internal Medicine, La Guardia Hospital, New York City, 1986 - 1987  
Cornell Medical College and Northshore University, New York, NY

## MEDICAL PRACTICE

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- Family Practice 1985 - 1986  
Solo private practice in a rural community, Kindersley, Saskatchewan, Canada.  
Active Staff Member, Kindersley Union Hospital. Busy obstetric and paediatric practice.
- Resident Medical Officer, The London Clinic, London, England 1985  
Internal Medicine and Oncology
- Family Practice with Obstetrics and In-patients, Canora, Saskatchewan 1984
- Family Practice with Obstetrics and In-patients, Bengough, Saskatchewan 1984
- House Officer, Northwick Park Hospital, London, England 1984  
Cardiology, General Surgery, Orthopaedics  
Postgraduate training in Psychiatry - Locum posts in various London Teaching Hospitals  
(Obstetrics, Gynaecology, Respiratory and Emergency Medicine)
- Family Practice, Durban, South Africa 1983
- Medical Officer, Sir Albert Robinson Mine Hospital 1983  
Johannesburg Gold Reef, South Africa  
Experience in Infectious Disease, Trauma and Anaesthesia
- Medical Officer, Somerset Hospital, Cape Town, South Africa 1983  
Emergency Medicine
- Senior House Officer, London, England  
(Hammersmith, Northwick Park, Stoke Mandeville) 1983  
Experience in Emergency Room, Internal Medicine, Geriatrics, Obstetrics and Gynaecology

Rotating Internship, Groote Schuur Hospital, University of Cape Town, South Africa 1982  
Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology

## COURSES AND ELECTIVES

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Physician in Charge, March of the Living Youth Program, Poland and Israel	1994
Patient Controlled Analgesia, Vancouver, British Colombia	1990
Advanced Cardiac Life Support Course	1990
Paediatric Critical Care, Hospital for Sick Children, Toronto, Ontario	1989
Chronic Pain Management, Sunnybrook Medical Centre, Toronto, Ontario	1989
Elective in Anaesthesia at Hadassah Medical Centre Hebrew University of Jerusalem & Tel Hashomer Medical Centre, University of Tel Aviv, Israel	1989
Regional Burn Centre, Wellesley Hospital, Toronto, Ontario	1988
Neonatal Resuscitation Course, Mt. Sinai Hospital, Toronto, Ontario	1987
Advanced Trauma Life Support Course	1986
African Mission Hospital, Eastern Transvaal, South Africa	1980

## REFERRED PUBLICATIONS

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- Meperidine to control shivering associated with platelet transfusion reaction. Friedlander M, Noble W. Can J Anaesth 1989; 36:4, 460-2.
- An Unusual Reaction to Precurarisation. Friedlander M, Brebner J. Can J Anaesth 1991;38;7:944
- Epidural vs Intravenous Fentanyl infusion in Post-thoracotomy patients: Analgesic and pharmacokinetic effects. L Panos, AN Sandler, DG Stringer, N Badner, S Lawson, M.Friedlander, G.Koren. Can J Anaesth 1990;37:S66
- Epidural vs Intravenous Fentanyl infusion in Post-thoracotomy patients: Analgesic and pharmacokinetic effects. L Panos, AN Sandler, DG Stringer, N Badner, S Lawson, M.Friedlander, G.Koren. Anesthesiology 73:3A:A831, 1990
- Epidural vs Intravenous Fentanyl infusion in Post-thoracotomy patients: Respiratory effects. DG Stringer, AN Sandler, L Panos, N Badner, S Lawson, M Friedlander. Can J Anaesth 1990;37:S16
- Hypoxic Pulmonary Vasoconstriction in Single Lung Anaesthesia in Human Subjects. M Friedlander, AN Sandler, B Kavanagh, S Lawson, L Panos, T Winton, J Benumof. Can J Anaes 1991;38;4(II) A95
- A Double blind, Placebo controlled trial of Transdermal Fentanyl for Post-Hysterectomy Pain Relief. II: Respiratory Effects. AN Sandler, AD Baxter, P Norman, B Samson, M.Friedlander, S Lawson, K Hull. Can J Anaesth 1991;38:4(II),A114
- Double blind, Placebo controlled trial of Transdermal Fentanyl for Post-Hysterectomy Analgesia. AN Sandler, AD Baxter, P Norman, B Samson, M.Friedlander, Anesthesiology 75:3A:A707,1991
- A Randomized double-blind comparison of Lumbar Epidural and Intravenous Fentanyl infusions for Post-Thoracotomy Pain Relief: Analgesic, Pharmacokinetic and Respiratory Effects. AN Sandler, D Stringer, L Panos, N Badner, M Friedlander, G Koren, J Katz, J Klein Anesthesiology,

77:4;626-634,1992

- Does Pre-incisional Multi-Modal Nociceptive Blockade Reduce Post-Operative Pain? J Katz, AN Sandler, H Nierenberg, S Roger, J Boylan, M Friedlander Canadian Pain Society 1992
- Pain after Thoracic Surgery involves a Sensory Memory-like Mechanism. J Katz, B Kavanagh, AN Sandler, H Nierenberg, M Friedlander, J Boylan,
- Is Post-operative Pain reduced by preoperative multimodal nociceptive blockade? A randomized, double blind, placebo controlled study. B Kavanagh, J Katz, AN Sandler, H Nierenberg, J.Boylan, A Davies M.Friedlander, Can J Anaes 39:5;1992;A76
- Pain and narcotic use following thoracic surgery are reduced by lumbar epidural fentanyl: a randomized prospective double-blind crossover study. B Kavanagh, J Katz, AN Sandler, H Nierenberg, J.Boylan, M.Friedlander, A Davies Can J Anaes 39:5;1992;A79
- Preemptive Analgesia. J Katz, B Kavanagh, AN Sandler, H Nierenberg, J Boylan, M.Friedlander, B Shaw. Anesthesiology, 77:439-446,1992.
- Hypoxic Pulmonary Vasoconstriction in Single Lung Ventilation in the Lateral Decubitus Position. Anesth Analg 1992;74:S100 M.Friedlander, AN Sandler, B Kavanagh, T. Winton, J Benumof.
- Transdermal fentanyl: Postoperative Analgesia with analgesic and respiratory effects. AN Sandler, A Baxter,B Samson, S.Roger K Hull J Katz, M.Friedlander, M Clairoux. Int Assoc Study Pain August 1993.
- Postoperative analgesia with transdermal fentanyl, analgesic and respiratory effects.AN Sandler, A Baxter,B Samson, S.Roger K Hull J Katz, M.Friedlander, M Donnelly Can J Anaesth 40: 5;1993;A51.
- Is hypoxic pulmonary vasoconstriction important during one lung ventilation in the Lateral Decubitus Position? M.Friedlander, A.Sandler, B.Kavanagh, T.Winton, J.Benumof. Can J Anaesth 1994;41:1;26-30
- A double blind comparison of ropivacaine 0.5%, 0.75%, 1.0% and bupivacaine 0.5%, injected epidurally, in patients undergoing abdominal hysterectomy. BT Finucane, AN Sandler, J McKenna, D Reid, AL Milner, M. Friedlander, D Muzyka, S O'Callaghan-Enright, V Chan. Can J Anaesth 1996/43:5:442-9
- Pharmacokinetics of three doses of epidural ropivacaine during hysterectomy and comparison with bupivacaine. AN Sandler, E. Arlander, BT Finucane, A Taddio, V Chan, A Milner, SO Callahan-Enright, M Friedlander, D Muzyka Can J Anaesth 1998/45:9/843-849
- Prospective study on incidence of transient radicular irritation, clinical efficacy and recovery profile with 1% hyperbaric spinal lidovaine in short urological procedures. D Tong, F Chung, M Friedlander, J Bremang, J Wong, G O'Leary, D Streiner Anesthesiology V89, No 3A, Sept 1998, A19.
- Comparison of Epidural anaesthesia with ropivacaine 0.5% and bupivacaine 0.5% for Caesarean Section. E. Crosby, A Sandler, B Finucane, D Writer, D. Reid, J McKenna, M. Friedlander, A Miller, S O'Callaghan-Enright, H Muir, R Shukla. Can J Anaesth 1998/45:11/pp1066-1071

## NON-REVIEWED PUBLICATIONS

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- The Acute Pain Service: How to establish one in a Community Hospital. Cont Anaesthesia 3:4;1993 pp13-19 M. Friedlander

## GUEST LECTURER

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### Conferences

- Analgesia in Obstetrics. Symposium for Obstetrical Nurses, May 1991 (Toronto General Hospital).
- "Anaesthesia - What's new?" Surgical Update, NYGH Ramada Renaissance Hotel, December 2, 1993.
- "Epidural Analgesia in the Community Hospital" Anaesthetic Practice '93, Royal York Hotel, Toronto, 5th November, 1993.
- "Is PCA without risk?" Anaesthetic Practice '95, University of Toronto, November 1995.
- Setting up an Acute Pain Service in the Community Hospital. Workshop, Regional Anaesthesia & Analgesia '98. University of Toronto, Hotel Inter-Continental, Toronto, October 1998.
- Epidural Analgesia on the floor with PCEA. Regional Anaesthesia Conference, An ASTRA Symposium, Deerhurst Resort, May 1999.
- How to Initiate an Epidural service on the floor. Regional Anaesthesia & Analgesia '98. University of Toronto, Hotel Inter-Continental, Toronto, October 1999.

### Lectures

- "General, Regional and Continuous Spinal Anaesthesia" Lecture, Lyphomed Canada Inc. 31 January, 1991.
- "Epidural and Spinal Narcotics in Obstetrics", Telemedicine Canada, May 7, 1992.
- Setting up a PCA program. Telemedicine Canada, May 1995
- "Anaesthesia" Radio Talk Show, CFRB 1010 Toronto, January 1996.
- "Pain Management" Radio Talk Show, CFRB 1010 Toronto, March 1996.

### Grand Rounds

- "Spinal Opioids in Obstetric Anaesthesia" presented at combined Grand Rounds of Departments of Obstetrics and Anaesthesia, Toronto General Hospital (Jan.1991).
- Postoperative Pain Management, Department of Physiotherapy, Toronto General Hospital, March, 1991.
- "Patient Controlled Analgesia and Epidural Narcotics for Postoperative Analgesia in Thoracotomy Patients". Department of Thoracic Surgery, Toronto General Hospital, April, 1991.
- Acute Pain Management in Medical Patients. Department of Internal Medicine, Toronto General Hospital, April, 1990.
- "Post-Caesarean Section Analgesia- What's new?" Department of Obstetrics, North York General Hospital, February 1992.
- "What's involved in starting an Acute Postoperative Pain Program" Departments of Nursing and Pharmacy, North York General Hospital, 26th August, 1992.
- "What's new in Anaesthesia" Department of Medicine, North York General Hospital, 10 February, 1993.



- "Introducing PCA to your patients and our hospital. " Surgical Grand Rounds, NYGH, September 23, 1993.
- "Modern Pain Control Options" North York General Hospital Core Lecture Series, December 1993.
- Obstetric analgesia and "Walking Epidurals", Dept. Family Practice Grand Rounds, December 1995.
- Analgesia for Genetic Termination: A Symposium. Dept. Genetics, North York and Credit Valley Hospitals, November 1996.
- ACLS review: Dept. Nursing, North York General Hospital Nov. 1997
- Volunteering in the developing World: working with Interplast, May 2008 (North York General Hospital)

## TEACHING

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- Teaching is an integral part of the work of an anesthesiologist at North York General Hospital. Teaching occurs in all aspects of daily routine and weekend and night calls. There are always medical students, residents and allied health care trainees who seek and receive teaching in the course of clinical activities. Most of these are undocumented occurrences.
- Antenatal Education, Toronto General Hospital (Sept.1990- Jan.1992).  
Education in Patient Controlled Analgesia and Epidural Narcotics, Toronto General Hospital 1990-1991.
- Current teaching in Dept Anesthesia, North York General Hospital (Emergency Medical Services Technicians, Respiratory Therapy Students, Anesthesia Assistants, Medical Students, Obstetric Residents, Anesthesia Residents) 1992-present.

*References available upon request*



**Michael Gofeld MD, DEAA**

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Fax: 647-427-4100  
Experts@AllevioClinic.com

**1. EDUCATION**

**Degrees**

1986 - 1989	MD, Dept of Medicine, Crimea Medical Academy, Simferopol, Ukraine
1983 Sep - 1986 Jun	MD (Yrs 1-3), Dept of Medicine, Ural Medical Academy, Sverdlovsk, Sverdlovskaya oblast', Russian Federation

**Postgraduate, Research and Specialty Training**

2010 - 2011	Teaching Scholars Program, Medical Education and Biomedical Informatics, University of Washington, Seattle, Washington, United States, Supervisor(s): Dr. Lynn Robins
2005 - 2006	Clinical Fellow, Department of Anesthesia, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada, Supervisor(s): Dr. Gil Faclier
1995 - 2000	Resident, Anesthesiology, Belinson Medical Center, Tel Aviv University, Israel, Supervisor(s): Dr. Leonid Idelman
1995	Resident, General Surgery, Department of Surgery, HaEmek Medical Center, University of Haifa, Israel, Supervisor(s): Dr. J. Saifan
1989 - 1990	Intern, General Surgery, City Hospital #6, Simferopol, Ukraine, Supervisor(s): Dr. A. Firkovich

**2. EMPLOYMENT**

**Current Appointments**

2013 - present	Staff Anesthesiologist, Department of Anesthesia, St. Michael's Hospital, Toronto, Ontario, Canada
2013 - present	Assistant Professor, Anesthesia, University of Toronto, Toronto, Ontario

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## Previous Appointments

### CLINICAL

2010 - 2013	Director Clinical Operations, Center for Pain Relief (2008-2010) and Attending Physician, Department of Anesthesiology and Pain Medicine, School of Medicine, University of Washington, Seattle, Washington, United States
2008 – 2013	Attending Physician, Department of Neurological Surgery, School of Medicine, University of Washington, Seattle, Washington, United States

## 3. HONOURS AND CAREER AWARDS

### Distinctions and Research Awards

#### NATIONAL

##### Received

2000	<b>Kristal Award</b> , National Research Conference of Anesthesiology Residents, Israel. (Research Award) <i>For project: "Changes in brain antioxidant capacity after transient focal ischemia in rats".</i>
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### Teaching and Education Awards

#### LOCAL

##### Received

2013 Jul - 2015 Jun	<b>Merit Award Education Competition</b> , Dept of Anesthesia, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada. (Multilevel Education)
2012	<b>Teacher of the Year Award</b> , University of Washington. (Postgraduate MD, Clinical Fellow)
2011	<b>Stephen Butler Teacher of the Year Award</b> , University of Washington. (Postgraduate MD, Clinical Fellow)

## 4. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

### Professional Associations

2011 - present	<b>President and Chairman of Board</b> , American Academy of Pain Medicine Ultrasonography
2009 - present	<b>Member</b> , North American Neuromodulation Society
2008 - present	<b>Active Member</b> , American Society of Regional Anesthesia
2001 - present	<b>Member</b> , International Association for the Study of Pain
2000 - present	<b>Member</b> , World Institute of Pain
2005 - 2008	<b>Member</b> , Canadian Anesthesiologists' Society

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2004 - 2008	<b>Member</b> , American Society of Anesthesiology
2004 - 2008	<b>Founder and Member of Interventional Pain Special Interest Group</b> , Canadian Pain Society
2000 - 2004	<b>Member</b> , Israeli Pain Association
1995 - 1999	<b>Member</b> , Israel Society of Anesthesia

## Administrative Activities

### INTERNATIONAL

#### American Society of Regional Anesthesia

2009 - 2010	<b>Vice Chair</b> , Ultrasound in Pain Medicine Special Interest Group
2009	<b>Member</b> , Annual Meeting Organizing Committee

#### International Association for the Study of Pain

2012 - present	<b>Member</b> , Quality Assurance Committee, Special Interest Group in Neuromodulation
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#### North American Neuromodulation Society

2009 - present	<b>Member</b> , Technology Assessment Committee
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#### University of Washington

2013	<b>Member</b> , R&D Committee Point of Care Ultrasound, UW Medicine, Seattle, Washington, United States. <i>Development of institutional education curriculum and practice guidelines in point of care ultrasound.</i>
2012	<b>Member</b> , School of Medicine New Curriculum Development Committee, Seattle, Washington, United States. <i>Revising current curriculum (transition to practice phase).</i>

#### World Institute of Pain

2000 - present	<b>Member</b> , Examination Board
2006 - 2008	<b>Chair</b> , Canadian Chapter

### NATIONAL

#### Canadian Pain Society

2004 - 2008	<b>Executive Member</b> , Interventional Pain Special Interest Group, Canada.
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### PROVINCIAL / REGIONAL

#### Ministry of Health and Long-Term Care

2014 - present	<b>Member</b> , Adult Chronic Pain Network Advisory Board, Toronto, Ontario, Canada.
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### LOCAL

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## Peer Review Activities

### ASSOCIATE OR SECTION EDITING

#### Editor

2013 - present Current Headache and Pain Reports (Section Editor)

#### Associate Editor

2014 Feb - present Pain Practice

2014 - present Regional Anesthesia and Pain Medicine

## 5. GRANTS, CONTRACTS AND CLINICAL TRIALS (last two years)

2011 - 2013 **Principal Applicant.** Unrestricted (gift) industry grants to support educational and research activities. SonoSite Inc. and Pajunk. 115,000 USD. [Donations]  
Seattle, Washington, United States.

2010 - 2013 **Principal Site Investigator.** The EMP3OWER™ Study: Eon Mini™ study – Product Options for Wellness, Effectiveness, and Relief; A Multi-Centered Evaluation of Patients with Chronic Pain of the Trunk and/or Limbs using Percutaneous Leads. St. Jude's Medical. PI: S. Washburn. Collaborator(s): 12 sites in USA. 98,000 USD. [Clinical Trials]

## 6. PUBLICATIONS (last two years)

### Peer-Reviewed

1. **M. Gofeld.** New Horizons in Neuromodulation. Current Pain and Headache Reports. 2014 Mar;18(3):397. Impact Factor 1.672. **Principal Author.**
2. M. Saulino, **M. Gofeld.** "Sonology" of Programmable Intrathecal Pumps. Neuromodulation. 2014 Feb. Epub ahead of print. Impact Factor 1.19. **Co-Principal Author.**
3. Pezeshki PS, Woo J, Akens MK, Davies JE, **Gofeld M**, Whyne CM, Yee AJ. Evaluation of a bipolar-cooled radiofrequency device for ablation of bone metastases: preclinical assessment in porcine vertebrae. Spine J. 2014 Feb;14(2):361-70. **Coauthor or Collaborator.**
4. **Gofeld M**, Brown MN, Bollag L, Hanlon JG, Theodore BR. Magnetic positioning system and ultrasound guidance for lumbar zygapophysial radiofrequency neurotomy: a cadaver study. Reg Anesth Pain Med. 2014 Jan;39(1):61-6 (Trainee publication, Brown MN, Hanlon JG). **Principal Author.**
5. Pezeshki P, Akens MK, **Gofeld M**, Woo J, Whyne CM, Yee AJ. Therapeutic effect of bone targeted radiofrequency ablation in a 2 Rabbit Model of Femoral Carcinoma. Journal of Orthopaedic Research. 2014. In Press. **Coauthor or Collaborator.**

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6. Bhatia A, **Gofeld M**, Ganapathy S, Hanlon J, Johnson M. Comparison of anatomic landmarks and ultrasound guidance for intercostal nerve injections in cadavers. *Reg Anesth Pain Med*. 2013 Nov;38(6):503-7. **Coauthor or Collaborator**.
7. **Gofeld M**, Krashin DL, Ahn S. Needle echogenicity in ultrasound-guided lumbar spine injections: a cadaveric study. *Pain Physician*. 2013 Nov;16(6):E725-30 (Trainee publication, Krashin DL). **Principal Author**.
8. **Gofeld M**, Hanlon JG. Ultrasound-Guided Placement of a Paddle Lead Onto Peripheral Nerves: Surgical Anatomy and Methodology. *Neuromodulation*. 2014 Jan;17(1):48-53 **Principal Author**.
9. **Gofeld M**, Bristow SJ, Chiu S, Kliot M. Preoperative ultrasound-guided mapping of peripheral nerves. *J Neurosurg*. 2013 Sep;119(3):709-13 (Trainee publication, Bristow SJ, Chiu S). **Principal Author**.
10. McClintic AM, Dickey TC, **Gofeld M**, Illian PR, Kliot M, Kuciewicz JC, Loeser JD, Richebe PG, Mourad PD. Rapid ultrasonic stimulation of inflamed tissue with diagnostic intent. *J Acoust Soc Am*. 2013 Aug;134(2):1521-9. **Coauthor or Collaborator**.
11. **Gofeld M**, Restrepo-Garces CE, Theodore BR, Faclier G. Pulsed radiofrequency of suprascapular nerve for chronic shoulder pain: a randomized double-blind active placebo-controlled study. *Pain Pract*. 2013 Feb;13(2):96-103. **Principal Author**.
12. Tych RE, **Gofeld M**, Jarvik JG, Kliot M, Loeser JD, McClintic AM, Ollos RJ, Pederson KD, Sparks RE, Terman GW, Mourad PD. Neuropathic tissue responds preferentially to stimulation by intense focused ultrasound. *Ultrasound Med Biol*. 2013 Jan;39(1):111-6. **Coauthor or Collaborator**.
13. Garcia JD, **Gofeld M**, Illian PR, Loeser JD, Kliot M, McClintic AM, Ward A, Yao A, Mourad PD. Intense focused ultrasound as a potential research tool for the quantification of diurnal inflammatory pain. *Ultrasonics*. 2013 Jan;53(1):84-9. **Coauthor or Collaborator**.
14. McClintic AM, Dickey TC, **Gofeld M**, Kliot M, Loeser JD, Richebe P, Mourad PD. Intense focused ultrasound preferentially stimulates subcutaneous and focal neuropathic tissue: preliminary results. *Pain Med*. 2013 Jan;14(1):84-92. **Coauthor or Collaborator**.
15. Theodore BR, Olamikan S, Keith RV, **Gofeld M**. Validation of self-reported pain reduction after diagnostic blockade. *Pain Med*. 2012 Sep;13(9):1131-6 (Trainee publication, Olamikan S). **Senior Responsible Author**.
16. Bollag L, Richebe P, Siaulys M, Ortner CM, **Gofeld M**, Landau R. Effect of transversus abdominis plane block with and without clonidine on post-cesarean delivery wound hyperalgesia and pain. *Reg Anesth Pain Med*. 2012 Sep;37(5):508-14. **Coauthor or Collaborator**.
17. **Gofeld M**, Montgomery K. Spine ultrasonography: interventions and diagnostics. *Pain Management*. 2012 Jul;2(4):373-82 (Trainee publication, K. Montgomery, Pain Medicine Fellow 2011-12). **Senior Responsible Author**.
18. Chiu SC, Bristow SJ, **Gofeld M**. Near-infrared tracking system for epidural catheter placement: a feasibility study. *Reg Anesth Pain Med*. 2012 May;37(3):354-6 (Trainee publication, Chiu SC, Bristow SJ). **Senior Responsible Author**.
19. **Gofeld M**, Bristow SJ, Chiu SC, McQueen CK, Bollag L. Ultrasound-guided lumbar transforaminal injections: feasibility and validation study. *Spine (Phila Pa 1976)*. 2012 Apr 20;37(9):808-12 (Trainee publication, Bristow SJ, Chiu S, McQueen CK). **Principal Author**.
20. **Gofeld M**, Bristow SJ, Chiu S. Ultrasound-guided injection of lumbar zygapophyseal joints: an anatomic study with fluoroscopy validation. *Reg Anesth Pain Med*. 2012 Mar;37(2):228-31 (Trainee publication, Bristow SJ, Chiu S). **Principal Author**.

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## Book Chapters

1. **Gofeld M.** Ultrasound-Guided Peripheral Nerve Stimulation. In: Bigeleisen P, Gofeld M, editor(s). Ultrasound-Guided Regional Anesthesia and Pain Medicine. 2nd edition. Lippincott Williams & Wilkins; 2014. In Press. **Principal Author.**
2. Krashin D, **Gofeld M.** Third Occipital Nerve Block and Cervical Medial Branch Block. In: Bigeleisen P, Gofeld M, editor(s). Ultrasound-Guided Regional Anesthesia and Pain Medicine. 2nd edition. Lippincott Williams & Wilkins; 2014. In Press (Trainee publication, Krashin D). **Senior Responsible Author.**
3. Lee JM, **Gofeld M.** Ilioinguinal, Iliohypogastric and Genitofemoral Nerve Blocks. In: Bigeleisen P, Gofeld M, editor(s). Ultrasound-Guided Regional Anesthesia and Pain Medicine. 2nd edition. Lippincott Williams & Wilkins; 2014. In Press (Trainee publication, Lee JM). **Senior Responsible Author.**
4. Montgomery K, **Gofeld M.** Ultrasound-Guided Lumbar Spine Interventions. In: Bigeleisen P, Gofeld M, editor(s). Ultrasound-Guided Regional Anesthesia and Pain Medicine. 2nd edition. Lippincott Williams & Wilkins; 2014. In Press (Trainee publication, Montgomery K). **Senior Responsible Author.**
5. Brown MN, **Gofeld M.** Musculoskeletal Ultrasonography. In: Bigeleisen P, Gofeld, editor(s). Ultrasound-Guided Regional Anesthesia and Pain Medicine. 2nd edition. Lippincott Williams & Wilkins; 2014. In Press. **Co-Principal Author.**
6. **Gofeld M,** Shankar H. Chapter 56: Peripheral & visceral sympathetic blocks. In: Raj PP, editor(s). Practical Management of Pain. 5th edition. Elsevier; 2014. p. 755-767.e2. **Principal Author.**
7. **Gofeld M,** Shankar H. Chapter 67: Ultrasound-Guided Sympathetic Blocks: Stellate Ganglion and Celiac Plexus. In: Benzon H, Raja S, Fishman S, Liu S, Cohen S, editor(s). Essentials in Pain Medicine. 3rd edition. Philadelphia: Elsevier Saunders; 2012. p. 494-501. **Principal Author.**

## 8. PATENTS AND COPYRIGHTS

2012	Methods and Systems for Preoperative Ultrasound-Guided Tissue Mapping, Patent, Patent Application 61/564,546 filed 11/29/2011 UW Reference: 45731.01US1, Applied, United States, Michael Gofeld, Michel Kliot
2011	Acoustic Palpation Using Non-Invasive Ultrasound Techniques for Identification of Target Sites and Assessment of Chronic Pain Disorders, Patent, Serial No.: 13/161,214, Applied, United States, Jeffrey G. Jarvik, Pierre D. Mourad, Michel Kliot, Robert C.A. Frederickson, Abbi M. McClintic, Trevor C. Dickey, Michael Gofeld
2011	Method of radiofrequency ablation utilizing bi-polar electrosurgical probe, Patent, Applied, CRFPCT001, United States, Jason Woo, Neil Godara, Kris Shah, Michael Gofeld

## 9. PRESENTATIONS (last two years)

2014 Jun 21	<b>Invited Speaker.</b> Overview, Patient Evaluation & Criteria for Intervention. 11th International Symposium of Ultrasound in Regional Anesthesia, Pain Medicine and Perioperative Applications (ISURA). Toronto, Ontario, Canada. (Continuing Education).
2014 Jun	<b>Workshop Instructor.</b> Hands-on Workshop Ultrasound in Pain Medicine and MSK. 11th International

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- Symposium of Ultrasound in Regional Anesthesia, Pain Medicine and Perioperative Applications (ISURA). Toronto, Ontario, Canada. June 22-23. (Continuing Education).
- 2014 Jun **Course Director, Facilitator, Speaker, Instructor.** Ultrasonography in Pain Medicine. Level III Neurosonology. American Academy of Pain Medicine Ultrasonography (AAPMU). Las Vegas, Nevada, United States. June 28-29. (Continuing Education).
- 2014 May 7 **Invited Speaker.** From the surface to the depth: ultrasound in interventional pain therapy. 7th World Congress, World Institute of Pain. Maastricht, Netherlands. (Continuing Education).
- 2014 May 1 **Invited Speaker.** Treatment of Sacroiliac Pain. 4th Networking World Anesthesia Convention. Vienna, Not Required, Austria. (Continuing Education).
- 2014 Apr 4 **Invited Speaker and Instructor.** Treatment Options for Discogenic Pain. Interventional Pain Special Interest Group of the Canadian Pain Society. Vancouver, British Columbia, Canada. Canadian Interventional Pain Course. Available from: <http://www.cipc2014.com/>. (Continuing Education).
- 2014 Mar 1 **Invited Speaker.** Spine Sonography. Department of Anesthesia, Emory University. Atlanta, Louisiana, United States. (Continuing Education).
- 2014 Mar **Course Director, Facilitator, Speaker, Instructor.** Ultrasonography in Pain Medicine Level I and Level II. American Academy of Pain Medicine Ultrasonography (AAPMU). Atlanta, Georgia, United States. (March 28-30). (Continuing Education).
- 2014 Feb 28 **Visiting Professor.** Interventional Cancer Pain Management. Department of Anesthesia, Emory University. Atlanta, Georgia, United States.
- 2014 Feb 15 **Invited Speaker.** Management of Painful Bone Metastases; Interventional Options for Treatment of Osteoarthritis. Cleveland Clinic Foundation. Las Vegas, Nevada, United States. Available from: <http://www.clevelandclinicmeded.com/live/courses/pain/default.asp>. (Continuing Education).
- 2014 Jan **Course Director, Facilitator, Speaker, Instructor.** Level II Spine Course. American Academy of Pain Management in Ultrasonography (AAPMU). Tampa, Florida, United States. (Jan 18-19). (Continuing Education).
- 2013 Dec **Invited Speaker and Instructor.** Principles of Ultrasound and its use in Interventional Pain; Ultrasound vs Fluoroscopy vs CT. WIP Comprehensive Review and Workshop. London, United Kingdom. December 5-7. (Continuing Education).
- 2013 Nov 15 **Invited Speaker.** Pathophysiology of Cancer Pain; Chronic Low Back Pain. Swiss Interventional Pain Society Annual Meeting. Montreux, Switzerland. (Continuing Education).
- 2013 Nov 11 **Visiting Professor.** Department of Anesthesiology, Sourasky Medical Center, Tel Aviv University. Israel.
- 2013 Nov 9 **Organizer.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). Los Angeles, California, United States. (Continuing Education).
- 2013 Oct 27 **Visiting Professor.** Department of Anesthesiology, Catholic University of Korea. Seoul, Korea, Republic Of.
- 2013 Oct **Course Director, Facilitator, Speaker, Instructor.** Level III Neuro Course. American Academy of Pain Management in Ultrasonography (AAPMU). Las Vegas, Nevada, United States. (Oct 19-20). (Continuing Education).
- 2013 Sep 21 **Invited Speaker.** Ultrasound in Pain Medicine. Californian Society of Interventional Pain Physicians.



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Palos Verdes, California, United States. (Continuing Education).

- 2013 Sep 8 **Course Director, Facilitator, Speaker.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). New Jersey, United States. (Continuing Education).
- 2013 Aug 17 **Course Director, Facilitator, Speaker, Instructor.** Ultrasonography in Pain Medicine Level 1. American Academy of Pain Medicine Ultrasonography (AAPMU). Las Vegas, Nevada, United States. (Continuing Education).
- 2013 Aug **Organizer.** Ultrasonography in Pain Medicine Course. Dannemiller Foundation. Chicago, Illinois, United States. (Aug 2-3). (Continuing Education).
- 2013 Jul 13 **Organizer.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). Denver, Nebraska, United States. (Continuing Education).
- 2013 Jun 14 **Instructor.** Ultrasound in Pain Medicine Workshop. World Institute of Pain. Genk, Belgium. (Continuing Education).
- 2013 Jun 13 **Invited Speaker.** Ultrasonography in Lumbar Spine Interventions. 14th WIP Benelux 2013 Symposium. Lanaken, Belgium. (Continuing Education).
- 2013 Jun **Organizer.** Ultrasonography in Pain Medicine Level II (MSK). American Academy of Pain Medicine Ultrasonography (AAPMU). Las Vegas, Nevada, United States. (June 15-16). (Continuing Education).
- 2013 May 25 **Invited Speaker.** Spinal Ultrasonography. Annual Meeting of Korean Pain Society. Daejeon, Korea, Republic Of. (Continuing Education).
- 2013 May 18 **Organizer.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). Chicago, Illinois, United States. (Continuing Education).
- 2013 May 2 **Visiting Professor.** Department of Anesthesiology, Sourasky Medical Center, Tel Aviv University. Tel Aviv, Israel.
- 2013 Apr 20 **Organizer.** Ultrasonography in Pain Medicine Level I. American Academy of Pain Medicine Ultrasonography (AAPMU). Washington DC, District of Columbia, United States. (Continuing Education).
- 2013 Apr 2 **Visiting Professor.** Department of Anesthesiology, Prince Wales Hospital, Chinese University. Hong Kong.
- 2013 Apr **Invited Speaker.** An Overview of Ultrasonography in Pain Medicine. International Symposium on Spine and Paravertebral Sonography for Anaesthesia and Pain Medicine (ISSPS). Hong Kong. April 5-7. (Continuing Education).
- 2013 Mar **Course Director, Facilitator, Speaker, Instructor.** Level III Spine Course. American Academy of Pain Medicine in Ultrasound (AAPMU). Las Vegas, Nevada, United States. (March 9-10). (Continuing Education).
- 2013 Feb 9 **Organizer.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). Phoenix, Arizona, United States. (Continuing Education).
- 2013 Jan **Course Director, Facilitator, Speaker, Instructor.** Ultrasonography in Pain Medicine Level II Course. American Academy of Pain Medicine in Ultrasound (AAPMU). Las Vegas, Nevada, United States. (January 12-13). (Continuing Education).
- 2013 Jan **Visiting Professor.** Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and

Michael GOFELD

Women's Hospital, Harvard School of Medicine. Cambridge, Massachusetts, United States. January 22-23, 2013.

- 2012 Dec **Invited Speaker.** Ultrasonography in Neuromodulation. North American Neuromodulation Society (NANS) 16th Annual Meeting. Las Vegas, Nevada, United States. December 6-9. (Continuing Education).
- 2012 Nov 11 **Invited Speaker and Instructor.** Ultrasonography in Pain Medicine conference and workshop. Department of Anesthesia, University of California San Francisco. San Francisco, California, United States. (Continuing Education).
- 2012 Nov 10 **Organizer.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). San Diego, California, United States. (Continuing Education).
- 2012 Nov **Invited Speaker, Moderator and Instructor.** Special Ultrasound Workshop. American Society of Regional Anesthesia (ASRA) and Pain Medicine Annual Meeting. Miami, Florida, United States. November 15-17. (Continuing Education).
- 2012 Oct 27 **Organizer.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). Boston, Massachusetts, United States. (Continuing Education).
- 2012 Oct 26 **Invited Speaker.** Internally Cooled Radiofrequency Application in Interventional Pain Medicine. Chinese International Association for the Study of Pain (IASP) Chapter (CIASP). Beijing, China. (Continuing Education).
- 2012 Oct **Visiting Professor.** Ultrasonography in Pain and Musculoskeletal Practice. Lucy Montoro Rehabilitation Institute and University of Sao Paulo. São Paulo, Brazil. Oct 10-11.
- 2012 Sep 22 **Organizer.** Ultrasonography in Pain Medicine Level 4. American Academy of Pain Medicine Ultrasonography (AAPMU). Chicago, Illinois, United States. (Continuing Education).
- 2012 Sep **Invited Speaker.** Vertebroplasty and Osteocool Ultrasound in Pain Medicine. 1st European – American Spine & Chronic Pain Symposium. Bol (Island of Brac), Croatia. Sept 14-16. (Continuing Education).

CURRICULUM VITAE July 28, 2015

**DR. PATRICIA KATHLEEN MORLEY-FORSTER**  
BSc, MD, FRCPC

Professor - Department of Anesthesia &  
Perioperative Medicine

## *BIO SKETCH*

Married –two sons

Hobbies – travel, cycling, skiing, opera

## *PERSONAL SUMMARY*

Name	Patricia Kathleen Morley-Forster
Languages	English: spoken and written French: spoken and written
Office Address	St. Joseph's Health Care Department of Anesthesia and Perioperative Medicine 268 Grosvenor Street London, Ontario, Canada N6A 4L6
Telephone	519-646-6000 ext. 65065
Fax	519-646-6376
Email	<a href="mailto:pat.morley-forster@sjhc.london.on.ca">pat.morley-forster@sjhc.london.on.ca</a>

## *APPOINTMENTS AND POSITIONS HELD*

### Current Appointment(s)

#### Current Positions Held

- |                |   |
|----------------|---|
| 2012-present   | Clinical Professor, Dept of Anesthesia and Perioperative Medicine , Schulich School of Medicine, University of Western Ontario, London, Ontario, Canada.  |
| 2004 - 2012    | Clinical Associate Professor, Dept of Anesthesia and Perioperative Medicine, Schulich School of Medicine, University of Western Ontario, London, Ontario, Canada  |
| 2002 - present | Physician Program Leader, St. Joseph's Health Care Pain Management Program, Duties include ensuring timely access to Pain Clinic through triage process, overseeing utilization of resources, hiring and recruitment of medical and non-medical personnel(Role descriptor available on request) |
| 2000 - present | Affiliated Faculty Member, University of Toronto Centre for the Study of Pain.(Invited Appointment). Toronto, Ontario, Canada   |
| 1997 - present | Affiliate Investigator, Lawson Research Institute, (Invited Appointment). London, Ontario, Canada   |
| 1987 - present | Consultant, St. Joseph's Health Care, Department of Anesthesia, London, Canada  |
| 1987 - present | Consultant, London Health Sciences Centre, Department of Anesthesia, London, Canada   |

### Previous Appointment(s)

#### Previous Positions Held

- |             |  |
|-------------|--|
| 1993 - 2007 | Consultant, St. Joseph's Health Care, Acute Pain Service. London, Ontario, Canada  |
| 2006 - 2009 | Consultant, CPM Centers for Pain Management, Mississauga, Ontario, Canada  |
| 2001 - 2005 | Earl Russell Endowed Chair in Pain Management, University of Western Ontario. Duties included development and implementation of strategic plan, setting up governance model, establishment of new interdisciplinary research teams, grant-writing, recruitment and training of personnel, and fundraising for the endowment. |
| 1999        | Locum Tenens, Grey-Bruce Regional Health Centre, Anesthesia Staff. Owen Sound, Ontario, Canada   |
| 1998        | Locum Tenens, Grey-Bruce Regional Health Centre, Anesthesia Staff. Owen Sound, Ontario, Canada   |
| 1993 - 2001 | Resident Research Coordinator, University of Western Ontario, Anesthesia Residency Program, London, Ontario, Canada  |
| 1988 - 2000 | Director of Obstetric Anesthesia Program, University of Western Ontario, London, Ontario, Canada   |
| 1987 - 1992 | Clinical Assistant Professor, University of Western Ontario, London, Ontario, Canada   |
| 1987        | Assistant Professor, University of Toronto, Toronto, Ontario, Canada   |

1983 - 1987      Lecturer, Toronto General Hospital, Department of Anesthesia, Toronto, Canada

1983 - 1987      Courtesy Staff Consultant, Orthopedic and Arthritic Hospital, Dept of Anesthesia, Ontario, Canada

## EDUCATION AND QUALIFICATIONS

### Degrees and Diplomas

1973 - 1977      MD, University of Toronto, Undergraduate, Toronto, Ontario, Canada

1970 - 1973      BSc, University of Western Ontario, Undergraduate, Biology, London, Ontario, Canada

### Specialized Training

2007              Advanced Cardiac Life Support Re-certification

Apr-Sept 2000    Wasser Pain Clinic, Mt. Sinai Hospital, Fellowship in Chronic Pain Management, Supervisor: Dr. Allan Gordon, Dept. of Neurology, University of Toronto, Toronto, Ontario, Canada

Jan-Mar 1999    University of Western Ontario, Postgraduate Clinical Training in Cancer Pain Management. Supervisor: Dr. Dwight Moulin, Associate Professor, Dept. of Clinical Neurological Sciences, Toronto, Ontario

1997              Sunnybrook Health Centre, Training session on Anaesthesia Crisis Simulator

1996              Victoria Hospital, A.C.L.S. Recertification Course

1986              McMaster University, Dept. of Epidemiology, Fundaments of Clinical Research Design, Seminar Course, Supervisor: Dr. D. Sackett

1982 - 1983      Toronto General Hospital, Clinical Research Fellowship, Toronto, Ontario, Canada. Primarily peripheral cardiovascular and neuroanesthesia

1978 - 1982      Resident, University of Toronto, Anesthesia Residency Program, Toronto, Ontario, Canada

1977 - 1978      Mixed Internship, Ottawa Civic Hospital, Ottawa, Ontario, Canada

### Qualifications, Certifications and Licenses

2012              Pain Medicine, Founder Status, Royal College of Physicians and Surgeons

2011-2015      *Diplomate* Accreditation, American Academy of Pain Management (MCQ invigilated examination)

1982 - present    Fellow, Royal College of Physicians & Surgeons of Canada, Canada

1977 - present    Licensiate, Medical Council of Canada, License, Canada

## *PROFESSIONAL DEVELOPMENT*

### Continuing Education - Roles in Conferences

#### Conferences and Courses

Sept 19,2015	Malpractice in Pain Medicine-Medico-Legal Conference , Toronto
July 17, 2015	Canadian Opioid Guideline Update Process, National Faculty Meeting, McMaster University
June 2015	Canadian Anesthesiology Society, Ottawa
May 2015	Canadian Pain Society, Charlottetown
October,2014	Int Association for the Study of Pain, Buenos Aires
May 2014	Speaker,Canadian Anesthesia Society Conference, St John's
May 2013	Canadian Pain Society Annual Conference, Winnipeg
Nov. 2012	Improving patient and physician satisfaction: Time management and Communication skills    November 8, 2012
2012	Canadian Anesthesiologists' Society, June 16-18, Quebec City, Quebec
2012	Principles and Practices of being an Effective Mentor. Presented by the Department of Anesthesia and Perioperative Medicine , May 10, Schulich School of Medicine
2012	Canadian Pain Society Annual Conference, May 23-26,Whistler, British Colombia
2012	Canadian Conference on Physician Leadership, Canadian Medical Association sponsored April 13-14, Ottawa, Ontario
June 2011	Canadian Anesthesia Society Annual Conference, Toronto , Canada
May 2011	Canadian Pain Society Annual Conference, Niagara Falls, Canada
2010	International Association for the Study of Pain. 13th World Congress on Pain: Montreal, QC, Canada.
2010	Lawrence S Bloomberg Faculty of Nursing, University of Toronto. Moving the Pain Education Forward: Innovative Models: Toronto, ON, Canada.
2010	Canadian Anesthesiologists Society. CAS Annual Meeting: Montreal, QC, Canada.
2010	Canadian Pain Society. CPS Annual Conference: Calgary, AB, Canada.
2009	3rd Annual Anesthesia Conference of Kuwait.
2009	Inter-urban Pain Association of Ontario. Inter-urban Pain Association of Ontario Conference (Co-organizer):London, ON, Canada.
2009	Speaker,Colegio Mexicano de Anestesiologia: Mexico City, Mexico
2009	Canadian Pain Society. CPS Meeting: Quebec City, QC, Canada
2009	Canadian Pain Society. CPS Pain Refresher Day. Toronto

2008	Pain Education Day: London, ON, Canada
2008	International Association for the Study of Pain. 12th World Congress on Pain: Glasgow, Scotland, UK
2008	Canadian Interventional Pain Advanced Course, McGill Medical Simulation Centre, Montreal
2008	Centres for Pain Management. Pain Day.
2008	Canadian Anesthesiologists Society. CAS Annual Meeting: Halifax, NS, Canada
2008	Canadian Pain Society. CPS Annual Conference: Victoria, BC, Canada
2007	College of Physicians and Surgeons of Ontario. Conference of CPSO Assessors.
2006	Canadian Anesthesiologists Society. CAS Annual Meeting: Toronto, ON, Canada.
2006	Canadian Pain Society. CPS Meeting: Edmonton, AB, Canada.
2005	Canadian Pain Society. CPS Meeting: Halifax, NS, Canada.
2004	The University of Western Ontario. UWO Research Pain Day.
2004	Regional Anesthesia and Pain Medicine Conference: Toronto, ON, Canada.
2004	McMaster University. McMaster University Pain Symposium.
2004	Joint Canadian and American Pain Societies, Joint CPS/APS Conference: Vancouver, BC, Canada.
2004	6th Annual Pain and Chemical Dependency Workshop: New York, USA.
2001	PubMed Computerized Literature Search Workshop.
1998	Canadian Medical Association. CMA Leadership Workshop for Medical Women: Toronto, ON, Canada.
1997	The University of Western Ontario. Improving Your Vocal and Physical Expressiveness as a Lecturer. A mini-course sponsored by the Educational Development Office, Instructor Mary Dow.



## *SERVICE AND ADMINISTRATION*

### Current Memberships:

American Academy of Pain Management, Diplomate

Canadian Academy of Pain Management

Ontario Medical Association, Section on Chronic Pain (Past Executive Member, 2008-10)

Canadian Pain Society (Past Executive Board Member 2005-10)

International Association for the Study of Pain

Canadian Anesthesiologists Society (Past member of Association of Canadian University Departments of Anesthesia ACUDA 1993-2001)

Canadian Pain Coalition (Past Board Member 2007-09)

Association of Directors of University-Affiliated Pain Clinics of Canada (Founding Member, Past Chair 2004-2010))

Lawson Research Institute (Invited member), London, Ontario

University of Toronto Centre for the Study of Pain (Invited member)

Neuropathic Pain Special Interest Group (National Organization affiliated with Can Pain Society)

### Past Professional Associations

2003 - 2010           Invited Member, Canadian Arthritis Network

1993 - 2001           Appointed Member, Association of Canadian Universities Departments of Anesthesia (ACUDA)

1992 - 2010           Member, American Society of Anesthesiologists

1984 – 2009           Member, Society of Obstetric Anesthesia and Perinatology

### Peer Review Activities

2015                   University of Montreal, Peer assessment for Promotion

2015                   University of Western Ontario, Peer assessment for Promotion

2015                   University of Western Ontario, Peer Assessment for Promotion

2013                   Invited External Reviewer for Hamilton Health Sciences Chronic Pain Program ,

2011                   Participation in Dept of Physical Medicine and Rehabilitation External review

2011                   Expert Witness for Discipline Hearing, College of Physicians and Surgeons of Ontario

2005 – 2010           CPSO Physician Assessor   (appointed)

2002                   University of Toronto, Peer assessment for promotion to Professor

2000	University of Western Ontario, Peer Assessment for promotion
2000	University of Toronto, Peer Assessment for promotion.
1999	University of Western Ontario, Internal University Reviewer for Pediatric Critical Care Program. London, Ontario
1998	Consultant for Canadian Medical Protective Association (CMPA)
1997	Peer Assessment for promotion to Professor at University of Ottawa. Ottawa, Ontario

#### Journal Reviewer

2015	Guest Reviewer , Anesthesia and Analgesia
2015	Guest reviewer, Canadian Journal of Anesthesia
2009 - 2014	Editorial Board, Canadian Journal of Anesthesia
2013	Guest Reviewer, Pain
2002 - 2015	Guest Reviewer, Pain Research & Management (2-3 reviews/yr)
2011	Guest reviewer, Clinical Journal of Pain
2011	Guest reviewer, Canadian Family Physician
1991 – 2009	Guest Reviewer, Canadian Journal of Anesthesia
2004 - 2008	Editorial Board, Pain Research & Management.
2004 - 2006	Editorial Board, Complementary and Alternative Medicine Online Journal.
2004	Journal of the Society of Obstetrics and Gynecology of Canada.
2000	Journal of the Society of Obstetrics and Gynecology of Canada.
1995	Journal of Neurosurgical Anesthesiology.

#### Grant Reviewing Roles

2014	PSI Foundation Grant Reviewer
2012	Review of Dr Diane Gromala for Canada Research Chair Tier 2
2011	Grant Review for British Oxygen Chair Research Grant, National Institute of Academic Anesthesia
2010	Grant Review, Population Health Grants, Canadian Institutes of Health Research
2009	PSI Foundation Grant Reviewer.
2005	PSI Foundation Grant Reviewer.
2004	PSI Foundation Grant Reviewer.
1996	PSI Foundation Grant Reviewer

Books Reviewed

1. MacIntyre P, Ready B. Acute Pain Management: A Practical Guide. 2nd ed. London: W.B. Saunders; 2001. Reviewer

Administrative Roles:

National

2014-present	Member, Pain Medicine Examination Committee, Royal College of Physicians and Surgeons
2011-2015	Chair Specialty Committee Pain Medicine, Royal College of Physicians and Surgeons of Canada
2010-2012	Chair of Specialty Committee ,Royal College of Physicians and Surgeons of Canada Working Group in Pain Medicine
2008 - 2010	Invited Member, National Opioid Use Guidelines Group (NOUGG).
2006 - 2010	Chair, Task Force for the Royal College Accreditation of Pain Medicine as a Subspecialty
2005 - 2010	Executive Member, Canadian Pain Society
2010 -2012	Invited Member, Canadian Pain Society Task Force on Service delivery (Mandate-to plan the National Pain Summit meeting of April, 2012)
2004 - 2010	Chair, Association of Directors of University-Affiliated Pain Clinics of Canada
2004 - 2008	Executive Member, Canadian Pain Coalition
2001 - 2003	Vice-President, Canadian Anesthesiologists' Society Section on Chronic Pain

Provincial

2012 – 2014	Invited Member, Ontario Benefits, Drug Program (OBDP) Pain Medication Review Subcommittee
2011	Invited member, OMA/MOHLTC Working Group in Chronic Pain-The mandate of this committee was to create a blueprint for chronic pain services in Ontario , covering primary care, secondary community centers and tertiary multidisciplinary clinics.
2008 - 2010	Elected Member of Executive: Ontario Medical Section of Chronic Pain Physicians.
2005 -2010	Physician Practice Assessor, College of Physicians and Surgeons of Ontario.
1991	OMA Subcommittee: Guidelines for Continuous Infusion Epidural Analgesia (appointed member)

University of Western Ontario

2015-2016	Course Lead, Portfolio, Year 3, Schulich School of Medicine
2014-2015	Course Co-Leader with Dr Michael Sanatani, Portfolio Year 1, Schulich School of

Medicine

2012	Examiners' Board, PhD Candidate, John Robertson,
2005-2014	Scientific Advisory Board of the University of Western Ontario Interdisciplinary Pain Program
2002 - 2004	Appointed Member, Department of Anesthesia Academic Affairs Committee
1999 - 2000	Appointed Member, Department of Anesthesia Academic Affairs Committee
1999 - present	Member, University and Hospital Selection Committees for Departmental Chair of Anesthesia
2005 - 2008	Invited Member, UWO Complementary & Alternative Medicine Network
2001 - 2005	Chair, Scientific Advisory Board of the University of Western Ontario Interdisciplinary Pain Program
2003 - 2004	Member, Selection Committee for Canada Research Chairs Tier and Tier 2
1999 - 2001	Member, Selection Committee for Chair of Anesthesiology Department
1995	Member, Selection Committee for Chair of Otolaryngology Department.
1995	Member, Selection Committee for Chair of Obstetrics and Gynecology.

University of Toronto

2014	External reviewer, MSc Clinical Sciences Thesis, "Chronic Pain, Opioids and Ovarian Hormones." Candidate, Ms. Samah Hassan, Collaborative Graduate Program in Women's Health, University of Toronto
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St Joseph's Health Care

2013	Member, Chronic Disease Management Project, Physician Leaders Group
2012	Chair, Strategic Planning Process for the SJHC Pain Management Program
2002 - 2015	Chair, Pain Clinic Advisory Committee, SJHC
2002-2004	Invited Member, Board of Directors, St Joseph's Health Care
2001 - 2003	Chair, Grosvenor Site Medication Committee
2006 - 2007	Member, Obstetric Anesthesia Strategic Planning Committee
1998 - 2000	Member, Pharmacy and Therapeutics Committee
1998 -2001	Member, Functional Planning Committee for Low-Risk Birthing Centre
1998 - 2000	Member, City-wide Midwifery Task Force
1998 - 2000	Member, Obstetric Anaesthesia Interest Group, St Joseph's Health Care
1998 - 2001	Member, Maternal Perinatal Health Citywide Steering Task Force
1997 - 2000	Member, City-wide Pediatric Anaesthesia Interest Group

1997 - 2002	Member, Obstetrical/Perinatal Task Team Obstetrics/Perinatal Working Group
1994 - 2000	Member, Low-Risk Obstetrical Care Advisory Committee
1993 - 1996	Member, Labour/Birthing Room Construction Planning Committee, SJHC
1991 - 1997	Member, Perinatal Advisory Committee, SJHC
1992	Chair, Introduction of Epidural Infusions for Labour Analgesia into Clinical Practice, SJHC
1991 - 1994	Chair, Departmental Risk Management Committee
1992	Chair, Introduction of Epi-Morph for Postoperative C-section Pain into Clinical Practice
1989 - 1995	Member, Department Subcommittee for Academic Development
1989 - 1992	Member, Hospital Perinatal Mortality Committee
1989 - 1991	Member, Hospital Search Committee for Chief of Department of Anesthesia, <i>Lawson Health Research Institute and Parkwood Hospital</i>
2002 - 2005	Invited Member, Rehabilitation and Geriatric Care Committee <i>Toronto General Hospital</i>
1986 - 1987	Member, Research Ethics Committee

## RESEARCH AND SCHOLARLY ACTIVITIES

### Grants

#### Peer-reviewed

2013	Faculty Supervisor: Dr Qutaiba Tawfic-Mahodi. Low Dose Oral Ketamine Adjuvant Therapy in Chronic Pain Patients – A Pilot Study to Assess Safety. Internal Research Fund Award from Dept of Anesthesiology and Perioperative Medicine \$10,000
2011	Co-Investigator, Near Infra-red Spectroscopic Measurement of Tissue Oxygen Saturation and the Vascular Occlusion Test in CRPS. PI: Dr Geoff Bellingham. AHSC AFP Innovation Fund \$115,540
2011	Faculty Supervisor: Dr Raj Manikandan. Plasma concentrations of ketamine and norketamine in patients using topical application of 10% ketamine for neuropathic pain. Earl Russell Trainee Grant. \$10,000
2010-2011	Faculty Co-Supervisor with Dr Phil Jones. The effect of a perioperative smoking cessation program on rates of smoking cessation/reduction and perioperative complications: A randomized clinical trial. Principal Investigator Dr Philip Jones. Dept of Anesthesia Internal Academic Development Fund \$10,000
2011	Co-Investigator, Investigating the changes in neural activity caused by chronic pain in patients with fibromyalgia PI: Keith St Lawrence. Academic Development Fund UWO, \$8400
2010	Co-Investigator, Identification of physical and psychosocial predictors of chronic pain in children and adolescents: a first step towards prevention. Canadian Institutes of Health

	Research (CIHR) Population and Public Health, \$99,983
2010	Co-Investigator, Combination Ultra Low Dose Naloxone Infusion and Oral Tramacet for postoperative pain management in elderly patients undergoing joint replacement surgery: a prospective randomized, controlled trial. Earl Russell Pain Program Trainee Award, \$ 10,000
2008 - 2009	Principal Investigator, Outcomes and Side effects of Lidocaine Infusions for Neuropathic Pain in Outpatients. Summer Research Training Program, UWO, \$ 10,000
2007 - 2009	Co-Investigator, Dr RA Gordon Patient Safety Award, Post-Dural Puncture Headache Clinical Trials Group.PI: Dr Pamela Angle \$40,000
2008 - 2009	Co-Investigator, Project: The Effect of the Combined Use of Naloxone Infusion and Oral Tramacet on Post-Operative Analgesia in Elderly Patients Undergoing Joint Replacement Surgery. PI: Imasogie N, Lawson Health Research Institute, \$15,000
2008	Co-Investigator, Neuroimaging of lidocaine-induced analgesia in complex regional pain syndrome. Dr Collin Clarke , Earl Russell Pain Program Trainee Research Award, \$5,000
2007 - 2009	Adjudicating Committee Member, Post-Dural Puncture Headache Clinical Trials Group. PI: Dr Pamela Angle, Physician Services Inc Foundation, \$ 149,500
2007	Co-Investigator, Neuroimaging of lidocaine-induced analgesia in complex regional pain syndrome. Dr Collin Clarke ,CAS/Vitaid-LMA Residents' Research Award. Canadian Anesthesiologists' Society, \$5,000
2006 - 2008	Co-Investigator, Local anesthesia and chronic pain relief: Is procaine a useful drug? Dept of Anesthesia Academic Development Fund, \$10,000
2005 - 2007	Co-Investigator, Methadone and Opioid-related osteoporosis (MORO) Pilot study. Dept of Endocrinology Academic Fund, \$2,500
2005	Co-Investigator, Faculty Supervisor, Dr Geoff Bellingham, PGY5 The use of intra-operative low-dose ketamine in chronic pain patients undergoing laparotomy. CAS/Vitaid-LMA Residents' Research Award. Canadian Anesthesiologists' Society, \$5,000
2005	Co-Investigator, Faculty Supervisor: Dr Kate Ower, Fellow Chronic Pain Management Needs for and Access to Medical Information among Patients Attending Chronic Pain Clinic. Earl Russell Funds, \$3,000
2005	Principal Applicant, AMOSO Opportunities Fund Award: Medical leadership for St. Joseph's Health Care Pain Clinic. Academic Medical Organization of Southwestern Ontario, \$60,000
2004 - 2006	Co-Investigator, Prospective Study of the Management of Chronic Neuropathic Non-Cancer Pain. Canadian Pain Trials Network, Canadian Foundation for Innovation, Principal Investigator: Dr Dwight Moulin, Total Funding \$1,991,059
2004 - 2006	Co-Investigator, The effects of a weak specific pulsed low frequency magnetic fields on pain perception in a chronic pain population. PI: Dr. Alex Thomas, Earl Russell Chair Funds and Lawson Research Health Institute, \$15,000
2004	Principal Applicant, AMOSO Opportunities Fund Award: UWO Interdisciplinary Pain Program Leadership. Academic Medical Organization of Southwestern Ontario, \$75,000

2003 - 2008	Co-Investigator, Disentangling the placebo effect: The relative roles of pharmacology and response expectancies in pain and sleep. PI: Leora Swartzman, Dr. Gilles Lavigne, CIHR – New Emerging Team Grant, Total Funding:\$1,200,000
2002 - 2005	Co-Investigator, Psychological Factors Predicting Adjustment to Persistent Pain. PI: Dr. Allan Shapiro, Earl Russell Chair Funds and UWO Summer Research Training Program, \$6,500
2005	Co-Investigator, The impact of psychological factors on the neural processing of nociception in a chronic pain syndrome. PIs: Dr Leora Swartzmann , Dr Gilles Lavigne Placebo NET\$, 35,000
2000	Co-Investigator, A Phase 2 Multi-centre Randomized Double-Blind Placebo Controlled Crossover Study of CJC 1008, a Long-Acting Parenteral Opioid Analgesic in the Treatment of Post-herpetic Neuralgia. PI: Dr. Dwight Moulin, \$ 40,000
1999	Principal Site Investigator, A Phase 2 Multi-centre Randomized, Double-Blind Placebo Study of CJC 1008, a Long-Acting Parenteral Opioid analgesic in the Treatment of Surgical Pain Following Total Abdominal Hysterectomy. \$112,500
1997	Principal Investigator, Comparison of two anaesthesia delivery systems to demonstrate cost savings in isoflurane consumption during procedures of shorter duration. St. Joseph's Health Care, \$ 5,000
1992	Principal Investigator, The use of a Panasonic hand-held computer to record pain intensity in Second-Stage labour. St. Joseph's Health Care Foundation, \$ 3,000
1991	Principal Investigator, The efficacy of Indomethacin as a postoperative analgesic for outpatient gynecologic surgery. St. Joseph's Health Care Foundation, \$, 2,000

#### Industry

2007 - 2012	Co-Investigator, Multicentre Neuropathic Pain Database Study: Long-term outcome of the pharmacologic management of neuropathic pain. Genetics and Economic Burden of Neuropathic Pain. Pfizer Canada, Funded, \$853,088
2005 - 2007	Site Investigator, Multicentre RCT-Efficacy and Safety of Pregabalin in the Treatment of Subjects with Neuropathic Pain Associated with Lumbosacral Radiculopathy. Pfizer Canada Inc. Funded, \$74,408
2005 - 2007	Co-Investigator, A randomized Placebo-controlled Trial of the Efficacy and Safety of Pregabalin in the Treatment of Subjects with Peripheral Neuropathic Pain. PI: Dr. Dwight Moulin, Pfizer Canada Inc. \$84,000
1998	Principal Investigator, Comparison of the incidence and severity of post-dural puncture headache with the Epi Sprotte and Tuohy needles. Pajunk Inc\$10,300
1997	Principal Investigator, Anesthesia for intranasal surgery: A comparison between tracheal intubation and the flexible reinforced laryngeal mask. Gensia Inc. \$4,000
1996	Site Investigator, Epidural Anesthesia for Cesarean Section: A double-blind comparison of ropivacaine 7.5 mg/ml and bupivacaine 5mg/ml. Astra, \$24,000
1996	Principal Investigator, Incidence of epidural vein cannulation with the flexible Arrow epidural catheter. Arrow International, \$1,600

- 1990 Principal Investigator, Effect of Midazolam premedication on patient recovery characteristics after pediatric tonsillectomy. Hoffman-Laroche, \$5,000
- 1986 Principal Investigator, Temperature changes and shivering after epidural anesthesia for Cesarean Section. Mon-A-Therm, \$5,000

Industry Consulting Roles:

- 2006 - 2009 Physician Assessor for Centers for Pain Management (CPM)
- 2005 Consultant for Purdue Pharmaceuticals, Advancing the Continuum of Pain Management.
- 2005 - 2008 Scientific Consultant, Fralex Therapeutics Management Board.
- 2005 Pfizer Canada, Member, Multidisciplinary Consultant's Forum on Neuropathic Pain Management.
- 2005 Media Relations Consultant for Merck-Frosst re: Post Therapeutic Neuralgia Vaccine.
- 2005 Member, Janssen-Ortho Advisory Board, "The Future of Pain Management".
- 2003 Pfizer International, Scientific Consultant for International Coalition on Neuropathic Pain. Cannes, France
- 2003 Scientific Advisor for Janssen-Ortho Inc., Opioid Management Board.
- 2003 Scientific Consultant for Janssen Ortho Inc., at conference in Enhancing Chronic Pain Management with Opioids. Whistler, British Columbia
- 2001 Invited member of Scientific Advisory Board for ConjuChem. To advise on development of a novel analgesic for acute and chronic pain. Scientific Adviser in design and implementation of Phase II trials for CJC 1008
- 1997 External Consultant for Oshawa General Hospital to advise on optimal site for cesarean sections. (\$15,000 report). Oshawa, Ontario

Other Contributions

- 2015 Creation of Pain Medicine Website; March 2015; <http://fhs.mcmaster.ca/pain-medicine-residency/index.html>
- 2011 Nominator: Cathy Lowery RN, SJHC Clinical Excellence in Direct Nursing Care
- 2010 Participation in Dept. of Anesthesia External Review
- 2006 Nominator: Cathy Rohfritsch RN, Awarded Excellence in Direct Nursing Care.
- 2006 Complementary and Alternative Medicine Curriculum – Planning Forum in Medical Education.
- 2005 Ministry of Health and Long-term Care Drug Reviewer for Drug Quality and Therapeutics Committee.
- 2001 Invited to be Director of Obstetric Anaesthesia at University Health Network, by Dr. David Bevan, Anaesthetist-in-Chief. Toronto, Ontario





## *HONOURS AND AWARDS*

2013	Gold Medal. Canadian Anesthesiologists' Society 2013. In recognition of outstanding contributions to anesthesiology and leadership in advancing the area of chronic pain management
2007	CAS/LMA Vitaid Residents' Research Award Faculty Supervisor, Primary Applicant: Dr Collin Clarke, Neuroimaging of lidocaine-induced analgesia in complex regional pain syndrome.. Canadian Anesthesiologists' Society, \$5,000
2007	London Hospitals Long Service Award, 20 Years Service
2005-2008	AMOSO Opportunity Fund Award "Medical Leadership for St Joseph's Health Care Pain Clinic" \$60,000
2005-2008	AMOSO Opportunity Fund Award "The UWO Interdisciplinary Pain Program Leadership Fund"\$75,000
2005	CAS/LMA Vitaid Resident Research Award . Primary Applicant Dr Geoff Bellingham, Faculty Supervisor. The use of intra-operative low-dose ketamine in chronic pain patients undergoing laparotomy. \$5,000
2005	Travel Award. Travel award to attend IASP World Congress on Pain in Sydney, Australia: awarded by Purdue Pharma through written competition. \$5000
2000	Retraining Award for Chronic Pain Management. Faculty of Medicine Mini-Fellowship Fund. University of Western Ontario, Faculty of Medicine, London, Ontario, Canada. \$3,000
2000	Retraining in Chronic Pain Management Award, Royal College of Physicians and Surgeons of Canada, Ontario, Canada Funded \$3,000.
2000	St. Joseph's Health Care Physician Retraining Award. \$12,500.
1996	Best Clinical Abstract. 1997 Faculty Supervisor,; Dr Brian Banwell ,Midwest Anesthesia Residents Conference, Canada
1990	CAS Resident Research Competition. First Prize: Indomethacin as a postoperative analgesic for total hip arthroplasty. Faculty Supervisor: Dr Ron Segstro, Canadian Anesthesiologist's Society, Ontario, Canada
1984	CAS Scientific Exhibit. First Prize: Hypothermia in the Operating Room. Canadian Anesthesiologist's Society, Ontario, Canada
1977	Thomas Donald Hammell Memorial Award in Anaesthesia. Awarded to an Anaesthesia Resident at the University of Toronto who demonstrates all-round excellence. University of Toronto, Toronto, Ontario, Canada

## *TEACHING AWARDS*

2005 – 2006	Fellow Teacher of the Year Award, Level: Postgraduate, Dept of Anesthesia
2002	University Students' Council Teaching Honour Roll, Level: Undergraduate, Awarded for undergraduate medical student teaching.
2001 - 2015	Level: Postgraduate, Teaching ability ranked in the first quartile most years according to resident city-wide evaluations of anesthesia faculty.

1996                      Level: Postgraduate, Ranked as 3rd best overall teacher in city in faculty evaluations by residents.

## PUBLICATIONS

### Peer Reviewed Publications

#### Journal Articles

1. Mehta S, Rice D, Serrato J, Janzen S, Getty H, Shaprio A, Morley-Forster P, Sequiera K, Teasell RW. The long-term role of anxiety-sensitivity and experiential avoidance on Pain Intensity, mood and disability among individuals in a specialist pain clinic. Submitted to Pain Research and Management, June,2015
2. Lee SM, Landry J, Jones PM, Buhrmann O, Morley-Forster PK. Long-term quit rates after a perioperative smoking cessation randomized controlled trial. Anesth Analg 2015;120:582-587.
3. Tarride, J-E, Moulin DE, Lynch M, Clark AJ, Stitt LW, Gordon A, Morley-Forster PK et al. Impact on health-related quality of life and costs of managing chronic neuropathic pain in academic pain centres: results from a one-year prospective observational Canadian study. Submitted to Pain Research and Management, June,2015.
4. Bostick GP, Toth C, Carr EC, Stitt LW, Gordon A, Morley-Forster PK et al. Physical functioning and opioid use in patients with neuropathic pain. Pain Med 2015
5. Moulin DE, Clark AJ, Gordon A, Lynch M, Morley-Forster PK, Nathan H, Smyth C, Toth C, VanDenKerkhof E, Gilani A, Ware MA. Long Term Outcome of The Management of Chronic Neuropathic Pain - A Prospective Observational Study. Journal of Pain 2015;16:852-861.
6. Morley-Forster P, Karpinski J. Pain Medicine-A New Credential in Canada. Pain Med. 2015 Jun;16(6):1038-44.
7. Morley-Forster PK, Sessle BJ, Squire P, Stinson J, Taenzer P, Velly A, Ware MA, Weinburg EL, Williamson OD. Pharmacological management of chronic neuropathic pain: Revised consensus statement from the Canadian Pain Society. Pain Res Manag 2014, Nov-Dec; 19(6):328-35
8. Bellingham GA, Smith RS, Morley-Forster PK, Murkin JM. Use of near infrared spectroscopy to detect impaired tissue oxygen saturation in patients with complex regional pain syndrome type Can J Anaesth. 2014 ;61 (6):563-70
9. Shokouhi M, Davis KD, Moulin DE, Morley-Forster PK, Nielson WR, Bureau Y, St Lawrence K. Pain-related disability in fibromyalgia is related to basal ganglia perfusions-An arterial spin labeling study. J of Pain 2015.xxx
10. Bostick GP, Toth C, Carr ECJ, Stitt LW, Morley-Forster P, Clark A, Lynch M, Gordon A, Nathan H, Smyth C, Ware M, Moulin DE. Physical function and opioid use in patients with neuropathic pain. xxx
11. Morley-Forster PK, Pergolizzi JV, Taylor R, Axford-Gatley RA, Sellers EM. Mitigating the risk of opioid abuse through a balanced undergraduate pain medicine curriculum. J Pain Res. 2013;6:791-801
12. Velayudhan A, Bellingham G, Morley-Forster P. Opioid-induced Hyperalgesia . Critical Care and Pain 2012;Online Access, Sept 26,2013
13. Watt-Watson J, Peter E, Clark J, Dewar A, Hadjistavropoulos T, Morley-Forster P et al. The ethics of Canadian entry-to-practice pain competencies: How are we doing? Pain Res Manage 2013; 18: 25-32.
14. Lee SM, Landry J, Jones PM, Buhrmann O, Morley-Forster PK. The effectiveness of a perioperative smoking cessation program: A randomized clinical trial. Anesth Analg

- 2013;117:605-13.
15. Morley-Forster PK. The new Canadian Royal College program in Pain Medicine Can J Anesth 2014;61:188-94.
  16. Bellingham G, Detection of impaired tissue oxygenation in the hands of patients with complex regional pain type I using near infra-red spectroscopy. Submitted to
  17. Watt-Watson J, Peter E, Clark J, Dewar A, Hadjistravopoulos T, Morley-Forster PK, O'Leary C, Raman-Wilms L, Unruh A, Webber K, Campbell-Yoo M. The ethics of Canadian entry-to-practice pain competencies: How are we doing?. Pain Res Manag 2013; 18: 25-32.
  18. Morley-Forster PK, Pergolizzi J, Sellers, E. Mitigating the Risks of Addiction, Abuse and Diversion. Submitted to Mayo Clinic Proceedings, August 2012.
  19. Nalamachu S, Morley-Forster PK. Diagnosing and Managing Postherpetic Neuralgia. *Drugs and Aging*. 2012; 11 (29): 863-869.
  20. VanUum S, Chaudhary S, Morley-Forster PK. Chronic Opioid therapy: Does it affect the Endocrine system? Canadian Journal of Diagnosis. 2010 Mar; 27(3):37-38. Coauthor
  21. Imasogie NN, Singh S, Watson JT, Hurley D, Morley-Forster P. Ultra low-dose naloxone and tramadol/acetaminophen in elderly patients undergoing joint replacement surgery: a pilot study. Pain Res Manag. 2009 Mar-Apr; 14(2):103-8. Coauthor
  22. Fraser LA, Morrison D, Morley-Forster P, Paul TL, Tokmakejian S, Larry Nicholson R, et al. Oral opioids for chronic non-cancer pain: higher prevalence of hypogonadism in men than in women. Exp Clin Endocrinol Diabetes. 2009 Jan; 117(1):38-43. Coauthor
  23. Van Uum SH, Sauvé B, Fraser LA, Morley-Forster P, Paul TL, Koren G. Elevated content of cortisol in hair of patients with severe chronic pain: a novel biomarker for stress. Stress. 2008 Jan; 11(6):483-8. Coauthor
  24. Singh SI, Morley-Forster PK, Shamsah M, Butler R. Influence of injection rate of hyperbaric bupivacaine on spinal block in parturients: a randomized trial. Can J Anaesth. 2007 Apr; 54(4):290-5. Co-Principal Author
  25. Moulin DE, Clark AJ, Gilron I, Ware MA, Watson CP, Morley-Forster PK, et al. Pharmacological management of chronic neuropathic pain - consensus statement and guidelines from the Canadian Pain Society. Pain Res Manag. 2007 Spring; 12(1):13-21. Coauthor
  26. Thomas AW, Graham K, Prato FS, McKay J, Morley-Forster PK, Moulin DE, Chari S. A randomized, double-blind, placebo-controlled clinical trial using a low-frequency magnetic field in the treatment of musculoskeletal chronic pain. Pain Res Manag. 2007 Winter; 12(4):249-58. Coauthor
  27. Hadi IA, Morley-Forster PK, Horrill K, Dain SL, Moulin DE. Brief review: Perioperative Management of the patient with chronic non-cancer pain. Can J Anaesth. 2006 Dec; 53(12):1190-99. Co-Principal Author (Fellowship supervisor for Dr Hadi)
  28. Balasubramanian S, Morley-Forster PK. Chronic pelvic pain due to peripheral neuropathy: A case report. J Obstet Gynaecol Can. 2006 Jul; 28(7):603-7. (Fellowship supervisor for Dr Balasubramanian)
  29. Morley-Forster PK, Singh S, Angle P, Littleford J, Currin M, Halpern S. The effect of epidural needle type on post-dural puncture headache: A randomized trial. Can J Anesth. 2006 Jun; 53(6):572-8. Principal Author
  30. Morley-Forster PK, Abotaiban A, Ganapathy S, Moulin DE, Leung A, Tsui B. Targeted thoracic epidural blood patch placed under electrical stimulation guidance (Tsui test). Can J Anaesth. 2006 Apr; 53(4):375-9. (Resident supervisor for Dr Abotaiban) Principal Author
  31. Hadi IA, daSilva O, Natale R, Boyd D, Morley-Forster PK. Opioids in the parturient with chronic non-malignant pain: A retrospective review. J Opioid Manag. 2006 Jan-Feb; 2(1):31-4. (Resident supervisor for Dr Hadi)
  32. Morley-Forster PK. Prevalence of neuropathic pain and the need for treatment. Pain Res Manag. 2006 summer; 11 Suppl SA: 5A-10A. Principal Author
  33. Balasubramanian S, Morley-Forster PK, Bureau Y. Opioids and Brain Imaging. J Opioid Manag.

- 2006 May-Jun;2(3):147-53.(Fellowship supervisor for Dr Balasubramanian)
34. Wallace MS, Moulin DE, Clark AJM, Wasserman R, Neale A, Morley-Forster PK, et al. A Phase II, multicenter, randomized, double-blind, placebo-controlled crossover study of CJC-1008--a long-acting, parenteral opioid analgesic--in the treatment of postherpetic neuralgia. *J Opioid Manag.* 2006 May-Jun; 2(3):167-73. Coauthor
  35. Ower K, Morley-Forster PK, Moulin DE. Fluctuating QTc interval in an asymptomatic patient treated with methadone for chronic pain. *J Opioid Manag.* 2005 May-Jun; 1(2):73-6. (Fellowship supervisor for Dr Kate Ower)
  36. Morley-Forster PK, Clark AJ, Speechley M, Moulin DE. Attitudes toward opioid use for chronic pain: A Canadian Physician Survey. *Pain Res Manag.* 2003 Winter; 8(4):189-94. Principal Author
  37. Armstrong KP, Kennedy B, Watson JT, Morley-Forster PK, Yee I, Butler R. Epinephrine reduces the sedative side effects of epidural sufentanil for labour analgesia. *Can J Anaesth.* 2002 Jan; 49(1):72-80. Coauthor
  38. Moulin DE, Clark AJ, Speechley M, Morley-Forster PK. Chronic Pain in Canada-Prevalence, Treatment, Impact and the Role of Opioid Analgesia. *Pain Res Manag.* 2002 Winter; 7(4):179-84. Coauthor
  39. Morley-Forster PK. Regional techniques for Cesarean section. *Tech Reg Anesth Pain Manag.* 2001 Jan; 5(1):24-9. Principal Author
  40. Fallon K, Fuller JG, Morley-Forster PK. Fat embolization and fatal cardiac arrest during hip arthroplasty with methylmethacrylate. *Can J Anaesth.* 2001 Jul-Aug;48(7):626-9.(Resident supervisor for Dr Kate Fallon)
  41. Morley-Forster PK, Reid W, Vandenberghe H. A comparison of patient controlled analgesia fentanyl and alfentanil for labour analgesia. *Can J Anaesth.* 2000 Feb; 47(2):113-9. Principal Author
  42. Sandhu H, Morley-Forster PK, Spadafora S. Epidural hematoma following epidural analgesia in a patient receiving unfractionated heparin for thromboprophylaxis. *Reg Anesth Pain Med.* 2000 Jan-Feb;25(1):72-5.(Resident supervisor for Dr Sandhu)
  43. Webster AC, Morley-Forster PK, Janzen V, Watson J, Dain SL, Taves D, Dantzer D. Anesthesia for intranasal surgery: A comparison between tracheal intubation and the flexible reinforced laryngeal mask airway. *Anesth Analg.* 1999 Feb; 88(2):421-5. Co-Principal Author
  44. Fraser J, Morley-Forster PK, Dain SL, Woolsey ME, Yee I. Comparison of two anesthesia delivery systems (circle versus Bain) to demonstrate cost savings in isoflurane consumption during procedures of shorter duration. *CJRT.* 1998 Dec; 34(4):114-8. (Medical Supervisor for Judy Fraser RRT)
  45. Morley-Forster PK, Toll M. Effect of labour room ventilation design and scavenging on ambient nitrous oxide levels. *Canadian J Respiratory Therapy.* 1999 Sept; 35(3):37-43. Principal Author
  46. Morley-Forster PK, Weberpals J. Neonatal effects of patient-controlled analgesia using fentanyl in labor. *Int J Obstet Anesth.* 1998 Apr;7(2):103-7.( SRTP Supervisor for Dr J Weberpals) Principal Author
  47. Banwell B, Morley-Forster PK, Krause R. Decreased incidence of complications in parturients with the arrow (FlexTip Plus) epidural catheter. *Can J Anaesth.* 1998 Apr; 45(4):370-2. (Resident Supervisor for Dr Banwell-Awarded Best Clinical Abstract at MARC,1997)
  48. Morley-Forster PK, McAllister JD, Vandenberghe H, Thiessen JJ, White A, Taylor M, Knoppert DC. Does thiopental delay recovery in children premedicated with midazolam? *Paediatr Anaesth.* 1997; 7(4):279-85. (Resident supervisor for Dr John McAllister, SRTP Supervisor for Dr M Taylor))Principal Author
  49. Ruby RR, Webster AC, Morley-Forster PK, Dain S. Laryngeal mask airway in pediatric otolaryngologic surgery. *J Otolaryngol.* 1995 Oct; 24(5):288-91. Coauthor
  50. Morley-Forster PK, Newton PT, Cook M-J. Ketorolac and indomethacin are equally efficacious for minor postoperative pain. *Can J Anaesth.* 1993 Dec;40(12):1126-30. (Resident supervisor for Dr Peter Newton)
  51. Webster AC, Morley-Forster PK, Dain S, Ganapathy S, Ruby R, Au A, Cook M-J. Anesthesia for

- adenotonsillectomy: a comparison between tracheal intubation and the armored laryngeal mask airway. Can J Anaesth. 1993 Dec; 40(12):1171-7. Co-Principal Author
52. Smedstad KG, Doig G, Halpern S, Morley-Forster PK, Holmes J, Pearce D. Administration of epidural analgesia for pain relief in labour. Ontario Medical Review. 1992 Nov; 33-8. Coauthor
  53. Segstro R, Morley-Forster PK, Lu G. Indomethacin as a postoperative analgesic for total hip arthroplasty. Can J Anaesth. 1991 Jul; 38(5):578-81. Coauthor
  54. Chan VWS, Vosu HA, Morley-Forster PK. Temperature changes and shivering after epidural anesthesia for Cesarean section. Reg Anesth. 1989 Jan-Feb; 14(1):48-52. (Resident Supervisor for Dr Vince Chan)
  55. Morley-Forster PK. Unintentional hypothermia in the operating room. Can Anaesth Soc J. 1986 Jul; 33(4):516-27. Principal Author
  56. Kalman PG, Wellwood MR, Weisel RD, Morley-Forster PK, Teasdale SJ, Ivanov J, et al. Cardiac dysfunction during abdominal aortic operation: The limitation of pulmonary wedge pressures. J Vasc Surg. 1986 May;3(5):773-81. Coauthor

#### Book Chapters

1. Morley-Forster PK, Clarke C. Analgesia for the High-risk patient (Chapter 7). In: McConachie I. ed. Anesthesia for the High-Risk Patient. United States:Cambridge University Press;2009:93-108. (Resident Supervisor for Dr Collin Clarke)

#### Editorials

##### *Published*

1. Morley-Forster PK. Methadone for Pain- A Pan-Canadian Perspective .Pain Research and Management (Invited)
2. Morley-Forster PK. The vexing problem of post-amputation pain: what is the optimal perioperative pain management for below-knee amputation? Can J Anaesth. 2009 Dec;56(12):895-900. Principal Author
3. Morley-Forster PK. Tomorrow and tomorrow and tomorrow: wait times for multidisciplinary pain clinics in Canada. Can J Anaesth. 2007 Dec;54(12):963-8. Principal Author
4. Morley-Forster PK. Shared pain: lessons from the labour room in Istanbul. Pain Res Manag. 2004 Winter;9(4):181-2. Principal Author

#### Commentaries

1. Morley-Forster PK. Spinal anaesthesia for Caesarean section in a patient with a cervical arteriovenous malformation [Comment]. Can J of Anaesth. 1996 Oct;43(10):1052-8;1055-6. Principal Author

#### Letters to Editor

1. Morley-Forster PK, Tsui B, Ganapathy S, Abotaiban A. Letter to the Editor. Can J Anaesth. 2006 Sept;53(9):965-6.Principal Author
2. Morley-Forster PK. Primary Care for Chronic Pain Patients. Can Fam Physician. 2005 Aug;51(8):1073.

Principal Author

3. Morley-Forster PK. Addressing Physician Resources for Chronic Pain Management. Can J Anaesth. 2005 Dec;52(10):1103. Principal Author
4. Morley-Forster PK. Re: Doctor Shortage. Member's Dialogue. 2004 Sept-Oct; 12(5):6. Principal Author
5. Webster AC, Morley-Forster PK, Dain S, Ganapathy S. Letter to the Editor. Can J Anaesth. 1994 Aug;41(8):758. Coauthor
6. Morley-Forster PK. In Defense of Oral Examinations. Annals RCPSC. 1983 Jul;16(5):492-3. Principal Author

Non-Peer Reviewed Publications

Journal Articles

1. Morley-Forster PK. Acute pain management in the chronic pain patient. Pain Care. 2007;6:3-8. Principal Author
2. Hadi IA, Morley-Forster PK. Analgesia in Labour. St. Joseph's Health Care Perinatal Outreach Newsletter. 2005 Winter;27(1):1-4. Co-Principal Author
3. Morley-Forster PK. The End of the Shift. UWOMJ. 2001 Fall;71(2):61-2. Principal Author
4. Morley-Forster PK. Update on PCA fentanyl in Labour. St. Joseph's Health Care Perinatal Outreach Newsletter. 1996. Principal Author
5. Morley-Forster PK. Intravenous fentanyl for labour analgesia. St. Joseph's Health Care Perinatal Outreach Newsletter. 1994;12(1). Principal Author
6. Morley-Forster PK. NSAIDS for pain relief after caesarean section. St. Joseph's Health Care Perinatal Outreach Newsletter. 1994;12(1). Principal Author
7. Morley-Forster PK. Pain Relief in Labour. St. Joseph's Health Care Perinatal Newsletter. 1990; 8(1). Principal Author
8. Vox Pop Article, Oxycontin has benefits., London Free Press, November 2007. Morley-Forster PK, Merskey H.

Abstracts Published

1. Coulombe M-A, St Lawrence K, Moulin DE, Morley-Forster PK. Intrinsic functional connectivity of the periaqueductal gray (PAG) is related to fibromyalgia clinical symptoms. Society for Neurosciences;Chicago Pain Imaging and Perception 5496,. October 18,2015.Chicago
2. Shokouhi M, et al. Disruptions in sensorimotor network connectivity associated with Complex Regional Pain Syndrome . Abstract presented at International Society for Magnetic Resonance, 23<sup>rd</sup> Annual Mtg; June, 2015:
3. Racine M, Jensen MP, Harth M, Morley-Forster PK, Nielson WR. Operant Learning vs Energy Conservation Activity Management Treatments for Patients with Fibromyalgia: A randomized controlled clinical trials. Int. Assoc for Study of Pain, Buenos Aires. October 7-11, 2014
4. Bostick GP, Toth C, Carr ECJ, Morley-Forster PK, Clark AJ, Lynch M, Gordon A, Nathan H, Smyth C, Gilani A, Ware M, Moulin DE. Physical functioning and opioid use in patients with neuropathic pain. IASP 2014. Buenos Aires, Argentina. October 7-11, 2014
5. Moulin DE, Clark AJ, Gordon A, Lynch M, Morley-Forster PK, Nathan H, Smyth C, Toth C, VanDenKerkhof E, Gilani A, Ware M. Canadian Multi-Centre Cohort Study To Determine the Longterm Outcomes of the Management of Chronic Neuropathic Pain. Can Pain Society Annual Meeting, Quebec City. May 20-23, 2014.
6. Moulin DE, Boulanger A, Clark AJ, Clark H, Dao T, Ginley GA, Furlan A, Gilron A, Gordon A, Morley-Forster PK, Sessle BJ, Squire P, Stinson J, Taenzer P, Toth C, Velly A, Ware MA, Weinberg EL, Williamson OD. Pharmacological Management of Chronic Neuropathic Pain-Revised Consensus Statement from The Canadian Pain Society. Can Pain Society Annual Meeting.

- May 20-23, 2014.
7. Shokouhi M, Davis KD, Moulin DE, Morley-Forster PK, Nielson WR, St. Lawrence K. Cerebral Perfusion Alternations in Fibromyalgia and Their Correlation to Clinical Metrics of Pain. The American Pain Society 33<sup>rd</sup> Annual Scientific Meeting, Tampa FL. April 30 – May 3, 2014.
  8. Angle P., Douglas J, Lay C, Gawel M, Kronberg J, Morley-Forster PK et al Proposing Formal Diagnostic Criteria for Post -epidural PDPH. Can Anesth Soc Annual Scientific Meeting 2013, Calgary, Alberta.
  9. Lee S M, Landry J, Jones, P, Morley-Forster P K, Buhrmann O. Effectiveness of a perioperative smoking cessation program: An RCT. 2013 American Society of Anesthesiologist Society Annual Meeting, San Francisco. Faculty Co-Supervisor with Dr P Jones
  10. Morley-Forster P, McCarthy, G. Case Study; Concurrent Disorder and Substance Abuse. American Pain Society Annual Meeting 2013: Chicago, May 9-12, 2013.
  11. Morley-Forster P, McCarthy, G. Case Study; Concurrent Disorder and Substance Abuse. American Society of Addiction Medicine Annual Meeting 2013, New Orleans
  12. Morley-Forster PK, Loh E, McCarthy G, Bellingham G, Walton D, Kim G, Brymer C, Moulin DE. Pain in the Undergraduate Curriculum: The Window Opens. Can Pain Soc Winnipeg May 11-14, 2013
  13. Lee S M, Landry J, Jones, P, Morley-Forster P K, Buhrmann O. Effectiveness of a perioperative smoking cessation program: An RCT. 2012 Canadian Anesthesiologists Society Annual Meeting, Quebec City, Quebec Faculty Co-Supervisor with Dr P Jones
  14. Morley-Forster PK, Manikandan R, Railton C, Urquhart B, Freeman D. Uptake of topical 10% ketamine gel over 7 days: A pilot study. 2012 Canadian Anesthesiologists' Annual Meeting, Quebec City, Canada. Faculty Supervisor for Dr R Manikandan
  15. Morley-Forster, PK, Pergolizzi J, Sellers EM. Mitigating the Risks of addiction, abuse, and diversion: undergraduate pain management curricula. College on Problems of Drug Dependence. 74<sup>th</sup> Annual Scientific Meeting Palm Springs, June, 2012.
  16. Samosh A, Morley-Forster PK, Moulin DE, Watson JE, Ower K. Safety of intravenous lidocaine infusions for the treatment of chronic pain. 2010 May; CPS Annual Conference: Calgary, AB, Canada. (SRTP Supervisor for Adam Samosh) Senior Author
  17. Moulin DE, Genge A, Gilani A, Gordon A, Lynch M, Morley-Forster PK, et al. Canadian Multicentre Cohort Study to determine long-term outcomes of chronic neuropathic pain and its management. 2010; Int Assoc for the Study of Pain. Coauthor
  18. Samosh A, Morley-Forster PK, Moulin DE, Ower K, Watson JT. Safety of intravenous lidocaine infusions for the treatment of chronic neuropathic pain. 2010; Int Assoc for the Study of Pain: Montreal, QC, Canada. (SRTP Supervisor for Adam Samosh) Senior Author
  19. Angle P, Gawel M, Morley-Forster PK, et al. (The Canadian PDPH Collective) How useful are clinical criteria for PDPH diagnosis after epidurals? 2010; Can Anesth Society: Montreal, QC, Canada. Coauthor
  20. Angle P, Kronberg J, Douglas J, George R, McKeen D, Morley-Forster PK, et al. (The Canadian PDPH Collaborative) Persistent headaches in parturients after epidural-related PDPH. 2010; Can Anesth Society: Montreal, QC, Canada. Coauthor
  21. Imasogie N, Singh S, Watson JT, Syrov J, Morley-Forster PK. The effects of combined use naloxone infusion and oral Tramacet on postoperative analgesia in elderly patients undergoing joint replacement surgery: A randomized controlled study. 2010 Jun; Mechanisms of Anesthesia Conference: Toronto, ON, Canada. Coauthor
  22. Getty H, Shapiro AP, Morley-Forster PK, Teasell R, Harth M, Pope J. Unmitigated communion, self-silencing, and unpaid domestic workload: Relationship with disability and depression in the context of chronic pain. 2008 Aug; Int Assoc for the Study of Pain: World Congress on Pain Glasgow, Scotland, UK. Coauthor
  23. Watt-Watson J, McGillion M, Hunter J, Choiniere M, Cark J, Morley-Forster PK, et al. Pre-licensure pain curricula in Health Science Faculties: A survey of Canadian universities. 2008 Aug; Int Assoc for the Study of Pain World Congress on Pain: Glasgow, Scotland, UK. Coauthor



24. McKeough LA, Paul TL, Morley-Forster PK, Tokmakejian S, Nicholson LR, Koren G, Van Uum SHM. Adipocytokine Levels in Patients Taking Oral Opioids for Chronic Non-Cancer Pain. 2007 Oct; Canadian Diabetes Association/Canadian Society of Endocrinology and Metabolism Annual Meeting: Vancouver, BC, Canada. Coauthor
25. Van Uum S, Morley-Forster PK, et al. Sex-specific effects of long-term oral opioids on hypothalamus-pituitary-gonadal axis in patients with chronic non-cancer pain. 2007 Jun; 10th International Pituitary Congress: Chicago, IL, USA. Coauthor
26. Morrison D, McKeough L-A, Paul TL, Morley-Forster PK, Tokmakejian S, Koren G, Van Uum SHM. Sexual Dysfunction and decreased bone density in opioid-induced hypogonadism in patients of a chronic pain clinic. 2007; Canadian Endocrine Society. Coauthor
27. Moulin DE, Morley-Forster PK, Connolly B, Guerin J, Clark AJ. Prospective study of the pharmacologic management of chronic neuropathic non-cancer pain. 2007; Int Assoc for the Study of Pain Neuropathic Pain Congress. Berlin. Co-Principal Author
28. Imasogie NN, Morley-Forster PK, Singh SI, Watson JT. Naloxone and Tramacet for postoperative analgesia in elderly patients having joint replacement. Anesthesiology: ASA Abstracts. 2007 Oct;107 Suppl 3A:A1168. Co-Principal Author
29. Ower K, Morley-Forster PK, Moulin J. Needs for and Access to Information Among Patients Attending a Chronic Pain Clinic. 2006 Jun; CPS Annual Conference: Edmonton, AB, Canada. Co-Principal Author
30. Getty H, Shapiro A, Morley-Forster PK, Harth M, Pope J, Teasell R. Distinct patient subgroups at risk for dysfunction secondary to pain: Replication in a Rheumatoid Arthritis sample. 2006 Jun; CPS Annual Conference: Edmonton, AB, Canada. Coauthor
31. Getty H, Shapiro A, Morley-Forster PK, Teasell R, Harth M, Pope J. Relationships between unmitigated communion and unpaid domestic workload and adjustment to chronic pain. 2006 Jun; CPS Annual Conference: Edmonton, AB, Canada. Coauthor
32. Shapiro A, Getty H, Teasell R, Morley-Forster PK, Horrill K, Sequeira K. Subgroups of patients at differential risk for dysfunction secondary to chronic pain: Evidence of persisting dysfunction? 2006 Jun; CPS Annual Conference: Edmonton, AB, Canada. Coauthor
33. McKeough LA, Paul TL, Morley-Forster PK, Tokmakejian S, Nicholson LR, Koren G, Van Uum SHM. Increased prevalence of osteopenia in patients of a pain clinic taking chronic opioids. 2006; Int Osteoporosis Society Abstract: Toronto, ON, Canada. Coauthor
34. McKeough LA, Paul TL, Morley-Forster PK, Tokmakejian S, Nicholson LR, Koren G, Van Uum SHM. Sexual Dysfunction in patients attending a chronic pain clinic on long-acting opioid therapy. 2006; American Endocrine Society Meeting. Boston, MA, USA. Coauthor
35. Moulin DE, Morley-Forster PK, Connolly B, Guerin J, Watling C, Watson J. Pharmacologic Management of Chronic Neuropathic Non-Cancer Pain--A Prospective Study. 2005 Aug; Int Assoc for the Study of Pain: Sydney, Australia. Co-Principal Author
36. Thomas AW, Graham K, Keenlside L, Prato F, MacKenzie RA, Moulin DE, Morley-Forster PK. The Effects of weak, specific, pulsed low-frequency magnetic fields on pain perception on a chronic pain population. 2005 Aug; Int Assoc for the Study of Pain: Sydney, Australia. Coauthor
37. Ower K, Morley-Forster PK, Moulin DE. QTc Prolongation in a Patient Treated with Methadone for Chronic Pain. 2005 Jun; Can Anesth Society. Co-Principal Author
38. Abotaiban A, Morley-Forster PK, Ganapathy S, Moulin DE, Tsui B. Epidural catheter stimulator for targeted blood patch in a Patient with Spontaneous Intracranial Hypotension. 2005 Jun. Can Anesth Society. Co-Principal Author
39. Shapiro A, Getty H, Teasell R, Morley-Forster PK, Hong S, Sequeira K, et al. Identification of Distinct Patient Subgroups at Risk For Dysfunction Secondary to Pain. 2005 May; CPS Annual Conference: Halifax, NS, Canada. Coauthor
40. Moulin DE, Morley-Forster PK, Connolly B, Guerin J, Watling C, Watson J. Prospective Study of the Management of Chronic neuropathic Non-cancer Pain. Pain Res Manage. 2005 Summer;10(2):102. Co-Principal Author
41. Kanellakos G, Morley-Forster PK, Singh I. Sickle Cell Anemia in a Pregnant Jehovah's Witness Patient requiring Cesarean Section. 2004 Jun; Department of Anaesthesia: McMaster/Western

- Annual Residents' Research Day. (Resident Supervisor for Dr George Kanellakos)
42. Horrill K, Morley-Forster PK. The Role of the Nurse Practitioner in an Outpatient Chronic Pain Clinic. 2004; Joint Conference CPS/APS. Co-Principal Author
  43. Teasell R, Getty H, Shapiro A, Morley-Forster PK, Sequiera K, Horrill K. Anxiety Sensitivity: A Dimension of Obsessive Personality in Dysfunctional Chronic Pain Patients? 2004. Joint Conference CPS/APS: Vancouver, BC, Canada. Coauthor
  44. Hadi IA, Dasilva O, Natale R, Boyd D, Morley-Forster PK. Neonatal Effects of Prescribed Opioids in Pregnancy. 2003 Aug; Anesthesiology into the new millennium IV Symposium: Crystal Mountains, MI, USA. (Resident Supervisor)
  45. Hadi IA, Dasilva O, Natale R, Boyd D, Morley-Forster PK. Opioid Use for Chronic Pain in Pregnancy: A Retrospective Review of Neonatal Effects. 2003 Mar; Midwest Anaesthesia Residents Conference. Chicago, IL, USA. (Resident Supervisor-Awarded Second Prize in Category)
  46. Hadi IA, Dasilva O, Natale R, Boyd D, Morley-Forster PK. Opioid Use for Chronic Pain in Pregnancy: A Retrospective Review of Neonatal Effects. 2003 May; CPS Annual Conference: Toronto, ON, Canada. (Resident Supervisor)
  47. Singh I, Morley-Forster PK, Shamsah M. Effect of Speed of Injection of Hyper baric Bupivacaine on the Spread of Spinal Anaesthesia in Parturients. 2002 Jun; Canadian Anesth Society Richard Knill Competition. Victoria. Co-Principal Author
  48. Morley-Forster PK, Clark J, Speechley M, Moulin DE. Attitudes toward Opioid Use for Chronic Pain -- A Canadian Physician Survey. 2002 May; CPS Annual Conference: Winnipeg, MB, Canada. Principal Author
  49. Moulin DE, Clark J, Speechley M, Morley-Forster PK. Chronic Pain in Canada -- A Patient Survey. 2002; 10th World Congress of Pain: San Diego, CA, USA. Coauthor
  50. Angle PJ, Halpern SH, Morley-Forster PK, Littleford JA, Gnanendran K, Owen RN, et al. Post-epidural back pain in the parturient -- comparison of the epidural Sprotte vs. Tushy needle. SOAP Abstracts. 2002:A62. Coauthor
  51. Cheung AK, Schulz, V, Morley-Forster PK. Origins of Palliative Care and its Evolution in Canada. Royal College of Physicians and Surgeons of Canada Abstracts. 2002:35(5);7. (Meds student supervisor for Dr Arthur Cheung)
  52. Morley-Forster PK, Angle PJ, Littleford JA, Halpern SH, Currin MJ, Brockurst N. Post-dural Puncture Headache in the Parturient -- a Comparison of the Special Sprotte vs Tuohy Needle. Anesthesiology: ASA Abstracts. 2001 Oct;95 Suppl 3A:A1053. Principal Author
  53. Ower K, Gverzdys S, Morley-Forster PK, Fuller JS. Ehlers-Danlos Syndrome Type IV in a Pregnant woman presenting for Cesarean Section at 37 Weeks. 2001; Midwest Anaesthesia Residents Conference. Coauthor
  54. Singh S, Morley-Forster PK, Kennedy B. Anaesthetic management of a parturient with Osler-Weber-Rendu disease complicated by cerebral and pulmonary vascular malformations. 2000 Jun; 12th World Congress of Anaesthesiologists: Montreal, QC, Canada. P3.2.11. Co-Principal Author
  55. Shamsah M, Singh S, Morley-Forster PK, Butler R. Effect of speed of injection on the spread of spinal anaesthesia with hyperbaric bupivacaine in parturients. 2000 Jun; 12th World Congress of Anaesthesiologists: Montreal, QC, Canada. Coauthor
  56. Angle PJ, Halpern SH, Morley-Forster PK, Littleford JA, Gnanendran MD, Owen H, et al. Post-epidural back pain in the parturient--a comparison of the epidural Sprotte vs. Tuohy needle. Anesthesiology: SOAP Abstracts. 2000:A62. Coauthor
  57. Armstrong K, Kennedy B, Watson JT, Morley-Forster PK, Yee I, Butler R. The side effect profile of sufentanil epidural analgesia with and without epinephrine. Anesthesiology. 1999 Apr;90 Suppl 1A:A83. Coauthor
  58. Writer D, Muir H, Shukla R, Nunn R, Scovil J, Morley-Forster PK, et al. Epidural anaesthesia for caesarean section: double-blind comparison of ropivacaine, 7.5 mg/ml, and bupivacaine 5 mg/ml. Can J Anaesth. 1998 May;45(5.2):A61-A. Co-Principal Author
  59. Morley-Forster PK, Reid WD, MacKinnon CJ. A comparison of patient-controlled analgesia (PCA) fentanyl and PCA alfentanil for labour analgesia. Anesthesiology: SOAP Abstracts. 1997. Principal

Author

60. Webster AC, Morley-Forster PK, Watson J, Dain S, Jansen V. Evaluation of the flexible reinforced laryngeal mask airway (FRLMA) for intranasal surgery. *Anesthesiology: ASA Abstracts*. 1997 Sept;87 Suppl 3A:A30. Co-Principal Author
61. Webster AC, McKishnie JD, Morley-Forster PK. Lumbar epidural anaesthesia for inguinal herniorrhaphy in conscious ex-premature neonates. *Ped Anesth*. 1996. Coauthor
62. Dain SL, Webster AC, Morley-Forster PK, Ruby R, Weberpals J, Cook MJ. Propofol for insertion of the laryngeal mask airway for short ENT procedures in children. *Anesth Analg*. 1996 Mar;82:S83. Coauthor
63. Morley-Forster PK, Smith A, McIndoe M, Hutchinson J. Stand By Me: Implementation of a Parent Present at Induction Program. 1996; Association for the Care of Children's Health (ACCH) Conference: Albuquerque, NM, USA. Principal Author
64. Banwell B, Morley-Forster PK, Krause R, Dain SL. Decreased incidence of epidural vein cannulation and transient paresthesiae in parturients with the Arrow (FlexTip Plus) catheter. *Anesthesiology: ASA Abstracts*. 1996 Sept;85 Suppl 3A:A900.(Resident Supervisor for Dr B Banwell)
65. Ganapathy S, Morley-Forster PK, Chess DG, Lampe M. Preemptive analgesia and interscalene block. *Anesthesiology: ASA Abstracts*. 1995 Sept; 83 Suppl 3A:A783. Co-Principal Author
66. Ruby RRF, Webster AC, Morley-Forster PK, Dain SL. The laryngeal mask airway in pediatric otolaryngological surgery. *J Otolaryngology*. 1995;24(5):288-91. Coauthor
67. Toll MO, Morley-Forster PK. Effect of labor room ventilation design on ambient nitrous oxide levels. *Anesthesiology: ASA Abstracts*. 1994 Sept;81 Suppl 3A:A559. Co-Principal Author
68. McAllister JD, Morley-Forster PK, White AK, Taylor MD, Vandenberghe HM, Knoppert D. Recovery after oral midazolam premedication in children: intravenous vs. inhalation induction. *Can J Anaesth*. 1992 May;39(5.2):A48. (Resident Supervisor for Dr J McAllister)Co-Principal Author
69. Newton P, Morley-Forster PK, Cooke MJ. Intramuscular ketorolac and rectal indomethacin are equally efficacious for the relief of minor post-operative pain. *Anesthesiology: ASA Abstracts*. 1992 Sept;77 Suppl 3A:A14.(Resident Supervisor for Dr P Newton) Co-Principal Author
70. Dobkowski WB, Prato FS, Shannon NA, Drost DJ, Arya B, Morley-Forster PK, et al. Effects of magnetic resonance imaging at 1.5 T on Fentanyl induced respiratory depression. *Can J Anaesth*. 1992 May;39(5.2):A55. Coauthor
71. Segstro R, Morley-Forster PK, Lu G. The efficacy of indomethacin as a postoperative analgesic following total hip arthroplasty. *Can J Anaesth*. 1990 May;37(4.2):S41.(Resident Supervisor for Dr Ron Segstro-Awarded First Prize, CAS Resident Competition)
72. Chan VWS, Vosu HA, Morley-Forster PK. Shivering following epidural anesthesia for cesarean section. 1987; 29th Annual Meeting of SOAP. (Resident Supervisor for Dr V Chan)
73. Wellwood M, Kalman P, Morley-Forster PK, Teasdale SJ, Cain J, Walker P, et al. A comparison of anesthetic techniques for aortic reconstructive surgery. *Anesthesiology: ASA Abstracts*. 1984 Sept;61 Suppl 3A:A66. Coauthor

## PRESENTATIONS/LECTURES

### Invited Lectures

- |                |  |
|----------------|--|
| April 21, 2015 | Inheriting and accepting patients with pain. Owen Sound Family Health Team. Owen Sound, ON |
| April 15, 2015 | Inheriting and accepting patients with pain. The Middlesex County Pain                     |

Management Update. London , ON

- 2014 "Medical Marijuana/Methadone for Pain: What Do I Need to Know?" 59<sup>th</sup> Annual Ontario Anesthesia Meeting. September 18-21, 2014
- 2014 "Chronic Pelvic Pain-Emerging Views" Back and Pain Center, Ann Arbor, MI. May 20, 2014.
- 2014 "National Guidelines for Chronic Pain – The Patient Experience". Pain Management Program, St. Joseph's Health Care, London, ON. February 8, 2014.
- 2014 "Methadone and Marijuana for Chronic Pain: What the anesthesiologist needs to know" Ontario Section of Anesthesiology, Annual Mtg September 24-26, 2014, Toronto
- 2014 Pain Medicine: An Update Canadian Society of Anesthesiology Chronic Pain Section Meeting. St John June 15-19, 2014.
- 2014 "The Biology of Chronic Pain" Effective Pain Self-Management Session, Pain Management Program, St. Joseph's Health Care, London. March 28, 2014; July 11, 2014; November 14, 2014
- 2013 Pain Medicine: A New Royal College Subspecialty Program. Visiting Professor to the Dept of Anesthesia, Dalhousie University, November 13, 2013, Halifax, Nova Scotia.
- 2013 Pelvic Pain: Emerging View, New Treatment . September, 2013 Hugh Allen Day Dept of Obstetrics and Gynecology , London Health Sciences Centre
- 2013 Non-opioid and adjuvant pharmacotherapy in chronic pain. Special interest elective In chronic non-cancer pain for Family Medicine residents. June 19, London
- 2013 Chronic Pelvic Pain The conversion from Visceral to Neuropathic Pain. Invited lecture to University of Michigan Pain Fellows, May 12, 2013 Ann Arbor, Michigan
- 2013 Assessment and Management of Chronic Pain Parts 1 and 2 (4 hours). Anesthesiology Resident Core Curriculum Half Day May 1, 2013, London
- 2013 Chronic Pain Assessment and management in the Addicted Patient: Parts 1 and 2. (Total 4 hours) Meds IV, Western University, Integration, Consolidation, and Enrichment (I.C.E.) Course in Pain Medicine . April 4 and April 11, Schulich School of Medicine, London.
- 2013 The Biology of Persisting Pain. St Joseph's Pain Program Patient Education Day . January 11, 2013, London
- 2012 Update on Pharmacotherapy in Chronic Pain. London Family Health Care Team. November, 2012. Beaverbrook Family Health Care Team.
- 2012 Neurobiology of Chronic Pain: Factors influencing Transition from Acute to Chronic Pain , Conference: A Balanced Approach to Pain Management March 23-25, 2012, London, Ontario
- 2012 How to Utilize NOUGG Guidelines in Your Practice . Conference: A Balanced Approach to Pain Management March 23-25, 2012, London, Ontario
- 2012 Chronic Abdominal and Pelvic Pain. Conference: A Balanced Approach to Pain

	Management March 23-25,2012, London, Ontario
2012	What is Chronic Pain? Patient Education Day Theme: Effective Pain Self-Management. June 8,2012, St Joseph's Health Centre .Invited Speaker
2012	Intravenous Lidocaine infusion for chronic neuropathic pain, OMA Section on Chronic Pain ,Annual Meeting, Toronto. May 4,2012 Invited Speaker
2011/11	Annual Workshop on Neuropathic Pain for Family Physicians. St Josephs Pain Clinic Approved for CME By UWO. Invited Speaker
2011/10	Chair, London Smoking Cessation Group, Organized nine groups within London to collaborate on increasing accessibility to Smoking Cessation Programs.
2011/09	Neurophysiology of Pain. Physical Medicine and Rehabilitation Resident Seminar Leader
2011/07	Assessment and Management of the Chronic Pain Patient. Anesthesia Resident, Seminar Leader
2011/04	Canadian Interventional Pain Course. Introduction of Pain Fellowship by the Royal College. McMaster University, Hamilton Invited Speaker
2011/02	Grand Rounds,The Department of Anesthesiology, Ottawa Hospital, The New Royal College Subspecialty Program of Pain Medicine. Ottawa, Ontario, Canada, Invited Speaker
2010/12	Annual Workshop on Neuropathic Pain for Family Physicians.St Josephs Pain Clinic Approved for CME By UWO Invited Speaker
2010/10	St. Joseph's Hospital, Smoking Cessation Counseling in the Preadmission Clinic. Perioperative Interdisciplinary Rounds. London, Ontario, Canada, Invited Speaker
2010/09	McMaster University Health Sciences, Fourth Annual Interventional Pain Management Conference, Methadone for Chronic Pain. Hamilton, Ontario, Canada, Invited Speaker
2010/08	Lawrence S Bloomberg Faculty of Nursing, University of Toronto, Workshop Chair To Produce a Consensus Statement on the Optimal Methods of Interprofessional Assessment at a conference on Moving the Pain Education Agenda Forward: Innovative Models. Toronto, Ontario, Canada, Workshop Chair
2010/07	The University Hospitals Coventry and Warwickshire NHS Trust, Dept of Anesthesia and Pain Management, Canadian Opioid Use Guidelines for Chronic Non-Cancer Pain. Visiting Professor
2010/06	Ambulatory Anesthesia Section Annual Meeting, Accuracy and Usefulness of Smokerlyzer device. Montreal, Quebec, Canada, Invited Speaker
2010/04	7th Annual Medicine Update in Psychiatry, Pain and its interface with the biopsychosocial realm. Regional Psychiatry Meeting , London, Ontario Invited Speaker
2010/04	Walkerton/Hanover Family Health Teams, Fibromyalgia: Thinking beyond the pain. (Consultant for Boehringer Ingelheim) Invited Speaker
2010/04	Annual Workshop on Neuropathic Pain for Family Physicians. St Joseph's Health Care Pain Clinic Approved for CME by UWO Invited Speaker
2009/11	3rd Annual Anesthesia Conference in Kuwait, (delivered four lectures), Kuwait, Visiting

Professor

- 2009/10      Hugh Allen Education Day,    Diagnosis and Treatment of Chronic Pelvic Pain. Regional Meeting, Dept of Obstetrics and Gynecology. Invited Speaker
- 2009/10      OMA/CAS Section of Anesthesia Mtg, Perioperative Considerations in Chronic Pain. Regional Meeting .Invited Speaker
- 2009/08      Mexican College of Anesthesia, New Concepts in Complex Regional Pain Syndrome and Acute Pain Management in the Chronic Pain Patient (delivered two lectures). Visiting Professor
- 2009/04      Canadian Endocrine Update 2009, , Chronic Opioid Therapy: Does it affect the endocrine system? London, Ontario, Canada, Invited Lecturer
- 2009/02      Can Pain Society SIG Pain Refresher Course, Use of Topical Agents in Neuropathic Pain. Toronto, Ontario, Canada, Invited Lecturer
- 2009/01      City-wide UWO Dept of Anesthesia Rounds, UH Auditorium D, Developments in Treatment of CRPS. London, Ontario, Canada, Invited Lecturer
- 2009          Annual Workshop on Neuropathic Pain for Family Physicians.St Josph's Health Care Pain Clinic. Approved for CME by UWO    Invited Speaker
- 2008/06      Centers for Pain Management    Topical Compounds in the treatment of chronic pain. Invited Lecturer
- 2008          Annual Workshop on Neuropathic Pain for Family Physicians. St Joseph's Health Care Pain Clinic, Approved for CME by UWO .Invited Speaker
- 2007/11      University of Western Ontario Interdisciplinary Pain Program Rounds, Topical Analgesics: An Idea Whose Time Has Come. Invited Lecturer
- 2007/11      Breakfast and Learn Session, SJHC Pain Clinic Team, Intravenous Local Anesthetic Infusions for Chronic Neuropathic Pain. Invited Lecturer
- 2007/10      Centers for Pain Management . Using the Needle Wisely and Well. Physician in-training seminar on interventional techniques in pain management office practice. Invited Lecturer
- 2007/10      Hand Therapists' Association of Southwestern Ontario, Complex Regional Pain Syndrome. Ontario, Canada, Invited Lecturer
- 2007/05      Pain Fair, Evening CME, Demystifying Pain for Family Physicians. Invited Lecturer
- 2007/04      Can Pain Society and Can Pain Coalition, Pain in the Older Person: A Public Forum sponsored by Can Pain Society and Can Pain Coalition to increase awareness of 2007-the Year of Pain in the Elderly. London, Ontario, Invited Lecturer
- 2007          Annual Workshop on Neuropathic Pain for Family Physicians. Invited Speaker
- 2006/09      Fibromyalgia Support Group, London Chapter, Fibromyalgia:    Are we Making Any Progress? London, Ontario, Invited Lecturer
- 2006/07      AIM Family Practice Clinic, Opioids for chronic non-cancer pain. Do they cause more harm than good? London, Ontario, Invited Lecturer
- 2006/02      McGill Centre for the Study of Pain, Hypogonadism in the chronic pain patient on opioid

	therapy. Visiting Professor
2005/11	Patient Education Forum, What Happens in a Pain Clinic? Living with Chronic Pain- Helping You Move Forward. London, Ontario, Invited Lecturer
2005/11	Endometriosis Support Network, Pain Management in Endometriosis. London, Ontario, Invited Speaker (Continued)
2005/11	Neuropathic Special Interest Group, Problems with Pilot Neuropathic Pain Database. Toronto, Ontario, Invited Lecturer
2005/06	The Relief of Pain: Resolving Ethical Issues (Organized speaker and presented one case for discussion). Invited Lecturer
2005/05/26	Tillsonburg Family Physicians, Attitudes of Canadian Physicians towards Opioid- Prescribing for Chronic Pain. Invited Lecturer
2005/05	Can Pain Society, Role of University-affiliated Pain Clinics in Advocating for Political Change. Panel Speaker
2005/04	Can Pain Society Neuropathic Pain Experts Panel, The State of Human Clinical Research in Neuropathic Pain. Panel Speaker
2004/10/14	Department of Psychiatry CME Day, Co-existing Pain and Addiction. Invited Lecturer
2004/09	Merck-Frosst Clinical Workshop, Acute Pain Management – The Basics. Chatham, Ontario, Invited Lecturer
2004/04	Post Traumatic Stress Disorder Program, Concurrent Psychiatric Disorders with chronic pain. Invited Lecturer
2004	Department of Anesthesia, St Joseph Health Care: Placebo Response in Acute Postoperative Pain. Departmental Rounds
2004	Department of Medicine, St Josephs Health Care. SJHC Interdisciplinary Pain Program Vision for the Future .Invited Speaker
2003/10	Western Pain Day- In honor of Earl Russell, The Experience of Pain. London, Ontario, Keynote Speaker
2003/10	Interurban Pain Day Overview of UWO Pain Program: The Future. London, Ontario, Invited Lecturer
2003/09	Merck-Frosst Clinical Workshop, Overview of UWO Interdisciplinary Pain Program. London, Ontario, Invited Lecturer
2003/09	Merck-Frosst Clinical Workshop, NSAIDS for Post Operative Pain. London, Ontario, Invited Lecturer
2002/10	Ontario Peri-anaesthesia Nurses Association Meeting, Acute Post-op Pain Management Challenges in the Chronic Pain Patient. Toronto, Ontario, Invited speaker
2002/06	Canadian Anaesthesia Society Meeting, Problem Based Learning Seminar – Pain Management in a patient with Ischemic Neuropathy. Victoria, British Columbia, Facilitator
2002/04	Departments of Anaesthesia & Surgery Grand Rounds, University of Western Ontario, Chronic Post-Surgical Pain. London, Ontario, Invited Lecturer

2002	Lawson Health Research Institute Rehabilitation and Geriatric Care Research Day, Peripheral Opioid Analgesia: Mechanisms and Clinical Implications. London, Ontario, Keynote Address
2001/06	Canadian Anaesthesia Society Meeting, Problem-Based Learning Seminar-Fractured Humerus in a Patient with a Three Week Old Myocardial Infarction. Halifax, Nova Scotia, Facilitator
2001/04	Post-Anaesthetic Care Nursing Conference, Challenges in the PACU. London, Ontario, Invited Lecturer
2000/09	Midwives Provincial Teaching Program at McMaster Medical Centre, Epidural Analgesia in Labour. Hamilton, Ontario, Invited Lecturer
2000/06	Wasser Pain Management Centre, Mt. Sinai Hospital, Chronic Post-Surgical Pain. Toronto, Ontario, Invited Lecturer
2000/06	Association for the Care of Children's Health, Stand By Me: Developing a Parent Present at Induction Program. Albuquerque, New Mexico, United States, Invited Lecturer
1999/06	Can. Anaesthesiology Society Meeting, Obstetrics and Pain Management Presentations. Calgary, Alberta, Session Moderator
1999	Midwives Provincial Teaching Program at McMaster Medical Centre, Epidural Analgesia in Labour. January and September, Hamilton, Ontario, Invited Lecturer
1999	Dept. of Neonatology, St. Joseph's Health Care, Use of the Laryngeal Mask Airway in Neonatal Resuscitation. Ontario, Invited Lecturer
1998/01	Midwives Provincial Teaching Program at McMaster Medical Centre, Epidural Analgesia in Labour. Hamilton, Ontario, Invited Lecturer
1998	Middlesex-London Public Health Nurses, Obstetric Analgesia Update. Ontario, Invited Lecturer
1998	Kitchener Anaesthesiologists, Ropivacaine, From the Lab to Clinical Practice. Ontario, Invited Lecturer
1998	Anaesthesia and Nursing Staff at Hotel Dieu-Grace, Ropivacaine, From the Lab to Clinical Practice. Windsor, Ontario, Invited Lecturer
1998	St. Joseph's Health Care, Obstetric Analgesia Update. Departmental rounds
1997/05	Can-Am Clinical Anaesthesia Conference, Obstetrical Anaesthesia Panel Discussant. Niagara-on-the-Lake, Ontario, Invited Lecturer
1997/04	Post-anaesthetic Care Unit Nursing Conference, Stand By Me (Implementation of a Peri-operative Pediatric Support Program). London, Ontario, Invited Lecturer
1997/01	Midwives Provincial Teaching Program at McMaster Medical Centre, Epidural Analgesia in Labour. Hamilton, Ontario, Invited Lecturer
1997	Ontario Medical Association Section of Anesthesia Meeting, What is new in Obstetric Anaesthesia? Niagara-on-the-Lake, Ontario, Invited Lecturer
1996/01	Midwives Provincial Teaching Program at McMaster Medical Centre, Epidural Analgesia



- in Labour. Hamilton, Ontario, Invited Lecturer
- 1995/10 Neonatal Resuscitation Workshop-Ontario Heart and Stroke Association, The Use of the Laryngeal Mask Airway in Resuscitation. Instructor
- 1995 Department of Neonatology St. Joseph's Health Care, Update on Neonatal Anaesthesia. Invited Speaker (Continued)
- 1993 Department of Anaesthesia, St. Michael's Hospital, NSAIDS for Postoperative Pain Management. Toronto, Ontario, Invited Lecturer
- 1993 Ontario Medical Association, Section of Anaesthesia Annual Meeting, Delayed Complications of Epidural Anaesthesia. Invited Lecturer
- 1993 Southwestern Ontario Regional Anaesthesia Meeting, Hypothermia and Trauma. Invited Lecturer
- 1993 Southwestern Ontario Pediatric Dentists Study Club, Midazolam Sedation in Pediatric Dental Procedures. Invited Lecturer
- 1992 Telemedicine, The Role of Midazolam in Pediatric Premedication. Invited Lecturer
- 1992 Family Medicine Obstetric Update 1992, The Use of Entonox for Labour and Delivery. Invited Lecturer
- 1991 Can-Am Clinical Anaesthesia Conference, Unintentional Hypothermia in the Operating Room. Invited Lecturer
- 1991 Case Presentation and Discussion: Intra-operative Hypothermia during spinal procedure. Orthopaedic Grand Rounds
- 1990 Anaesthetic Practice 1990. University of Toronto, Unintentional Hypothermia in the Operating Room. Ontario, Invited Lecturer
- 1989 Southwestern Ontario Anaesthetists Society Annual Fall Meeting, Anaesthetic Management of Obstetrical Emergencies. Ontario, Invited Lecturer
- 1983 Telemedicine, Neonatal Resuscitation. Invited Lecturer

## TEACHING ACTIVITIES

### Program Teaching

#### Postgraduate Medical Education Admin

- 2015-present      Royal College of Physicians & Surgeons Pain Medicine Examination Committee
- 1999 - 2004      Royal College of Physician & Surgeons Anesthesiology Written Test Committee Member (MCQ).
- 1989 - 2000      Resident Coordinator of Obstetric Anesthesia for University of Western Ontario Residency Program.

#### Continuing Medical Education Admin

- 2013      Co-organizer with Dr Shelley McKellar. Invited Goodman Series Lecturer , Prof Joanna Bourke. Three interdisciplinary lectures, Theme: History of Pain. Target audience: Depts of History and Schulich School of Medicine, Western University
- 2013      Co-organizer with Dr Ian Herrick. Invited speaker, Dr Cathy Smyth, Associate Professor of Anesthesia , U of Ottawa and Gini Jarvis RN ,to implement interventional management of cancer pain at London Regional Cancer Care. Audience: Dept of Anesthesiology and Perioperative Medicine City-wide Rounds
- 2003      Organized three-day visit of Dr. Allen Finley, Professor of Anaesthesia, to address assessment and management of pediatric pain in London.

#### Undergraduate Medical Education

##### *Course Lead*

- 2015-2016      Year 3, Professional Portfolio Course, Schulich School of Medicine

##### *Instructor*

- 1988 - 1994      Obstetric Anesthesia and Analgesia Clerkship Seminar (6 times per year).

##### *Interviewer - Medical School*

- 1996 - 2000      Interviewer for the Admissions Committee for the University of Western Ontario Medical School.

##### *Examiner L.M.C.C., subsequently MCCQE Part II*

- 2015      Medical Council of Canada Qualifying Examination Part 2 Examiner (MCCQE Part 2
- 2013      Medical Council of Canada Qualifying Examination Part 2 Examiner (MCCQE Part 2)
- 2000      Part II.
- 1993 - 1997      Part II.

##### *Organizer - Major Undergraduate Medicine Course*

- 2002 - 2014      Worked with Dr. Dwight Moulin to prepare a selective course curriculum for fourth year medical students on Pain Mechanisms and Treatment. First offered February 2003.

*Undergraduate teaching*

- 2013-2014      Portfolio Course Mentor , Year 3, Schulich School of Medicine.
- 2010- 2014      Pain Medicine, Integration, Consolidation, Enrichment Meds IV Course Lecturer  
Assessment and Management of Pain in the Addicted Patient
- 2011              Discovery Days in Health Sciences, Secondary school students in Southwestern Ontario.  
Panel Speaker
- 2008 - 2012      Annual Lecture on Pain and its Management, Meds IV: Treatment of Chronic Pain  
Problems in the Emergency Department.
- 2003 - 2009      Pain and its Management in the New Millennium, Meds IV: Role of nerve blocks in  
diagnosis and treatment of chronic pain. Teaching Effectiveness: 6.4 / 7
- 2003 - 2009      Musculoskeletal System Lecturer for Meds II: Neural Blockade in The Management of  
Lumbar Spinal Pain.
- 2003 - 2007      Supervisor of Family Medicine residents on one-day rotation through Pain Clinic (4-  
6/year).
- 2004              Academic Half Day, Meds III: Assessment and Treatment of Chronic Pain.
- 2003              Academic Half Day: Assessment and treatment of Chronic Pain-Need for  
Multidisciplinary Approach, Meds I & Meds II.
- 1994 - 1998      Preanesthetic Assessment Seminar (2 hr tutorial given 6 times per year to Clinical  
Clerks).
- 1988 - 1994      Examiner: Department of Anesthesia Annual Resident Oral Examination.

Postgraduate Medical Education

- 1988 - 1992      University of Western Ontario Anesthesia Department. Journal Club Organizer.
- 1993 - 2000      Research Coordinator of Anesthesia Residency Program for the University of Western  
Ontario.

*Examiner - Practice Oral Exams*

- 1983 - 2001      Practice Oral Exam Sessions with F.R.C.P. Candidates, Semi-Annual Resident Training  
Program.
- 1983 - 2001      Practice Oral Exam Sessions with F.R.C.P. Candidates, Semi-Annual Resident Training  
Program.

*Anesthesia Core Residency Lecture Program*

- 2012-2013      Faculty teaching Evaluation based on Canmeds roles compiled on August 29,2012 and  
October 2,2013    Very Good to Outstanding
- May 1,2013      Assessment and Management of Chronic Pain Part I
- May 8,2013      Assessment and management of Chronic Pain , Part II
- 2008              Novel Analgesics in the Perioperative Period.
- 2008              Acute Post-operative Pain Management of the Chronic Pain Patient.

2006	Fetal Anatomy and Physiology.
2003 - 2013	Assessment & Treatment of Patients with Chronic Pain. ( <i>Teaching Effectiveness: 6.2/ 7</i> )
2004	Acute postoperative Pain Management of the Chronic Pain patient.
2004	Fetal Anatomy and Physiology.
2003	Assessment & Treatment of Patients with Chronic Pain.
2002	Neuroaxial Anaesthesia for Surgery.
2001	Anaesthesia for C-section.
2000	Anaesthesia for Cesarean Section.
1999	Regional Anaesthesia in Obstetric and Pediatric Anaesthesia.
1999	PCA fentanyl for labour analgesia.
1998 - 2000	Resident Supervisor for Obstetric Anaesthesia.
1997	Pediatric Anaesthetic Preoperative Assessment.
1997	Principles of Research Design (Annual Seminar).
1996	Anaesthetic Considerations in Pre-eclampsia.
1995 - 2000	Bimonthly Obstetric Anaesthesia Teaching Seminar to Anaesthesia Residents on site.
1988 - 1994	Obstetric Anaesthesia Seminars Monthly to Residents on a variety of topics.
1983 - 1987	The University of Toronto. Annual Lecture: Pharmacology of Induction Agents.

*ENT Core Lecture Program*

2009	Head and Neck Chronic Pain Management.
2008	Head and Neck Chronic Pain Management.
2006	Head and Neck Chronic Pain Management.
2003	Head and Neck Chronic Pain Management.

*Obstetrics/ Gynecology Core Lecture Program*

1989 - 1991	Obstetrics and Gynecology Resident Seminars annually in Obstetric Anaesthesia. <i>Plastic Surgery Core Residency Lecture Program</i>
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2004	Complex Regional Pain Syndrome.
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*Other*

1992	Neonatal Airway Training Cat Lab (organized practice session for anaesthesia residents on neonatal intubation and establishment of a percutaneous cricothyroidotomy airway using anesthetized cats as a model).
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Continuing Medical Education

*Organizer - CME course*

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|-------------|--|
| 2012        | Conference Co-Organizer, <i>A Balanced Approach to Pain Management</i> , In-Medic Pain Management Centre, London, Ontario                            |
| 2005        | Conference Co- Organizer. Interurban Pain  |
| 2003        | Organized two-day workshop in acute and chronic pain management for Merck-Frosst Musculoskeletal Health Associates.                                  |
| 2001 - 2005 | Organized educational dinner meetings for 10-12 invited participants. Case discussions presented focusing on a particular topic (Two to three/year). |
| 1996 - 2000 | Organizer, Midwest Anaesthesia Residents Conference (MARC). <i>Presenter - Department Rounds</i>   |
| 2002        | Department of Anaesthesia, Citywide Rounds: Chronic Post-Surgical Pain.  |
| 2002        | Department of Anaesthesia Citywide Rounds: Acute Pain Management for the Chronic pain patient.   |
| 1987 - 2003 | Departmental Rounds on a variety of topics (2-3 times per year).   |

*Family Practice Core Lecture Program*

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| 2015 | Internal Medicine Residency Core Lecture Program, Pain Medicine – The Basics, June 4, 2015                              |
| 2010 | Family Practice Resident Half Day Seminar in Chronic Pain: Pharmacologic Management: Opioid and Non-Opioid prescribing. |
| 2007 | Family Practice Residency Half Day Seminar in Chronic Pain.   |
| 2006 | Family Practice Faculty Half-Day-Update in Chronic Pain.  |

*Nursing*

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|-----------|--|
| 2013-2014 | Collaboration in Action: Acute and Chronic Pain Management. Invited Conference Planner, Office of Interprofessional Health Education and Research (IPHER), Western |
| 2009      | In-Service to University Hospital L8 Surgical Nurses: Pain in the Abdominal Wall.  |
| 2004      | In-Service to Operating Room Nurses: Placebo Response and Pain.  |
| 1999      | In-Service to Nurse Educators of London-Middlesex Public Health Department: Ambulatory Epidurals.  |
| 1998      | Peri-operative Nursing Degree Program: Pharmacology of drugs used in the operating room.   |
| 1991      | In-Service to Operating Room Nurses: Anaesthesia for Caesarean Section.  |
| 1990      | In-Service to Family Birthing Unit Nurses: Epi-Morph for Caesarean Section.  |

1989 - 1998      Epidural Certification for Labour and Delivery Nurses.

*Respiratory Therapy*

1991 - 1995      Coordinator for Clinical Instruction in O.R. for Respiratory Therapy Students.

1984 - 1987      Neonatal Resuscitation Lecture to Respiratory Therapy Students.

*Other*

2014              Organizer. Thames Valley Family Health Team Collaboration. Support and development of role of physician lead for chronic pain at Thames Valley Family Health teams.

2009 - 2011      Met with Team Leaders of Family Health Team, Wortley Village Family Practice Site has been designated as a Chronic Pain Pilot Center with Dr. Jeff Spence as Physician Champion. Agreed to provide preceptorships in SJHC Pain Clinic to nursing, pharmacy, and physician team members to assist with pain assessment and treatment.

2009 - 2010      SJHC Pain Clinic/Thames Valley Family Health Team Pain Pilot.

2006              Judge: McMaster Western Resident Research Day.

2006              Judge and Co-Chair: Chronic Pain Poster Session, Canadian Anesthesia Society Meeting.

2005              Complementary and Alternative Medicine Curriculum Committee in Medical Education.

2004 - 2005      Initiated monthly case discussions rounds for Interdisciplinary Pain Clinic.

2003              Developed role of Education Coordinator for UWO Interdisciplinary Pain Program.

2002              Initiated and judged an essay writing contest for Meds I-II students on pain-related topics. Award sponsored by Janssen Ortho Inc. to raise awareness of pain management chair at UWO.

2002 - present   Organized lecture series for UWO Interdisciplinary Pain Program.

2002              Preceptor for clinical course work leading to Nurse Practitioner Diploma. Kim Horrill

1999 - 2000      Hands-on Instruction in Operating Room to Neonatology residents and consultants in insertion of LMA in infants.

1997 - 2000      Session Moderator for Basic Science and Clinical Abstract Presentations (MARC).

1996              Judge of Clinical Abstracts Presentations (MARC).

## *TEACHING INNOVATIONS*

### Teaching Innovations / Curriculum Development

2014              Chair, Conference Organizing Committee, A Balanced Approach to Pain Management" targeting community pain physicians, family doctors, and postgraduate trainees .May 30-June 1, 2014. In-Medic Pain Management Centre, London, Ontario.

2012              Course instructor for revised case-based interdisciplinary 18 hour Meds IV Selective on

	Pain Medicine (6 hours lecture time)
2012	Conference Organizer  Lead Role on Organizing three day Conference "A Balanced Approach to Pain Management" targeting community pain physicians, family doctors, and postgraduate trainees. March 23-25, 2012. In-Medic Pain Management Centre, London, Ontario.
2011- 2013	Chair, Royal College Task Force for the Royal College Accreditation of Pain Medicine as a Subspecialty
2006 - 2010	Lead Applicant on, and Chair of Task Force to produce Phase II Proposal to Royal College of Physicians and Surgeons of Canada to make Pain Medicine a subspecialty of Anesthesiology. Successful May 2010.
2001 - 2005	Director-UWO Interdisciplinary Pain Program, Chair, Earl Russell Pain Management. Purpose: to improve clinical care, education & research into chronic non-cancer pain, cancer pain, and acute pain
2009	Key contributor. Patient information Pamphlet: Stop Smoking for Safer Surgery.
2007 - 2008	Centers for Pain Management (CPM) Preceptor one-on-one supervision of family doctors/emergency medicine doctors to teach clinical management of chronic pain
2005	Joint Collaboration between Pfizer Canada and the University of Western Ontario <i>CME Peerview Program</i> . CD ROM: Demystifying Neuropathic Pain.
2004 - 2013	Instituted and organized monthly Clinical Case Discussions for SJHC Pain Clinic (Breakfast and Learn Seminar Series).
2003	External Consultant for Merck-Frosst. Significant Contributor to CD ROM: <i>Role of Coxibs in Pain Management</i> .
2002	Organized Two-day Clinical Preceptorship for Merck Frosst Health Associates-determined curriculum, arranged speakers.
2002 - 2005	Instituted and organized monthly Interdisciplinary Pain Lectures for UWO Pain Program including invited and local speakers.
2002	David Ng, Meds III, Undergraduate, Presentation on "The Placebo Response-Friend or Foe." Organized this event for Meds I-II students to raise awareness of study of pain at UWO.
1999	Epidural and Analgesia Patient Information Pamphlet. Written by Dr P Morley-Forster
1995	Nursing Education Video-written and directed by P Morley-Forster Nitrous Oxide Analgesia in Labour.
1994 - 1996	Took primary responsibility for developing and implementing the highly successful Parent Present at Induction program (Stand by Me) at St. Joseph's Health Care.
1994	Patient Education Video: Demonstration of anaesthetic induction techniques for Stand By Me Program allowing parents in the OR. Written and directed by Dr. P. Morley-Forster
1994	Epidural Anaesthesia and Analgesia: A Self-Study Review for Nurses Education.
1992	Nursing Education Video: Continuous Epidural Infusions. Written and directed by Dr. P.

Morley-Forster

## *SUPERVISION AND MENTORING*

### Supervisory Experience

2011-2012	Dr Wilson Tay, Faculty Supervisor, Chronic Pain Fellow
2010 - 2011	Dr. Wern Hsien Bin, Faculty Supervisor, Chronic Pain Fellow
2010 - 2011	Dr. Raj Manikandan, Faculty Supervisor, Chronic Pain Fellow
2009	Dr Sahar El-Karadawy, One Month Preceptorship in Chronic Pain, Faculty Supervisor, University of Alexandria Faculty
2008	Dr Ramin Safakish, Chronic Pain Management Preceptorship, Faculty Supervisor, Consultant in Anesthesiology at Chatham-Kent Health Alliance
2007 - 2009	Adam Samosh, Faculty of Medicine Summer Research Training Program, Primary Supervisor
2006 - 2007	Dr Ahmed Abotaiban, Faculty Supervisor, Chronic Pain Fellow
2006	Dr David Patrick, Primary Supervisor, Family Medicine-one month rotation
2005 - 2006	Dr. Ibrahim Hadi, Faculty Supervisor, Chronic Pain Fellow
2005 - 2006	Dr. Shyam Balasubramanian, Faculty Supervisor, Chronic Pain Fellow
2005	Dr. George Kim, Primary Supervisor, Family Medicine-one month rotation
2005	Jana Moulin-McMaster Faculty of Medicine, Faculty of Medicine Summer Research Students, Primary Supervisor
2005	Dr Jeff Spence, Dr Birgit Volkentanz, Dr Deborah Dyke, One day Family Practice Preceptorships. Primary Supervisor
2004 - 2005	Dr. Kate Ower, Faculty Supervisor, Chronic Pain Fellow
2003 - 2004	Dr. Waseem Ashraf, Faculty Supervisor, Chronic Pain and Regional Fellow
2001 - 2002	Sahar Ghorayeb, Faculty of Medicine Summer Research Training Program, Primary Supervisor
1999 - 2000	Dr. Indu Singh, Faculty Supervisor, Obstetric Anesthesia Fellow
1997 - 1998	Dr. Michael Currin, Faculty Supervisor, Obstetric Anesthesia Fellow
1997	Dale Tanzer, Faculty Of Medicine Summer Research Students, Primary Supervisor
1996 - 1997	Dr. Kevin Armstrong, Faculty Supervisor, Obstetric/Regional Anesthesia Fellow
1996	Johanna Weberpals, Faculty of Medicine Summer Research Students, Primary Supervisor
1994	Michael Taylor, Faculty of Medicine Summer Research Training Program,,Primary



Supervisor

- 1991      Ambrose Au, Faculty of Medicine Summer Research Students, Primary Supervisor
- 1990      Grant Lu, Faculty of Medicine Summer Research Students, Primary Supervisor Clinical Supervision in the Pain Clinic of Anesthesia, Rheumatology, Neurology, and Family Medicine Residents and Medical students.

Additional Mentoring Activities

- 2014      Faculty Mentor to Dr Qutaiba Tawfic-Mahodi
- 2011 – 2013      Faculty Mentor to Dr C Clarke
- 2010-present      Faculty Mentor to Dr G Bellingham
- 2008-10      Faculty Mentor to Dr Ngozi Imasogie
- 1996 - 1999      Faculty Mentor during anesthesia residency to Dr. Vanessa Wong

Professional Contributions to Community

- 2014-2015      Member , St Jude's Church Renewal Committee
- 2009—2014      St Joseph's Health Care Stair Climb Team, Top Fund-raiser 2012-2014.
- 2014      Interviewed on Canada AM, CBC Radio , 12 stations nationally "Pain Medicine Residency"
- 2014      Interviewed for London Free Press "Pain Medicine Residency"
- 2010 - 2011      Fundraiser, Heart and Stroke Foundation.
- 2010      Participant in London Public Forum, Organized by Canadian Pain Coalition.
- 2010      Initiated support group for patients with Complex Regional Pain Syndrome with Cathy Lowery RN.
- 2009      Interview for Radio AM 800 Windsor.
- 2009      Interview for Chatelaine Magazine, "Everything you need to know about painkillers."
- 2007      Interviewed for London Free Press "Getting Older, Bigger Pain" (by Mary Jane Egan). London, Ontario
- 2007 - 2009      Interview for Vim and Vigour on Chronic Pain (by Amy Lynn Smith). Ontario
- 2006      Interview for Royal Canadian Legion Magazine on Chronic Pain.
- 2005      Member of organizing committee and speaker: Living with Chronic Pain, Helping You Move Forward.
- 2005      Interview for Toronto Sun re: Post-herpetic Neuralgia Vaccine (by Marilyn Linton). Ontario
- 2004      Interview for The New PL for Pain Awareness Week. Ontario

2004	Interview for the Jim Chapman Show, Living With Chronic Pain. Ontario
2004	Interview for the National Post regarding two cases of accidental overdose with Duragesic patches. Ontario
2004	Interview for The New PL (Today's Woman) on Chronic Pain and Addiction. Ontario
2004	Labatt's 24 Hour Relay Team, "The Hulcsters." Top Fund-raiser on the Team. Ontario
2003 - 2008	Invited member: International Association of Poets.
2002	Labatt's 24 Hour Relay Team, Co-Captain of "The Dream Team." Raised \$6800. Ontario
2002	Interview for CBC (Ontario in the Morning) re Earl Russell Chair in Pain Management. Ontario
2002	Interview for CBC (Ontario at noon) re: Pain Management. Ontario
2002	Interview for the New PL regarding the Earl Russell Chair in Pain Management. Ontario
2002	Interview for CJBK regarding the Earl Russell Chair in Pain Management. Ontario
2000	Interview for CFPL TV regarding Anesthesia for the Lithotripsy Program at St. Joseph's Health Care. Ontario
1999	Presentation on Cardiovascular Fitness and Strength Training at the Wellness Fair, St. Jude's Anglican Church, London, Ontario. London, Ontario
1998	Interview for CFPL TV regarding Stand By Me Program at St. Joseph's Health Care. Scarborough, Ontario
1997	Mentor to grade 12 students for independent studies project on Spinal Pain Pathways. Organized by Roger Duskey of the London Board of Education. London, Ontario
1997	Morning Workshop for Operating, PACU and Anaesthesia Staff of Scarborough Centenary Hospital: How to Implement your Own Parent Present at Induction Program. Scarborough, Ontario
1989 - 1994	Parent Volunteer at Masonville Public School, London, Ontario

Harsha Malempati, MD, MSc, FRCS(C)

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## EMPLOYMENT

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Sunnybrook Health Sciences Centre, Toronto, Ontario 2013  
Orthopaedic and Spine Clinical Associate, University of Toronto

MacKenzie Health – York Central Hospital, Richmond Hill, Ontario 2013  
Surgeon – privileges in Orthopaedic and Spinal Surgery

## EDUCATION

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University of Washington – Harborview Medical Center, 2011-2012  
Seattle, Washington, USA

Clinical Fellowship in Spine Surgery, supervisors include:

- Jens Chapman
- Carlo Bellabarba
- Richard Bransford
- Michael Lee
- Ted Wagner

Institute of Medical Science 2008- 2010  
M.Sc., Surgeon Scientist Program, Division of Surgery

University of Toronto, Toronto, Ontario 2005-2011  
Surgical Residency Training, Department of Orthopedic Surgery

University of Toronto, Toronto, Ontario 2001-2005  
Doctor of Medicine - M.D.

University of Windsor, Windsor, Ontario 1998-2001  
Bachelor of Science - B.Sc. – General Science  
Minor – Psychology

## PROFESSIONAL CERTIFICATION/LICENSES

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- Washington State DOH Physician and Surgeon License #MD60192948 2011-2012
- Royal College of Physicians and Surgeons of Canada; FRCS(C) 2011
- United States Medical Licensing Exam Step 1/2/3 2009-2010

- Advanced Trauma Life Support 2006
- Licentiate of the Medical Council of Canada Part 1 & 2 2005-2010
- College of Physicians and Surgeons of Ontario 2005-2011  
Postgraduate Medical License; #82999
- Advanced Cardiac Life Support 2005

## MEMBERSHIPS

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- American Association of Orthopaedic Surgeons 2011
- Canadian Spine Society 2009-present
- Canadian Orthopaedic Association 2007-present
- Canadian Orthopaedic Residents Association 2007-2011
- Canadian Medical Association 2005-present
- Ontario Medical Association 2005

## AWARDS AND ACHIEVEMENTS

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- University of Toronto, Toronto, Ontario 2011  
Best Spine Research Paper, Graduation Day 2011
- Ontario (Canada) Graduate Scholarship (\$15 000) 2009
- University of Toronto, Toronto, Canada 2009  
GSEF (Graduate Students Endowment Fund) Scholarship (\$5000)
- CIHR Medical Research Scholarship of Canada (Medical Student Scholarship) (\$5000) 2003
- University of Windsor, Windsor, Ontario 2001  
Dean's Gold Medal, Faculty of Science, Awarded to graduating student with highest academic standing in the discipline of General Science B.Sc.
- University of Windsor, Windsor, Ontario 1998-2001  
President's Roll for academic distinction during all three years of B.Sc.,
- National Science and Engineering Research Council (NSERC) of Canada 2001  
Research Scholarship
- National Science and Engineering Research Council (NSERC) of Canada 2000  
Research Scholarship
- National Science and Engineering Research Council (NSERC) of Canada 1999  
Research Scholarship

## RESEARCH EXPERIENCE

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- Institute of Medical Science, University of Toronto, Toronto, Ontario 2008 - 2010  
Master's Thesis, Department of Orthopaedic Surgery
- Thesis Supervisor: Dr. Albert Yee MD, FRCSC

- Thesis Title: "The evaluation of Canadian Spine Surgical Fellowship Training: A Review of Educational Objectives and Current Surgical Practice"

Brigham & Women's Hospital Harvard University, Boston, Massachusetts 2003

- Assessment of clinical outcomes of patients treated for multiple focal cartilage defects by autologous chondrocyte implantation at 2 and 7 years follow-up.
- Effects of previous cartilage stimulation techniques on outcomes of autologous chondrocyte implantation.
- Outcomes of patients receiving low femoral and high tibial osteotomies for malalignment of the knee.

University of Windsor, Windsor, Ontario 2001

Department of Inorganic Chemistry, Research of catalytic production of polyethylene with organometallic catalysts. Supervisor: Dr. Doug Stephan

University of Windsor, Windsor, Ontario 2000

Department of Organic Chemistry, Research of organic synthesis of iron and cobalt complexes and organometallic chemistry. Supervisor: Dr. James Green

University of Windsor, Windsor, Ontario 1998

Department of Organic Chemistry, Research of organic synthesis of macrocyclic ligands for the trapping of metals and other toxic substances. Supervisor: Dr. Philip Dutton

## RESEARCH FUNDING & GRANTS

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- The University of Toronto Collaborative (UT-SpineLINK): Creation of a collaborative model to enhance the triage and care of acute spine patients. Yee A, Fehlings M, Nathens A, Ahn H, Ginsberg H, Malempati H, Webster F, Sargeant D, Hickley N, Mraz, R, Schull M, Furlan J, Neary M: MOHLTC AFP Innovation Fund (\$100,000 2009-2010)

## PUBLICATIONS (PEER-REVIEWED)

---

- Webster F, Fehlings MG, Rice K, Malempati H, Fawaz K, Nicholls F, Baldeo N, Reeves S, Singh A, Ahn H, Ginsberg H, Yee AJ. Improving access to emergent spinal care through knowledge translation: an ethnographic study. BMC Health Serv Res. 2014 Apr 14;14(1):169.
- Malempati H, Ching R, Hacquebord J, Patel A, Chapman J, and Lee M. Biomechanical study of enhancing pedicle screw fixation in the lumbar spine utilizing allograft bone plug interference fixation. Abstract accepted to AOSNA Annual Fellows Forum 2012 – Banff, Alberta Feb 2012; Submitted to Spine Mar 2012.
- Malempati H, Hacquebord J, Patel A, Cizik A, Hamilton D, Bransford R, Bellabarba C, Chapman J, and Lee M. Risk factors for neurological complication from spine surgery: a multivariate analysis of 1,951 patients. Manuscript in preparation.
- Patel A, Malempati H, Louie P, Ortiz J, Bellabarba C, Chapman J, and Bransford R. A retrospective review of 204 patients with spinal epidural abscesses: risk factors, trends, and

outcomes of surgical and medical management. Abstract accepted to AOSNA Annual Fellows Forum 2012 – Banff, Alberta; manuscript in preparation.

- Malempati H, Bederman S, Kreder H, Backstein D, and Yee A. Recent trends in spine surgeon volumes and their effect on patient outcomes for degenerative disease of the lumbar spine. Can J Surg. Submitted February 2012.
- Chrea B, Malempati H, Campbell JR, Khan S, Ching RP, and Lee MJ. Enhancing pedicle screw fixation in the lumbar spine utilizing allograft bone plug interference fixation. J Spinal Disord Tech, 2013 Nov 6 (epub ahead of print).
- Malempati H, Wadey V, Paquette S, Kreder HJ, Massicotte EM, Rampersaud R, Fisher C, Dvorak M, Fehlings M, Backstein D, and Yee A. Spine surgery fellowship education in Canada: Evaluation of trainee and supervisor perspectives on cognitive and procedural competencies. Spine, 2013 Jan;38(1):83-91.
- Bederman S, Murnaghan O, Malempati H, Lansang E, Wilkinson M, Johnston E, Bronstein Y, Finkelstein J, and Yee A. In-hospital mortality and surgical utilization in severely polytraumatized patients with and without spinal injury. J Trauma, 2011 Oct;71(4):E71-8.
- Peskun C, Mayne I, Malempati H, Kosashvili Y, Gross A, and Backstein D. Cardiovascular Disease predicts complications following bilateral total knee arthroplasty under a single anaesthetic. Knee, 2012 Oct;19(5):580-4.
- Marchie A, Malempati H, Indar R, Finkelstein J, Ford M, and Yee A. Fracture-dislocation at the thoracolumbar junction in a patient with an associated traumatic lumbosacral spondylolisthesis: a case report. Journal of the Canadian Spine Society. Submitted Jan 2014.

#### PUBLICATIONS (NON PEER-REVIEWED) / BOOK CHAPTERS

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- Malempati H, Qamirani E, Yee A. Spine: Operative Management of Metastatic Disease/Myeloma. In *Evidence-based Orthopaedics* by Bandari M. BMJ. In print 2011.
- Malempati H, Qamirani E, Yee A. Spine: Nonoperative Management of Metastatic Disease/Myeloma. In *Evidence-based Orthopaedics* by Bandari M. BMJ. In print 2011.
- MCCQE 2005, 21<sup>st</sup> edition. Orthopaedics Chapter. Malempati H, Van Houwelingen A, and Van Vliet A. Toronto Notes Medical Publishing Inc: 2005.
- Malempati H, et al. Droopy Lid. University of Toronto Medical Publishing Inc: 2003.
- Malempati H. Prolific Scientist Profiles. University of Toronto Medical School Journal. 2003: 80(2), 128-30.

#### POSTERS AND PRESENTATIONS

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- Surgery for the Degenerative Lumbar Spine: A Study of Recent Trends Outcomes 2011

in Current Surgical Practice. University of Toronto Orthopaedic Graduation Day 2011, University of Toronto, Toronto, Canada (Oral)

- The Provision of Emergent Spinal Care from a Health Care Delivery Perspective: Results from a Demonstration and Evaluation Project in the Integration of Care Delivery, the UT-SpineLINK Experience, Canadian Spine Society Annual Meeting 2011, Quebec City, Quebec, Canada (Poster) 2011
- Canadian Spine Surgical Fellowship Training: A Review of Technical and Procedural Competencies, Canadian Orthopaedic Association Annual Meeting 2010, Edmonton, Alberta, Canada (Oral) 2010
- Spine Surgery Fellowship Training: A Review of Technical and Procedural Competencies, Canadian Orthopaedic Residents Association Annual Meeting 2010, Edmonton, Alberta, Canada (Oral) 2010
- Canadian Spine Surgery Fellowship Training: A Review of Technical and Procedural Competencies. Canadian Spine Society Annual Meeting 2010, Lake Louise, Alberta, Canada (Oral) 2010
- Spine Surgery Fellowship Training in Canada: A Review of Educational Objectives. University of Toronto Department of Surgery Annual Meeting Gallie Day, University of Toronto, Toronto, Canada (Poster) 2010
- Spine Surgical Fellowship Training: A Review of Educational Objectives. University Wide Orthopaedic Grand Rounds, University of Toronto, Toronto, Canada (Oral) 2009
- Spine Surgical Fellowship Training: A Study of Current Educational Objectives and Competencies. Orthopaedic Research Day, University of Toronto, Toronto, Canada (Oral) 2009
- IntraOperative Motor Evoked Potential Changes in Children Treated with IntraOperative Skull Skeletal Traction for Severe Coronal Plane Deformities. Lewis S, Holmes L, Strantzas S, Malempati H, Zarour C, Ahier J, Zeller R. Canadian Spine Society Annual Meeting 2009, Gatineau, Quebec, Canada (Oral) 2009
- What does it take to be a Spine Surgeon? A Review of Competencies in Fellowship Training. SpineFEST Visiting Professorship, University of Toronto, Toronto, Canada (Oral) 2009
- Cardiovascular Disease is a Contraindication to Bilateral Total Knee Arthroplasty Under a Single Anaesthetic. American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting 2009, Knee Society Specialty Day. (Oral) 2009
- Autologous Chondrocyte Implantation and other Cartilage Repair Techniques. North York General Hospital, Orthopaedic Surgery Grand Rounds. Toronto, Ontario. (Oral) 2004







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## INDEPENDENT ORTHOPEDIC ASSESSMENT

### FOR:

Ms. x xxx  
A Law Firm P.C.  
11 Bloor Street West  
Suite 3080  
Toronto ON M8X 2X3

### RE:

Niall DOE

Date of Birth:	September 17/1958
Date of Accident:	June 29/2010
Date of Assessment:	April 30/2014
Date of Report:	April 30/2014

### ASSESSOR:

Harsha Malempati, MD, MSc, FRCS(C)  
Orthopedic Surgery

### PROFESSIONAL DESIGNATION:

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I am a qualified orthopaedic surgeon and a fellow of the Royal College of Physicians and Surgeons of Canada. I am a member in good standing at the College of Physicians and Surgeons of Ontario. I completed six years of orthopaedic surgery training at the University of Toronto, including a Master's of Science in the Institute of Medical Science. Following this residency training, I completed a one-year spine surgery fellowship at the University of Washington-Harborview Medical Center, with particular interest in the management of spine and orthopaedic trauma.

I currently have appointments at Sunnybrook Health Sciences Centre and MacKenzie Health-Richmond Hill (York Central Hospital). My practice includes the treatment of orthopaedic trauma, spine trauma, and all adult elective spine pathologies.

I have been involved with orthopaedic related research that has been presented at the Canadian Orthopaedic Association annual meetings, the Canadian Spine Society annual meetings, and the American Academy of Orthopaedic Surgery.

I am licensed to practice in the province of Ontario. I am a member of the Canadian Orthopaedic Association, the American Academy of Orthopaedic Surgery, and the Canadian Spine Society.

### PURPOSE OF ASSESSMENT:

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I have been asked to perform an Orthopaedic assessment for Ms. Xxx Xxx with respect to injuries sustained in a motor vehicle accident on August 3, 2010. The purpose of the assessment was outlined to Ms. X prior to proceeding and verbal consent was obtained to proceed.

### DOCUMENTS RECEIVED AND REVIEWED:

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1. Motor vehicle accident report, dated August 3, 2010
2. Quinte Health Care Diagnostic Bone Scan report, dated February 25, 2011
3. Northumberland Hills Hospital, MRI of right ankle, dated February 9, 2012

- the report says no acute bony abnormality identified. No significant ligamentous or tendinous injury identified. The lateral malleolus appears unremarkable
- 4. Quinte Health Care, Trenton Memorial Hospital, clinical notes and records
- 5. Ambulance Call Report
- 6. Quinte Health Care, Belleville Hospital, general records June 18, 2013
- 7. Dr. Katherine Pauline Allen, clinical note dated August 9, 2010
- 8. Dr. Maureen Simmons, clinical note, dated August 19, 2010
- 9. Dr. Maureen Simmons, Disability Certificate, clinical notes for August 3 and 5, 2010
- 10. Dr. Maureen Simmons, clinical note, dated February 7, 2011
- 11. Dr. Maureen Simmons, clinical notes and records, September 2007 to July 2011
- 12. Dr. Maureen Simmons, Disability Certificate, dated January 20, 2012
- 13. Dr. Katherine P. Allen, clinical notes and records, dated March 13, 2013
- 14. Dr. M.L. Simmons, updated clinical notes and records, dated April 18, 2013
- 15. Dr. James A. MacLean's CNR, dated May 28, 2013
- 16. OHIP Summary, claim period from August 3, 2007 to November 14, 2011
- 17. OHIP Summary, claim period from November 14, 2011 to March 6, 2013
- 18. Quinte Foot Care Clinic, notes and records, May 9, 2011 to April 16, 2013
- 19. Physio One Sports
  - a. Jillian Homes, Physiotherapist, Treatment Plan (OCF-18), dated August 25, 2010
  - b. Jillian Homes, Physiotherapist, Disability Certificate (OCF-3), dated September 8, 2010
  - c. Jillian Pascao, Minor Injury Treatment Discharge Report (OCF-24), dated April 11, 2011
  - d. Jillian Pascao, Disability Certificate, dated August 5, 2011
- 20. Quality Health Assessment Incorporated
  - a. Yonit Nisan and Lydmila Havrylechko, Treatment and Assessment Plan (OCF-18), dated March 14, 2011
  - b. Dr. Khal Efala, Physician, Treatment and Assessment Plan (OCF-18), dated March 21, 2011
  - c. Maryam Nik and Philip Kalvari, Treatment and Assessment Plan (OCF-18), dated March 31, 2011

- d. Arvind Kumar Gupta, Occupational Therapy In-Home Assessment Report, dated April 5, 2011
  - e. Mikhael Shteynberg, Chiropractor, Treatment and Assessment Plan (OCF-18), dated April 15, 2011
  - f. M. Shteynberg, Functional Capacity Evaluation Report, dated April 17, 2011
  - g. Philip Kalvari, Gait Analysis, Foot Biomechanical Evaluation Report, dated June 13, 2011
  - h. Dr. Khal Efala, Orthopaedic Surgeon, Independent Orthopaedic Examination, dated June 13, 2011
  - i. Dr. Inese Robertus, Physician, Treatment and Assessment Plan (OCF-18), dated August 25, 2011
  - j. Dr. Inese Robertus, Physician, Treatment and Assessment Plan (OCF-18), dated September 23, 2011
  - k. M. Shteynberg, Work-Site Assessment Report, dated October 10, 2011
  - l. Arvind Kumar Gupta, Occupational Therapy In-Home Assessment Report, dated November 21, 2011
21. Accident Benefits Assessment
- a. Helen Leimonis, Insurer Examination Occupational Therapy Paper Review, dated June 20, 2011
  - b. Dr. Adam Goldfarb, Independent Chiropractic Examination, OCF-18 File Review, dated July 22, 2011
  - c. Community Living Algonquin and Lakeshore, Employer's Confirmation Form (OCF-2), dated August 13, 2010
  - d. Community Living Employment file, dated May 25, 2013
  - e. Algonquin and Lakeshore Catholic District Board employment file, dated May 27, 2013
22. Canada Revenue Agency
- a. Income Tax Returns from 2006 to 2010
  - b. Tax Return for 2011
  - c. Tax Return for 2012

#### ACCIDENT DETAILS AND CHRONOLOGY OF EVENTS:

Ms. Xxx states that the accident occurred at about 4:00 p.m. on August 3, 2010. She states that the weather conditions were clear. She was driving from North Beach to Highway 401.

She states that she was driving her boys home from the beach. She was the belted driver of an SUV motor vehicle and was in the car with two of her sons.

The accident occurred at the intersection of Wooler Road and Highway 2 in Trenton, Ontario. She was proceeding through the intersection on a green traffic light when she had to swerve to the left to get out of the way of a truck that was veering into her lane. She reports that she was driving about 60 km/h.

She was aware of the impending collision and tried to brace for it. She states that she did not sustain a head injury or loss of consciousness. She exited the vehicle after the accident and stated that there was extensive damage to the car which was essentially "a write off". On trying to stand, her right ankle gave out. A cardboard splint was applied and she was brought by ambulance to Trenton Hospital.

At the hospital, she was assessed by the emergency physician, diagnosed with a fracture and a third degree sprain of her right ankle. A back slab splint was applied and she was told to follow up with Dr. Kawam, in Belleville. Repeat x-rays were done. Dr. Kawam did not see a fracture on her repeat x-rays and told her that she had a sprain and was discharged.

As a direct result of this accident, she continues to experience daily right ankle pain. She attended physiotherapy for a period of one year with her last session being about 2 years ago. She wears orthotics at work, but still complains of pain. She takes Naprosyn anywhere from 1 to 3 tablets daily.

#### CURRENT ACCIDENT RELATED SYMPTOMS:

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Ms. Xxx reports pain around the lateral aspect of her right ankle. The pain is throbbing, which she describes as anywhere from a 1 to 2 out of 10 in intensity to a 7 out of 10 in intensity. She reports the feeling of electrical shocks. She has episodic giving way of her ankle. In addition to her ankle complaints, she reports difficulty sleeping and dizziness.

#### SOCIAL HISTORY:

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Ms. Xxx has a college education as a Developmental Service Worker. This was completed in Canada. She works in community living as a residential counsellor/DSW. She is currently working 40 hours per week, which in her line of work is considered modified, or part time hours, at full duties. She has been limited to 8 hours per shift due to pain, however, she states that since December her work is asking that she do 10 to 12 hours per shift. She used to work a total of 60 hours per week. She is not able to cope with the additional hours due to her symptoms.

#### PERSONAL AND VOCATIONAL HISTORY:

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Ms. Xxx lives in a house. She has a common law relationship with her husband. They have three children, aged 20, 18 and 16 years. Prior to the accident, she was quite active doing most

of the home maintenance activities. Her sons now do all of the snow shoveling and lawn maintenance. They help her out carrying the laundry and groceries. She is able to do the heavier aspects of housekeeping; however she uses pacing strategies when doing so.

#### PAST MEDICAL HISTORY:

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Ms. Xxx has a history of migraines. She has no history of previous WSIB claims or motor vehicle accidents. She takes Omeprazole, Zolmitriptane, Naprosyn 500 mg 1 to 3 tablets a day, Elavil 50 mg at night. She has no drug allergies.

#### PHYSICAL EXAMINATION:

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Ms. Xxx's examination began when she was greeted in the waiting area. She was able to walk into the examination room with an essentially normal gait. She was wearing high lace-up boots. Her shoes and socks were removed and her feet were examined. She had some subtle swelling around the peroneal tendons on the right side. She had Grade 4 out of 5 power on testing of the peroneal tendons on the right compared to 5 out of 5 power on the left. This recreated her pain. She had full range of motion of her ankle and subtalar joint. She did not have instability of the peroneal tendons on stress testing. Her testing of the posterior tibial tendon and tibialis anterior tendon were normal. She was able to toe and heel walk. She had numbness in the distribution of the sural nerve distribution on the right side of the lateral aspect of her foot. She had a positive Tinel's over the sural nerve proximally just 5 cm proximal to the tip of her fibula. This recreated some of her symptoms. Her pulses were present and cap refill was normal. Otherwise neurovascular examination was normal.

#### RADIOGRAPHIC INVESTIGATIONS:

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Standing AP and lateral x-rays were taken of both her feet and ankles in my office today, February 20, 2014. There is evidence of an old avulsion fracture at the level of the calcaneal cuboid joint of her right foot. There is a calcification present. This is very likely an avulsion fracture, either off the anterior tip of the calcaneus or off the tip of the fibula. This is not present on the contra-lateral left side. This finding can be indicative of a chronic peroneal tendon tear or avulsion type fracture.

#### CAUSATION:

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Ms. Xxx's avulsion fracture and sural nerve damage of her right foot are a direct result of the motor vehicle accident that occurred on August 3, 2010. Her current condition was caused by this accident and is the reason she continues to have ongoing impairment and disability.

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## ANSWERS TO QUESTIONS:

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I would now like to answer the questions posed in the letter of referral.

1. What is the nature of her impairment?

As a direct result of the motor vehicle accident that occurred on August 3, 2010, Ms. XX sustained an avulsion fracture around her right foot involving the peroneal tendons and has sural nerve damage. If not for the accident, these injuries would not have occurred.

2. The permanence of this impairment?

In my opinion, this injury is permanent and is unlikely to improve.

3. The specific function that is impaired?

Tearing of the peroneal tendons causes loss of power to walk on uneven ground. She reports pain with standing for prolonged periods of time or with exercise. She also has numbness and sural nerve damage. Given the pain that she has in her foot, she has lost the ability to do several activities she liked to do in the past such as hiking or physical activity. In my opinion, with the chronic damage that she has, this would aggravate her peroneal tendon tear and her nerve damage.

4. The importance of the specific function to the person?

As a direct result of this injury, Ms. Xxx's life has changed for the worse. She was extremely active prior to the accident. She used to go mountain biking with her husband and hiking. She has been unable to resume these activities. In my opinion this will be on a permanent basis and she has reached maximum medical recovery and will unlikely regain more function than she has at the present time.

5. In your opinion, has Ms. Xxx suffered a substantial inability to perform the essential tasks of her pre-accident employment?

Ms. Xxx, in my opinion, should work no longer than her current maximum of 40 hours per week. Further, if she works longer than this, this may cause aggravation of her peroneal tendon tear and her nerve pain of her foot, which may cause her further pain and suffering. In my opinion, while she can perform full duties, she should remain on modified hours on a permanent basis.

6. If your answer to the last question is yes, please advise whether in your opinion she will be able to return to her pre-accident employment.

Please refer to the previous question.

7. In your opinion, has Ms. Xxx sustained a loss of competitive advantage in the marketplace?

Yes. Ms. Xxx has explained to me that in her industry, most people work 12 hour shifts for an average of 60 hours per week. In my opinion, she is unable to work these hours due to her injuries and as a result she will only be allowed to work part-time hours on a permanent basis. As such, she has a loss of a competitive advantage in the marketplace.

8. In your medical opinion, does Ms. Xxx require periodic medical and rehabilitation treatment?

No, she has reached maximum medical recovery and further treatment is not necessary or reasonable at this time.

9. In your opinion, is Ms. Xxx unable to return to her pre-accident employment as a developmental service worker/residential counsellor? Is she a candidate for any of the following: a) vocational assessment; b) job retraining; c) transferrable skills analysis?

Ms. Xxx is working at her pre-accident employment, however on modified hours. I think it is reasonable for her to continue given that she has the ability to elevate her foot if she becomes symptomatic.

10. Given the injuries, impairments and limitations that have resulted from the car accident, in your medical opinion is Ms. Xxx, at the time of her examination, capable of resuming pre-accident housekeeping and home maintenance duties?

Yes, she is currently doing them, and as such she is able to complete these duties.

11. It is reasonable for our client to avoid the heavier and more repetitive chores of housekeeping and home maintenance duties?

Yes it is. She currently does them, but uses pacing strategies.

12. In your opinion, have the injuries sustained in the accident had a detrimental impact on Ms. Xxx's pre-accident lifestyle activities?

Yes, she no longer hikes or mountain bikes, or is active as compared to before. She used to drive her children to their athletic sports. As a direct result of her injuries sustained on August 3, 2010 she has had to stop these. This has had a detrimental effect on her family as well.

13. If so, please describe the effect of the physical or psychological injuries have had on her pre-accident lifestyle activities.

Please see the previous question.

14. Are there any pre-existing injuries which would have pre-disposed her to this impairment?

No, Ms. Xxx did not have any pre-existing injuries that would have led to this problem.

The opinions offered in this report are those of the evaluator. These opinions are based upon a careful review of documentation that has been made available, the history as obtained from the patient, and the results of the detailed physical examination. These opinions are independent of the referral source and based upon reasonable medical probability. The examiner reserves the right to modify his opinion should additional clinical information become available in the future. In that circumstance, please do not hesitate to contact me. I trust this information is useful to you.



*Client Name*

*Orthopedic assessment*

Yours truly,

Harsha Malempati, MD, MSc, FRCS(C)

Orthopaedic Surgeon

DRAFT



## Curriculum Vitae

### Rajiv Gandhi

#### 1. EDUCATION

##### Degrees

2007 Jul - 2008 Aug	MSc, Clinical Epidemiology, Harvard School of Public Health, Harvard University, Boston, Massachusetts, United States.
1998 - 2001	MD, McMaster University, Hamilton, Ontario, Canada.
1995 - 1998	BSc, McMaster University, Hamilton, Ontario, Canada.

##### Postgraduate, Research and Specialty Training

2006 - 2007	Fellowship, University of Toronto, Toronto, Ontario
2001 - 2006	Specialty Training, McMaster University, Hamilton, Ontario

#### 2. EMPLOYMENT

##### Current Appointments

2015 Sep – Present	Committee Member, Canadian Arthroplasty Society Research Committee.
2015 Sep – Present	Clinical Cross-appointment and Associate Graduate Faculty Membership in the Department of Laboratory Medicine and Pathobiology (L.M.P), University of Toronto.
2015 Aug – Present	Curriculum Committee, Arthroplasty Lead, Department of Post Graduate Education, University of Toronto.
2015 Jun – Present	Associate Professor, Orthopaedics, Department of Surgery, University of

	Toronto, Ontario, Canada.
2014 – Present	Committee Member, University of Toronto, Division of Orthopaedics Research Committee.
2011 Mar - Present	Committee Member, Division of Orthopaedics, Toronto Western Hospital Research, University Health Network, Toronto, Ontario, Canada.
2011 - Present	Committee Member, University Health Network Altum Health <i>Knowledge Translation Working group</i> .
2010 Jan 1 - Present	Head of Outcome, Measures and Reporting Team, University Health Network Altum Health, Toronto, Ontario, Canada.
2008 Aug – 2015 May	Assistant Professor, Orthopaedics, Department of Surgery, University of Toronto, Ontario, Canada.
2008 Jul - Present	Committee Member - Quality Control, Toronto Western Hospital, University Health Network, Toronto, Ontario, Canada.

### Previous Appointments

#### CLINICAL

2009 Jul - 2012 Jul	Co-Chairman Young Adult Hip Clinic, Orthopaedics, Mount Sinai Hospital, Toronto, Ontario, Canada.
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#### RESEARCH

2010 - 2012	Research Ethics Board Member, University Health Network, Toronto, Ontario, Canada.
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#### OTHER

2009 - 2012	Co-Chairman of the Arthritis Program Research Committee, Toronto Western Hospital, University Health Network, Toronto, Ontario, Canada. <i>Arthritis Program Research Committee</i>
2007 Aug - 2008 Aug	Lecturer, Orthopaedics, University of Toronto, Toronto, Ontario, Canada.

### 3. HONOURS AND CAREER AWARDS

#### Distinctions and Research Awards

##### INTERNATIONAL

2015	<b>ABC (American, British, Canadian) Travelling Fellowship</b> , Canadian Orthopaedic Association.
2013 Jul	<b>The Spine Journal &amp; NASS Outstanding Paper Award</b> . (Research Award)
2012	<b>2012 Abstract Award</b> , American Society of Regional Anaesthesia and Pain Medicine. (Best Abstract) <i>Single-shot or continuous femoral nerve blockade for total knee arthroplasty? A randomized, placebo-controlled, double blind trial.</i>
2009	<b>Special Emphasis Poster</b> , American Orthopedic Association. (Distinction)
1998	<b>Research Scholarship</b> , American Gastroenterology Association. (Research Award).

#### NATIONAL

- 2011 **2011 Research Award**, Canadian Association of Physical Medicine and Rehabilitation. (Research Award)  
*The Opinion of Orthopaedic Surgeons in Ontario on Hip Precautions Following Primary Total Hip Arthroplasty for Osteoarthritis.*
- 2009 **COA 2009- Top 20 Poster Award**, Canadian Orthopedic Association (COA). (Distinction).  
*Predicting Patient Dissatisfaction following Joint Replacement Surgery.*
- 2008 **Traineeship Grant**, Royal College of Physicians and Surgeons of Canada. (Distinction).
- 2007 **Junior Investigator Travel Grant**, Canadian Arthritis Network. (Distinction)
- 2007 **Traineeship Grant**, Royal College of Physicians and Surgeons of Canada. (Distinction).

#### LOCAL

- 2005 **Division of Orthopedics Research Prize, Best Clinical Paper**, McMaster University. (Research Award).
- 2004 **Division of Orthopedics Research Prize, Best Clinical Paper**, McMaster University. (Research Award).
- 1998 **Senate Scholarship for Academic Achievement**, McMaster University. (Distinction).
- 1995 **Andrew Foundation Scholarship**, McMaster University. (Distinction).

### 4. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

#### Administrative Activities

##### LOCAL

##### Toronto Western Hospital

- 2009 - Present **Active Member**, Arthritis Program Research Committee, Toronto, Ontario, Canada.
- 2007 Sep - Present **Member**, MHA Quality Committee, Toronto, Ontario, Canada.
- 2009 - 2012 **Co-Chair**, Division of Orthopedics Research Committee, Toronto, Ontario, Canada.
- 2007 **Committee Member**, ALC Project Implementation Team, Toronto, Ontario, Canada.

##### University Health Network

- 2010 - 2012 **Board Member**, Research Ethics Board, Toronto, Ontario, Canada.
- 2008 - 2011 **Executive**, Total Joint Network, Toronto, Ontario, Canada.

##### University of Toronto

- 2008 - 2010 **Co-Director**, University of Toronto Young Adult Hip Clinic, Faculty of Medicine, Toronto, Ontario, Canada.

## Research Funding

### 1. GRANTS, CONTRACTS AND CLINICAL TRIALS

#### PEER-REVIEWED GRANTS

##### FUNDED

2015 Jul – 2016 Jun	<b>Co-Investigator.</b> Sex Differences in the Association Between Inflammatory Biomarkers and Knee OA Pain. New Investigator Musculoskeletal Health Bridge Funding, Canadian Institutes of Health Research Operating Grant (CIHR). PI: Perruccio A, Co-Investigators: Badley Elizabeth, Chandran, Vinod, Gandhi Rajiv, Kapoor Mohit, Rampersaud Yoga. 100,000 CAD.
2015 Apr – 2016 Mar	<b>Co-Principal Investigator.</b> To determine the specific in vivo role of ULK1 in the pathophysiology of Osteoarthritis. Arthritis Program Start-up Grants. Co-PI: <b>Gandhi R</b> , Kapoor M. Collaborator(s): Haroon N L. 50,000 CAD
2014 Oct – 2017 Sep	<b>Collaborator.</b> Femoroacetabular Impingement Randomised Controlled Trial (FIRST). Canadian Institutes of Health Research Operating Grant (CIHR). PI: Olufemi Ayeni Co-PI: Mohit Bhandari. Collaborators: Asheesh Bedi, <b>Rajiv Gandhi</b> , Uffe Jorgensen, Antti Joukainen, Volker Musahl, Douglas Naudie, Matti Seppanen, Raine Sihvonen, Gerard Slobogean, Lehana Thabane, Daniel Whelan, Dale Williams, Ivan Wong. 471,740.84 CAD [Grants].
2014 Jun – 2015 May	<b>Co-Principal Investigator.</b> Sex specific associations between inflammatory mediators and pain in knee OA. A Pilot Investigation. Arthritis Program Start-up Grants. PI: <b>Gandhi R</b> , Perruccio AV. Collaborator(s): Chandran V, Venkatraghavan L. 25,000 CAD [Grants].
2013 Oct - 2016 Sep	<b>Collaborator.</b> Quantifying and Understanding a “Good” Outcome following Total Knee Replacement. The Arthritis Society. Strategic Operating Grant. PI: Davis, Aileen. Collaborator(s): Mahomed NN, Perruccio AV, Chesworth R, <b>Gandhi R</b> , Hogg-Johnson S, Waddell, RV. 329,832 CAD. [Grants]
2013 Feb - 2015 Jan	<b>Co-Principal Investigator.</b> Inflammation and Painful Joint Burden in Osteoarthritis, as a matter of Sex. The Arthritis Foundation and Autoimmunity Research Centre. PI: <b>Gandhi R</b> , Perruccio AV. Collaborator(s): Chandran V. 35,000 CAD. [Grants]
2012 Jul - 2013 Jun	<b>Collaborator.</b> Orthopaedic Surgical Adverse Events Severity (Ortho-SAVES) System: Identifying opportunities for improved patient safety and resource utilization. Canada’s Academic Health Sciences Centre’s (AHSC). AFP Innovation Fund. PI: Rampersaud YR. Collaborator(s): <b>Gandhi R</b> , Mahomed NN, Lewis S, Veillette C. 166,000 CAD. [Grants]
2012 Jan - 2014 Jan	<b>Co-Investigator.</b> Characterizing the 5-year natural history following total joint replacement for osteoarthritis-Assessing the links with later revision surgery and poorer patient-reported outcomes. Canadian Arthritis Network. PI: Perruccio, AV. Collaborator(s): <b>Gandhi R</b> , Davis A, Badley E, Mahomed N. 50,000 CAD. [Grants]
2012 - 2013	<b>Collaborator.</b> Knee Surgery Triage Tool. NRC Industrial Research

Assistance Program. 769823. PI: Cook, D. Collaborator(s): **Gandhi R**, Brean M, Mahomed N. 5,893 CAD. [Grants]

## NON-PEER-REVIEWED GRANTS

### FUNDED

- 2013 - 2015 **Principal Investigator**. Metabolic Syndrome: An inflammatory osteoarthritis phenotype. The Krembil Foundation. Collaborator(s): Gilbert P, Mahomed NN. 466,000 CAD. [Grants]
- 2009 - 2011 **Principal Investigator**. Evaluation of Rivaroxaban following Hip and Knee Arthroplasty: Phase IV evaluation. Bayer. Collaborator(s): Mahomed NN, Davey JR, Syed KA. 150,000 CAD. [Clinical Trials]
- 2008 - 2009 **Principal Investigator**. Predicting Value of Helical Computed Tomography in the Detection of Pulmonary Embolism Following Joint Replacement Surgery. Pfizer. Collaborator(s): Geerts W, Mahomed N, Salonen D. 25,000 CAD. [Grants]

## Publications

### 1. PEER-REVIEWED PUBLICATIONS

#### Journal Articles

1. Woodhouse L, **Gandhi R**, Warden SJ, Poiradeau S, Myers SL, Benson CT, Hu L, Ahmad QI, Linnemeier P, Gomez EV, Benichou O. A phase 2 randomized study investigating the efficacy and safety of myostatin antibody LY2495655 versus placebo in older patients undergoing elective total hip arthroplasty. Journal of Frailty and Aging, Oct 2015, In press. **Collaborator**.
2. **Gandhi R**, Weston A, Virtanen C, Takahashi M, Mahomed N, Perruccio, A Gene expression profiles of the subcutaneous fat and infrapatellar fatpads in individuals with early and endstage knee osteoarthritis: A cross-sectional analysis. Journal of Arthritis, Special Issue "Arthritis and Pain" 2015, In press. **Principal Author**.
3. **Gandhi R**, Zywiell M, Mahomed NN, Perruccio AV. Depression and the overall burden of painful joints: an examination among individuals undergoing hip and knee replacement for osteoarthritis. Arthritis. 2015; 2015: 327161. **Principal Author**.
4. Shulman R, Zyweil M, **Gandhi R**, Salonen D, Davey JR. Trunnionosis, The latest culprit in adverse reactions to metal debris following hip arthroplasty. Journal of Skeletal Radiology. 2015 Mar ;44(3):433-40. **Coauthor or Collaborator**.
5. **Gandhi R**, Kapoor M, Mahomed NN, Perruccio AV. A comparison of obesity related adipokine concentrations in knee and shoulder osteoarthritis patients. Obesity Research in clinical Practice. 2015 Sep; 9: 420-423. **Senior Responsible Author**.
6. Abdallah FW, Chan VWS, **Gandhi R**, Koshkin A, Abbas S, Brull R. Analgesic Effects of Proximal, Distal, or No Sciatic Nerve Block on Posterior Knee Pain after Total Knee Arthroplasty: A Double-blind Placebo-controlled Randomized Trial. Anesthesiology 2014 Dec; 121(6): 1302-10. **Coauthor or Collaborator**

7. Vasheghani F, Zhang Y, Li Y, Blati M, Fahmi F, Lussier B, Roughley P, Lagares D, Lajeunesse D, Marshall WK, Rampersaud R, Mahomed NN, **Gandhi R**, Pelletier JP, Martel-Pelletier J, Kapoor M. PPAR $\gamma$  deficiency results in severe, accelerated osteoarthritis associated with aberrant mTOR signaling in the articular cartilage. *Annals of The Rheumatic Diseases*. 2015; 74(3): 569-78.  
**Coauthor or Collaborator.**
  
8. Modi CS, Veillette CJH, Perruccio AV, **Gandhi R**, Rampersaud YR. Modi CS, Veillette CJH, Perruccio AV, **Gandhi R**, Rampersaud YR. Factors that Impact the Choice to Undergo Surgery (FICUS) for shoulder and elbow conditions. *Clin Orthop Relat Res*. 2014 Mar; 472 (3):883-91.  
**Coauthor or Collaborator.**
  
9. Zywiell M, Perruccio AV, Prabhu A, **Gandhi R**. The influence of anaesthesia and pain management strategies on cognitive dysfunction after elective joint arthroplasty. *Clin Orthop Relat Res*. 2014 May; 472(5):1453-66. **Senior Responsible Author.**
  
10. Khan M, Ranawat A, Williams D, **Gandhi R**, ChoudorH, Parasu Nm Simunovic N, Ayeni OR. Relationship between the Alpha and Beta Angle in diagnosing CAM Type Femoroacetabular Impingement on the Frog Leg Lateral Radiographs. *Knee Surgery and Aports Traumatology and Arthroscopy*. July 2014 In Press. **Coauthor or Collaborator.**
  
11. Byck, BA, Zywiell M, Mahomed A, **Gandhi R**, Perruccio AV, Mahomed NN. Clinical Factors and Patient Expectations in Orthopaedic Surgery. *Expert Rev Med Devices*. 2014 Jul; 11(4):403-15.  
**Coauthor or Collaborator.**
  
12. Cretu D, Prassas I, Saraon P, Batruch I, **Gandhi R**, Diamandis EP, Chandran V. Identification of Psoriatic Arthritis Mediators in Synovial Fluid By Quantitative Mass Spectrometry. *Clinic Proteomics* 2014 Jul 1; 11(1): 27. **Coauthor or Collaborator.**
  
13. Vasheghani F, Zhang Y, Li Y, Blati M, Fahmi F, Lussier B, Roughley P, Lagares D, Lajeunesse D, Marshall WK, Rampersaud R, Mahomed NN, **Gandhi R**, Pelletier JP, Martel-Pelletier J and Kapoor M. Cartilage- Specific Ppary-Deficient Mice Exhibit Accelerated Osteoarthritis associated with defective mTOR and autophagy signaling. *Annals of The Rheumatic Diseases* Accepted Oct 2014.  
**Coauthor or Collaborator.**
  
14. Lau R, Perruccio A, Evans HMK, Mahomed NN, Mahomed S, **Gandhi R**. Stem cell therapy for the treatment of early stage avascular necrosis of the femoral head: A systematic Review. *BMC Musculoskeletal*. 2014 May; 15: 156. **Senior Responsible Author.**
  
15. Cretu D, Prassas I, Saraon P, Batruch I, **Gandhi R**, Diamandis EP, Chandran V. Identification of Psoriatic Arthritis Mediators in Synovial Fluid By Quantitative Mass Spectrometry. *Clinical Proteomics*. Accepted May 2014. **Coauthor or Collaborator.**
  
16. Ayeni OR, Chan K, Whelan DB, **Gandhi R**, Williams D, Harish S, Choudur H, Chiavara MM, Karlsson J, Bhandari M. Diagnosing Femoroacetabular Impingement form Plain Radiographs: Do Radiologists and Orthopaedics Surgeons Differ? *The Orthopaedic Journal of Sports Medicine*. 2014 July; 2(7).  
**Coauthor or Collaborator.**
  
17. Li R, Nauth A, **Gandhi R**, Syed K, Schemitsch EH. BMP-@ mRNA expression after endothelial progenitor cell therapy for fracture healing. *Journal of Orthopaedic Trauma*. 2014 Apr; Supplemental Volume 1:s24-7. **Coauthor or Collaborator.**

18. **Gandhi R**, Perruccio AV, Mahomed NN. Surgical Management of Hip Osteoarthritis. Canadian Medical Association Journal; 186(5): 347-55. 2014 Mar. **Senior Responsible Author**.
19. Perruccio AV, Mahomed NN, Chandran V, **Gandhi R**. Multiple Symptomatic Joint Involvement and Plasma Levels of Adipokines in Hip and Knee Osteoarthritis. Journal of Rheumatology 2014 Feb; 41(2): 334-337. **Senior Responsible Author**.
20. Leroux T, Ogilvie-Harris D, Dwyer T, Chahal J, **Gandhi R**, Mahomed NN, Wasserstein D. The risk of knee arthroplasty following cruciate ligament reconstruction: A population-based matched cohort study. The Journal of Bone & Joint Surgery 2014 Jan; 96(1): 2-10. **Coauthor or Collaborator**.
21. **Gandhi R**, Woo K, Zywiell M, Rampersaud R. Metabolic Syndrome Increases the risk of prevalent spine osteoarthritis. Orthopaedic Surgery 2014; 6: 23-27. **Principal Author**.
22. Rampersaud YR, Lewis SJ, Davey JR, **Gandhi R**, Mahomed NN. Comparative Outcomes and the Cost-Utility following Surgical Treatment of Focal Lumbar Spinal Stenosis Compared with Osteoarthritis of the Hip or Knee: Part 1. Long-term Change in Health-Related Quality of Life. Spine Journal; 2014; 14(2): 234-43. **Coauthor or Collaborator**.
23. Zywiell M, Perruccio A, **Gandhi R**, Mahomed NN. Measuring expectations in Orthopaedic Surgery: A systematic review. Clinical Orthopaedic Related Research 2013; 471(11): 3446-56. **Coauthor or Collaborator**.
24. **Gandhi R**, Santone D, Takahashi M, Dessouki O, Mahomed NN. Inflammatory Predictors of Ongoing Pain Two Years Following Knee Replacement Surgery. The Knee 2013 Sep; 20: 316-318. **Principal Author**.
25. Khoshbin A, Leroux T, Wasserstein D, Marks P, Theodoropoulos J, Ogilvie-Harris D, **Gandhi R**, Kirat T, Lum G, Chahal J. The efficacy of platelet-rich plasma in the treatment of symptomatic knee osteoarthritis: A symptomatic review with quantitative synthesis. Arthroscopy: The Journal of Arthroscopic and Related Surgery 2013 Sep; 29 (12): 2037-48. **Coauthor or Collaborator**.
26. Wasserstein D, Farlinger C, Brull R, Briggs N, Muir O, Mahomed N, **Gandhi R**. Advanced age, obesity and continuous catheter femoral nerve blockade are independent risk factors for post-operative falls, following primary total knee replacement. Journal of Arthroplasty 2013 Sep; 28(7): 1121-4. **Senior Responsible Author**.
27. **Gandhi R**, Perruccio AV, Rizek R, Dessouki O, Evans HMK, Mahomed NN. Obesity related Adipokines predict patient reported shoulder pain. Obesity Facts 2013 Jul; 6: 536-541. **Principal Author**.
28. Albrecht E, Morfey D, Chan V, **Gandhi R**, Koshkin A, Chin KJ, Robinson S, Frascaolo P, Brull R. "Single-shot or continuous infusion femoral nerve blockade for total knee arthroplasty? A randomized, placebo-controlled, double blind trial." Perioperative pain management in orthopaedic surgery (Dr. Stavros Memtsoudis- Guest Editor). Clinical Orthopaedics and Related Research. 2013 Jun. In Press. **Coauthor or Collaborator**.
29. Perlas A, Kirkham K, Billing R, Tse C, **Gandhi R**, Chan V. The impact of analgesic modality on early ambulation following total knee arthroplasty. Regional Anaesthesia and Pain Medicine 2013; 38(4): 334-349. **Coauthor or Collaborator**.
30. Rampersaud R, Lewis SJ, **Gandhi R**, Davey JR, Mahomed NN. Long-term (Minimum 5-year) assessment of health related quality of life after surgical treatment of focal symptomatic spinal stenosis compared with osteoarthritis of the hip or knee. Spine. 2013 May. In Press. **Coauthor or Collaborator**.



31. **Gandhi R**, Evans HMK, Mahomed S, Mahomed NN. Does Tranexamic Acid Reduce Blood Loss In Total Knee and Hip Arthroplasty? A Meta-Analysis. BMC Res Notes 2013 May; 6:184. **Principal Author**.
32. Hamer H, **Gandhi R**, Wong S, Mahomed N. Predicting, return-to-work following interdisciplinary treatment of chronic pain disorder. Occupational Medicine London 2013; 63(4): 253-9. **Co-Principal Author**.
33. Wasserstein D, Dwyer T, **Gandhi R**, Austin P, Mahomed N, Ogilvie-Harris D. A matched cohort population study of re-operation after meniscal repair with and without concomitant anterior cruciate ligament reconstruction. American Journal of Sports Medicine 2013; 41(2): 349-55. **Coauthor or Collaborator**.
34. Hansen H, Taylor-Gjevre R, Obaid H, **Gandhi R**, King A. "Femoroacetabular impingement: A consideration in younger adults with hip pain". Canadian Medical Association Journal 2013 Nov; 185(16):1419-24. **Coauthor or Collaborator**.
35. Wasserstein D, Dwyer T, **Gandhi R**, Veillette C, Mahomed NN, Ogilvie-Harris D. Predictors of redislocation and revision after shoulder instability surgery in Ontario 2003-2008. American Journal of Sports Medicine 2013; 41(9): 2034-40. **Coauthor or Collaborator**.
36. Wasserstein D, Khoshbin A, Dwyer T, Chahal J, **Gandhi R**, Mahomed NN, Ogilvie Harris D. Risk factors for Recurrent Anterior ligament Reconstruction: A population Study in Ontario, Canada with 5-Year Follow-up. American Journal of Sports Medicine 2013; 41(9): 2099-107. **Coauthor or Collaborator**.
37. Connor AM, Mahomed N, **Gandhi R**, Keystone EC, Berger SA. Tumor Necrosis Factor-Alpha modulates protein degradation pathways in RA synovial fibroblasts. Arthritis Research & Therapy 2013; 14(2): **Coauthor or Collaborator**.
38. **Gandhi R**, Perruccio A, Rampersaud YR. Influence of patient perceptions on willingness to undergo elective musculoskeletal surgery. Patient preference and adherence 2013; 7:191-197. **Principal Author**.
39. Perruccio A, **Gandhi R**, Rampersaud YR. Heterogeneity in health status and the influence of patient characteristics across patients seeking musculoskeletal care - A cross-sectional study journal. BMC Musculoskeletal Disorders 2013; 14:83. **Co-Principal Author**.
40. **Gandhi R**, Perruccio AV, Rampersaud YR. Predictors of willingness to undergo elective musculoskeletal surgery. Patient Preference and adherence 2013; 7:191-197. **Principal Author**.
41. Ayeni OR, Peterson D, Chan K, Javidan A, **Gandhi R**. Suture vs. Arrow Repair for Meniscus Tears of the knee: A systematic Review. Journal of Knee Surgery 2012; 25(5): 397-402. **Senior Responsible Author**.
42. **Gandhi R**, Takahashi M, Rizek R, Dessouki O, Mahomed N. Obesity related Adipokines and Shoulder Arthritis. Journal of Rheumatology 2012; 39(10): 2046-8. **Principal Author**.
43. Kowalczyk M, Bhandari M, Farrokyar F, Wong I, Chahal M, Neely S, **Gandhi R**, Ayeni OR. Complications following hip arthroscopy: A systematic review and meta-analysis. Knee Surgery, Sports Traumatology, Arthroscopy, Official Journal of the ESSKA 2013; 21(7): 1669-75. **Co-Principal Author**.
44. Smith HN, Bhandari M, Mahomed NN, Jan M, **Gandhi R**. Comparison of Arthroplasty Trial Publication after Registration in ClinicalTrials.gov. Journal of Arthroplasty 2012; 27(7): 1283-1288. **Senior Responsible Author**.
45. Lau R, **Gandhi R**, Mahomed NN. Patient satisfaction after total knee and hip arthroplasty. Clinical Geriatric Medicine 2012; 28(3) 349-65. **Co-Principal Author**.

46. Lau R, **Gandhi, R**, Mahomed S, Mahomed NN. Patient Satisfaction Following Total Knee and Hip Arthroplasty - Review. Clinics in Geriatric Medicine 2012; 28(3): 349-65. **Co-Principal Author**.
47. Lau RL, Perruccio AV, **Gandhi R**, Mahomed NN. The role of surgeon volume on patient outcome in total knee arthroplasty: A systematic review of the literature. BMC Musculoskeletal Disorders 2012; 13:250. **Coauthor or Collaborator**.
48. Chahal J, Tomescu S, Ravi B, Bach BR, Ogilvie-Harris DJ, Mahomed NN, **Gandhi R**. Publication of sports medicine randomized controlled trials registered in ClinicalTrials.gov. American Journal of Sports Medicine 2012; 40(9): 1970-7. **Senior Responsible Author**.
49. **Gandhi R**, Salonen D, Geerts W, Khanna M, McSweeney S, Mahomed NN. A pilot study of CT detected asymptomatic pulmonary filling defects following hip and knee arthroplasty. Journal of Arthroplasty 2012; 27(5): 730 - 735. **Principal Author**.
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## Abstracts

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## 2. NON-PEER-REVIEWED PUBLICATIONS

### Journal Articles

1. Prasad Antapur, **Rajiv Gandhi**, Nizar Mahomed. Topical and Intra-articular Tranexamic Acid in Total Knee Arthroplasty. *Bone and Joint Education*. 2012. **Coauthor or Collaborator**.

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3. Wasserstein D, Rizek R, **Gandhi R**. Femoral Nerve Block causes quadriceps dysfunction: PRO. American Society of Regional Anesthesia and pain management. 2010; (2): 8-11. **Senior Responsible Author**.
4. Antapur P, **Gandhi R**, Mahomed NN. All Hip Replacement Patients Should receive metal-on-polyethylene Bearings: The Case for MOP. COA Bulletin. 2010; 89: 23-24. **Coauthor or Collaborator**.
5. **Gandhi R**, Diwanji S, Mahomed NN. Pain, functional outcomes, and patient satisfaction. Home based rehabilitation versus inpatient rehabilitation after primary unilateral total hip and knee replacement. US Musculoskeletal Review. 2010; 5: 7-10. **Principal Author**.
6. Syed K, **Gandhi R**, Davey JR, Mahomed NN. Risk of Wound Infection Is Greater After Skin Closure with Staples than with sutures in orthopaedic surgery. Journal of Bone and Joint Surgery (American). 2010; 92: 2732. **Co-Principal Author**.
7. **Rajiv Gandhi**, Nizar Mahomed. Knee Bracing: Uni-compartmental Knee Arthritis. COA Bulletin. 2008; 81: 28-29. **Principal Author**.
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### Book Chapters

1. Kapoor M. & Mahomed NN (Eds.). Osteoarthritis Biomarkers. Li YH, Kim C, Gandhi R. Chapter 9. In: Osteoarthritis. 2015. Pages TBD. **Senior Responsible Author**. (In Press).
2. Bhandari. M. & Robioneck, B.(Eds.). Advanced Concepts in surgical research. Meta-Analysis reporting checklists. Smith H, Mahomed NN, Gandhi R, Chapter 30. In: Evidence Based Orthopaedics. 2011. 202-208. **Senior Responsible Author**.
3. Saleh K , Lee, **Gandhi R**, Ingersoll, Mahomed NN, Sheibani-Rad, Novicoff W, Mihalko WM. Quadriceps Strength in Relation to Total Knee Arthroplasty Outcomes. In: Instructional Course Lecture. (Mary O'Connor: Ed.) American Academy of Orthopedic Surgeons, Rosemont, IL, 2010; 119-130. **Coauthor or Collaborator**.
4. Davey JR, **Gandhi R**. What is the role of Antibiotic Cement in Total Joint Replacement? In: Evidence Based Orthopaedics. (Jim Wright: ed.) Elsevier, Toronto, 2008; 556-570. **Co-Principal Author**.
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### Editorials

1. **Gandhi R**. The relationship of osteoarthritis, obesity, and the metabolic Syndrome. Healthy Weight: The magazine of the Canadian Association of bariatric physicians and surgeons. May 2014, page 4. **Principal Author**.
2. **Gandhi R**, Perruccio AV. Obesity, Osteoarthritis, and Gender. Healthy Weight: The magazine of the Canadian Association of bariatric physicians and surgeons Sept 2014, page 3. **Principal Author**.
3. **Gandhi R**, Liu SS, Brull R. What Matters, Most. Regional Anaesthesia Pain, Med 2013; 38(4) Pages 257-258.

### Presentations and Special Lectures

## **INTERNATIONAL INVITED LECTURES**

2015 Sep	Osteoarthritis Phenotypes and Treatment Response: Role of Big Data. The University of Chicago Medicine and Biological Sciences, Department of Orthopaedic Surgery And Rehabilitation Medicine, Chicago, Wisconsin, United States.
2015 May	Minimizing blood loss in joint replacement surgery: The tranexamic acid story. Combined meeting of the Auckland City, Middlemore, North Shore, and Starship Hospitals. Auckland, New Zealand.
2015 May	Pioneering Therapy of Autologous Mesenchymal Stem Cells in Osteoarthritis, University of Christchurch, Otago, Christchurch, New Zealand.
2015 May	Pioneering Therapy of Autologous Mesenchymal Stem Cells in Osteoarthritis, Children's Hospital at Westmead, Sydney, Australia.
2015 May	Pioneering Therapy of Autologous Mesenchymal Stem Cells in Osteoarthritis. The Australian College of Surgeons, Melbourne, Australia.
2015 May	Pioneering Therapy of Autologous Mesenchymal Stem Cells in Osteoarthritis, Fiona Stanley Hospital, Perth, Australia.
2015 May	Osteoarthritis takes its place in the Metabolic Syndrome, University of Glasgow, Scotland, U.K.
2015 May	Minimizing blood loss in joint replacement surgery: The tranexamic acid story. Combined Services Orthopaedic Society Meeting, Fenham Barracks, Newcastle Upon Tyne, U.K.

- 2015 May Patient Specific Surgery – Biological Considerations in Surgical Outcomes Research Hexham General Hospital, Northumbria NHS trust, Hexham, U.K.
- 2015 May Patient Specific Surgery – Biological Considerations in Surgical Outcomes Research, University of Edinburgh, Scotland, U.K.
- 2015 April Patient Specific Surgery – Biological Considerations in Surgical Outcomes Research. 25<sup>th</sup> Annual Seddon Society Meeting. Royal National Orthopedic Hospital, Stanmore, Middlessex. U.K.
- 2015 April Osteoarthritis takes its place in the Metabolic Syndrome, Royal London and St Bartholomew's Hospital, London, U.K.
- 2015 April Pioneering Therapy of Autologous Mesenchymal Stem Cells in Osteoarthritis, Norfolk and Norwich University Hospital, Norwich, U.K.
- 2015 April Patient Specific Surgery – Biological Considerations in Surgical Outcomes Research. Combined meeting of University of Leicester and University of Nottingham. National Center for Sports and Exercise Medicine of University of Loughborough. Leicester, U.K.
- 2015 April Patient Specific Surgery – Biological Considerations in Surgical Outcomes Research. Institute of Sport, Exercise and Health, University College London, London, United Kingdom

### Abstracts and Other Papers

- 2015 Jun Systemic inflammation and painful joint burden in osteoarthritis: a matter of sex. OARSI World Congress on Osteoarthritis. Seattle, WA, United States. Perruccio AV, Chandran V, Kapoor M, Power JD, **Gandhi R** . Peer-Reviewed (Poster).
- 2015 May A retrospective, sequential cohort study of peri-neural steroids for chronic post-traumatic neuropathic pain in the foot. . International Congress on Neuropathic Pain. Bhatia A, Lau JL, Alvi S, Mahomed NN, Peng P, **Gandhi R**, Davis A Nice, France. Peer-reviewed (poster).
- 2015 Mar Topical Tranexamic Acid In TKA Lowers Transfusion Rates And Hospital Costs Without Raising Thromboembolic Events. 2015 American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, Nevada, USA. Zywiell MG, Jan Z, Perruccio AV, Rampersaud YR, Davey JR, Evans L, Prabhu A, **Gandhi R**. Peer-reviewed (Poster).
- 2015 Mar Decreased Transfusion Rates And Hospital Resource Utilization With Routine Topical Tranexamic Acid Use In THA. American Academy of Orthopaedic Surgeons. Las Vegas, Nevada, United States. Zywiell MG, Jan Z, Perruccio AV, Rampersaud YR, Davey JR, Evans L, Prabhu A, **Gandhi R**. Peer-Reviewed (Podium)
- 2015 Mar Topical Tranexamic Acid In TKA Lowers Transfusion Rates And Hospital Costs Without Raising Thromboembolic Events. American Academy of Orthopaedic Surgeons. Las Vegas, Nevada, United States. Zywiell MG, Jan Z, Perruccio AV, Rampersaud YR, Davey JR, Evans L, Prabhu A, **Gandhi R**. Peer-Reviewed (Podium).
- 2015 Mar Adults With Down Syndrome Have Unique Hip Morphology Compared To Matched Controls And Published Normal Values. American Academy of Orthopaedic Surgeons. Las Vegas, Nevada, United States. Zywiell MG, Shulman R, Zochowski T, **Gandhi R**, Salonen D, Gross AE. Peer-Reviewed (Poster).
- 2014 Nov Trunnionosis: the latest culprit in adverse reactions to metal debris following hip arthroplasty. American Association of hip and knee surgeons (AAHKS) Dallas, TX.



- Shulman R, Zywiell M, **Gandhi R**, Davey JR, Salonen D. Peer-reviewed (Poster).
- 2014 Nov Routine topical tranexamic acid use in knee Arthroplasty reduces transfusion rates and hospital costs without increased risk of venous thromboembolic events. American Association of hip and knee surgeons. American Association of hip and knee surgeons (AAHKS) Dallas, TX. Zywiell MG, Jan Z, Perruccio AV, Rampersaud YR, Davey JR, Evans L, Prabhu A, Gandhi R. Peer-reviewed (Poster).
- 2014 Oct Relationship between the Alpha and Beta Angle in diagnosing CAM type Femoroacetabular Impingement on the Frog Legs lateral radiographs. ISHA Annual Meeting. Rio de Janeiro, Brazil. Khan M, Ranawat A, Williams D, **Gandhi R**, Choudor H, Parasu N, Simunovic N, Ayeni OR. Peer-reviewed (Poster).
- 2014 May Diagnosing Femoroacetabular Impingement from plain radiographs: Do Radiologists and Orthopaedic Surgeons Differ? Arthroscopic Association of North America Annual Meeting. Hollywood, Florida, U.S. Ayeni, OR, Chan K, Whelan D, **Gandhi R**, Williams D, Harish S, Choudor H, Chiavarras M, Karlsson J, Bhandari M,. Peer-reviewed (Poster)
- 2014 Apr The negative influence of multiple symptomatic joint involvement on patient-reported outcomes following TJR for OA can last up to 5 years. OARSI World Congress on Osteoarthritis. Paris, France. Perruccio AV, **Gandhi R**, Badley EM, Mahomed NN, Power JD, Davis AM. Peer-reviewed (Poster).
- 2014 Apr Depression and overall burden of symptomatic joints: an examination among individuals undergoing hip and knee replacement for osteoarthritis. OARSI World Congress on Osteoarthritis. Paris, France. **Gandhi R**, Bugg AC, Zywiell MG, Mahomed NN, Perruccio AV. Peer-reviewed (Poster).
- 2014 Apr Self-rated health as a long-term predictor of disability in social activities following TJR surgery for osteoarthritis. OARSI World Congress on Osteoarthritis. Paris, France. Perruccio AV, Badley EM, **Gandhi R**, Mahomed NN, Power JD, Davis AM. Peer-reviewed (Poster).
- 2014 Apr The impact of gastric bypass surgery compared to TKA for OA on knee symptoms. OARSI World Congress on Osteoarthritis. Paris, France. Zywiell MG, Okrainec A, Penner T, Kassam H, Perruccio AV, Jackson T, Urbach D, **Gandhi R**. Peer-reviewed (Poster).
- 2014 Apr End-stage knee osteoarthritis is independently associated with a higher prevalence of medical comorbidities marked by systemic inflammation when compared to end-stage hip osteoarthritis. OARSI World Congress on Osteoarthritis. Paris, France. Zywiell MG, Perruccio AV, Jackson T, **Gandhi R**. Peer-reviewed (Poster).
- 2014 Apr Comorbidities associated with end-stage knee osteoarthritis explain differences in the probability of major complications within 30 days of joint arthroplasty when compared to patients with hip osteoarthritis. OARSI World Congress on Osteoarthritis. Paris, France. Zywiell MG, Perruccio AV, Jackson T, **Gandhi R**. Peer-reviewed (Poster).
- 2014 Apr Multiple symptomatic joints are associated with increased health resource utilization among patients undergoing total knee arthroplasty for osteoarthritis. OARSI World Congress on Osteoarthritis. Paris, France. Zywiell MG, Chaudhary R, Rampersaud YR, **Gandhi R**, Mahomed NN, Perruccio AV. Peer-reviewed (Poster).
- 2014 Apr Multiple symptomatic joints are associated with increased in-hospital resource utilization among patients undergoing total hip arthroplasty for osteoarthritis. OARSI World Congress on Osteoarthritis. Paris, France. Zywiell MG, Djelic LD, Chaudhary R, Rampersaud YR, **Gandhi R**, Mahomed NN, Perruccio AV. Peer-reviewed (Podium).
- 2014 Mar The Risk of knee Arthroplasty following Cruciate Ligament Reconstruction: A Population-

- based matched cohort study. American Academy of Orthopaedic Surgeons. New Orleans, Louisiana, United States. Leroux T, Ogilvie-Harris D, Dwyer T, Chahal J, **Gandhi R**, Mahomed NN, Wasserstein D. Peer-reviewed (Podium).
- 2013 Oct Multiple Symptomatic Joint Involvement and Plasma levels of Adipokines in Hip and Knee Osteoarthritis. The Hip Society. Charleston, South Carolina, United States. Perruccio AP, Mahomed NN, Chandran V, **Gandhi R**. Peer-reviewed (Podium).
- 2013 Oct Proteomic Profiling of synovial fluid for the identification of psoriatic arthritis soluble biomarkers. ACR/ARHP Annual Meeting. San Diego, California, United States. Cretu D, Pellett F, **Gandhi R**, Diamandis E, Chandran V. Cretu D, Pellett F, **Gandhi R**, Diamandis E, Chandran V. Peer-reviewed (Poster).
- 2013 Oct Multiple Symptomatic Joint Involvement and Plasma Levels of Adipokines in Hip and Knee Osteoarthritis. ACR/ARHP Annual Meeting. San Diego, California, United States. Perruccio AV, Mahomed NN, Chandran V, **Gandhi R**. Peer-reviewed (Poster).
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- 2013 Oct Multiple Symptomatic Joint Involvement and plasma levels of Adipokines in Hip and Knee Osteoarthritis. ACR/ARHP Annual Meeting. San Diego, California, United States. Perruccio AP, Mahomed NN, Chandran V, **Gandhi R** Peer-reviewed (Podium).
- 2013 Oct Comorbid Lung Disease in Osteoarthritis. Annual Meeting of the American College of Epidemiology. Louisville, Kentucky, United States. Perruccio AV, Mahomed NN, Veillette C, **Gandhi R**. Peer-reviewed (Poster).
- 2013 Sep Comorbid lung disease in osteoarthritis. American College of Epidemiology. Louisville, Kentucky, United States. Perruccio AV, Mahomed NN, Veillette C, **Gandhi R**. Peer-Reviewed (Poster).
- 2013 Apr Complications Following Hip Arthroscopy: A Systemic Review and Meta-analysis. Arthroscopy Association of North America. (AANA). San Antonio, Texas, USA. Kowalczyk M, Bhandari M, Farrokhyar F, Wong I, Chahal M, Neely S, **Gandhi R**, Ayeni OR. Peer-reviewed (Poster).
- 2013 Risk factors for recurrent Anterior Cruciate Ligament Reconstruction: A population study in Ontario, Canada with 5-year follow-up. American Orthopaedic Society for Sports Medicine, Annual Meeting. Chicago, Illinois, United States. Wasserstein D, Khoshbin A, Dwyer T, Chahal J, **Gandhi R**, Mahomed N, Ogilvie-Harris D. Peer-reviewed (Poster).
- 2013 Shoulder dislocation in Ontario, Canada from 1994 to 2011: The incidence, rate and risk factors for recurrence. American Orthopaedic Society for Sports Medicine. Annual Meeting. Chicago, Illinois, United States. Leroux, Tim, Wasserstein D, **Gandhi R**, Veillette C, Mahomed N, Ogilvie-Harris D. Peer-reviewed (Podium).
- 2013 Factors Associated with Return-to-Work Following Work-related Upper Extremity Injuries. American Occupational Health Conference, Orlando, Florida, United States. Peer-reviewed (Poster).
- 2012 Jul Predictors of Redislocation and revision after shoulder instability surgery in Ontario 2003 -

2010. American Orthopedic Society for Sports Medicine, Baltimore, Maryland, United States. Wasserstein D, Dwyer, T, **Gandhi R**, Veillette C, Mahomed NN, Ogilvie-Harris D. Peer-reviewed (Poster).
- 2012 Mar Determinants of the likelihood of returning to work in a chronic pain population. International Conference on Health, Wellness and Society. Chicago, Illinois, United States. Hamer H, **Gandhi R**, Wong S, Yak A, Mahomed, N. Peer-reviewed (Podium).
- 2012 Feb Role of Surgeon Experience on Outcomes of Total Knee Replacement. Knee Society Open Meeting. San Francisco, California, United States. Mahomed NN, Lau R, **Gandhi R**. Peer-reviewed (Podium).
- 2012 Determinants of the likelihood of returning to work in a chronic pain population. American Occupational Health Conference. Los Angeles, California, United States. Hamer H, **Gandhi R**, Wong S, Yak A, Mahomed, N. Peer-reviewed (Podium).
- 2011 Jul Predictors of Complications and Re-operation after Knee Cruciate Ligament Reconstruction in Ontario 1992-2008. American Orthopaedic Society for Sports Medicine. San Diego, California, United States. Wasserstein D, **Gandhi R**, Mahomed NN, Ogilvie-Harris D. Peer-reviewed (Podium).
- 2011 Jul The Influence of Patient, Provider and Surgical Factors on Revision Anterior Cruciate Ligament Reconstruction (ACLR) in Ontario. American Orthopaedic Society for Sports Medicine. San Diego, California, United States. Dwyer T, Wasserstein D, **Gandhi R**, Mahomed N, Ogilvie-Harris D. Peer-reviewed Paper (Podium).
- 2011 Jun Feasibility and reliability of the International Physical activity questionnaires (IPAQ) and the Yale Physical Activity Survey (YPAS) in people with total knee replacement for osteoarthritis. (Physical Therapy). World Confederation for Physical Therapy (WPT). Amsterdam, Netherlands. Yeung S, **Gandhi R**, Mahomed NN, Davis A. Peer-reviewed (Podium).
- 2011 Mar Metabolic relationship between Obesity and OA. Segal North American Osteoarthritis Workshop. Chicago, Illinois, United States. Peer-reviewed (Podium).
- 2011 Feb The Synovial Fluid adiponectin-leptin ratio predicts pain with knee osteoarthritis. American Academy of Orthopedic Surgeons. San Diego, California, United States. **Gandhi R**, Takahashi M, Smith H, Rizek R, Mahomed NN. Peer-reviewed (Podium).
- 2011 Feb Microarray analysis of the Infrapatellar fat pad in Knee OA: Implications for the relationship to Joint Inflammation. (Knee Reconstruction). American Academy of Orthopaedic Surgeons. San Diego, California, United States. **Gandhi R**, Takahashi M, Virtanen C, Syed KA, Davey JR, Mahomed NN. Peer-reviewed (Poster).
- 2011 Feb A Prospective Study of Asymptomatic Pulmonary Embolism after Hip and Knee Arthroplasty. American Academy of Orthopaedic Surgeons. San Diego, California, United States. **Gandhi R**, Salonen D, Geerts WH, Khanna M, McSweeney S, Syed K, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2011 Feb The Synovial Fluid adiponectin-leptin ratio predicts pain with knee osteoarthritis. American Academy of Orthopaedic Surgeons. San Diego, California, United States. **Gandhi R**, Takahashi M, Smith H, Rizek R, Mahomed NN. Peer-reviewed (Podium).
- 2010 Mar Predicting Patient dissatisfaction following joint replacement surgery. American Academy of Orthopedic Surgeons. New Orleans, Louisiana, United States. **Gandhi R**, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2009 Oct Intra-articular Application of Tranexamic Acid for Perioperative Blood Loss in Total Knee Arthroplasty: A Randomized-Controlled Trial. The Knee Society- Member Meeting.

- Boston, Massachusetts, United States. Chan J, Mahomed NN, Davey JR, Syed KA, **Gandhi R**, Cheung F. Peer-reviewed (Podium).
- 2009 Jun The relationship between body habitus and leptin in a knee osteoarthritis population. American Orthopaedic Association (AOA). Bonita Springs, Florida, United States. **Gandhi R**, Takahashi M, Syed K, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2009 Feb Metabolic Syndrome and the Incidence of Symptomatic DVT following primary total knee arthroplasty. American Academy of Orthopaedic Surgeons. Las Vegas, Nevada, United States. **Gandhi R**, Razak F, Tso P, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2007 Dec Computer Navigation in Total Hip Replacement: A Meta-Analysis. OARSI World Congress on Osteoarthritis. Ft. Lauderdale, Florida, United States. **Gandhi R**, Marchie A, Farrokhhyar F, Mahomed NN. Peer-reviewed (Podium).
- 2007 Sep Antibiotic Bone Cement and the Incidence of Deep Infection following Total Knee Arthroplasty. Segal North American Osteoarthritis Workshop. Chicago, Illinois, United States. **Gandhi R**, Pathy R, Mahomed NN. Peer-reviewed (Podium).

## 2. NATIONAL

### Abstracts and Other Papers

- 2015 Nov Inflammatory Predictors of ongoing pain two years following knee replacement surgery. Canadian Arthroplasty Society (CAS). **Gandhi R**, Santone D, Takahashi M, Dessouki O, Mahomed N. Ottawa, Ontario, Canada. Peer-reviewed (Podium).
- 2015 Jun Adipokine Profile of Synovial Fluid in End-Stage Knee Osteoarthritis – An investigation across racial groups. 2015, 3<sup>rd</sup> World Congress on Controversies, debates and Consensus in Bone, Muscle & Joint Diseases (BMJD). Woodhouse L, Warden S, Poiraudau S, Myers S, Benson C, Hu L, Ahmad Q, Linnemeier P, Gomez E, Benichou O, **Gandhi R**. Montreal, Quebec, Canada. Peer-reviewed (Podium).
- 2015 Jun Hospital administrative data significantly underestimate the costs associated with perioperative delirium in patients with hip fractures. 2015 Annual Meeting of the Canadian Orthopaedic Association and Canadian Orthopaedic Research Society. Zywiell MG, Perruccio AV, **Gandhi R**, Coyte P, Rampersaud YR. Vancouver, BC, CAN. Peer-reviewed (Podium)
- 2015 Jun Metabolic Syndrome Is Not Independently Associated With Complications Following Lumbar Spine Fusion. Canadian Orthopaedics Association. Vancouver, British Columbia, Canada. Zywiell M, Chaudhary R, Jackson T, Rampersaud YR, **Gandhi R**. Peer-reviewed (Podium).
- 2015 Jun Hospital administrative data significantly underestimate the costs associated with perioperative delirium in patients with hip fractures. Canadian Orthopaedic Association, Vancouver, British Columbia, Canada. Zywiell M, Perruccio AV, **Gandhi R**, Coyte P, Rampersaud YR. Peer-reviewed (Podium).
- 2015 Jun Similar Efficacy and Safety Of Prophylactic Rivaroxaban Compared To Low Molecular Weight Heparin After TJA. Canadian Orthopaedics Association, Vancouver, British Columbia, Canada. Zywiell M, Naderipour A, Mahomed NN, Davey JR, Syed KA, **Gandhi R**. Peer-reviewed (Podium).

- 2015 Jun Adults with Down Syndrome Have Unique Hip Morphology Compared To Matched Controls And Published Normal Values. Canadian Orthopaedics Association, Vancouver, British Columbia, Canada Zywiell M, Shulman D, Zochowski T, **Gandhi R**, Salonen D, Gross A. Peer-reviewed (Poster).
- 2015 Apr Sharma A, Sundararajan K, Perruccio AV, Kapoor M, **Gandhi R**. Adipokine profile of synovial fluid in end-stage knee osteoarthritis - an investigation across racial groups. 3rd World Congress on Controversies, Debates & Consensus in Bone, Muscle & Joint Diseases, April 23-26, 2015, Montreal, PQ, CAN. Peer-reviewed (Poster)
- 2015 Apr Adipokine Profile of Synovial Fluid in End-Stage Knee Osteoarthritis – An Investigation across Racial Groups. 3<sup>rd</sup> World Congress on Controversies, Debates, Consensus in Bone, Muscle & Joint Diseases. Montreal, Quebec, Canada. Sharma A, Kapoor M, Perruccio AV, **Gandhi R**. Peer-Reviewed (Poster).
- 2014 Jun Diagnosing Femoroacetabular Impingement From Plain Radiographs: Do Radiologists and Orthopaedic Surgeons Differ? The Combined Meeting of the AOA and the COA. Montreal, Quebec, Canada. Ayeni OR, Chan K, Whelan DB, **Gandhi R**, Williams D, Harish S, Choudur H, Chiavaras MM, Karlsson J, Bhandari M. Peer-reviewed (Poster).
- 2014 Jun Post-Consultation Predictors of Willingness to Undergo Orthopaedic Surgery. Combined Meeting of the American Orthopedic Association and Canadian Orthopaedic Association. Montreal, PQ, Canada. Rampersaud R, Perruccio AV, **Gandhi R**. Peer-reviewed (Podium).
- 2014 Jun Comparative Outcomes and Cost-Utility Following Surgical Treatment of Focal Lumbar Spinal Stenosis Compared with Osteoarthritis of the Hip or Knee: Long- Term Change in Health-Related Quality of Life and Lifetime Incremental Cost-Utility. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, QC, Canada. Rampersaud R, Tso P, Walker K, Lewis S, **Gandhi R**, Davey JR, Mahomed NN, Cotye P. Peer-reviewed (Poster).
- 2014 Jun The influence of obesity and low education on health-related quality of life: A contrast between individuals with foot/ankle and knee OA. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, PQ, Canada. Perruccio AV, **Gandhi R**, Lau JTC, Syed K, Mahomed NN, Rampersaud YR. Peer-reviewed (Poster).
- 2014 Jun Depression and overall burden of symptomatic joints: an examination among individuals undergoing hip and knee replacement for osteoarthritis. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, QC, Canada. **Gandhi R**, Bugg AC, Zywiell MG, Mahomed NN, Perruccio AV. Peer-reviewed (Poster).
- 2014 Jun The influence of obesity and low education on health-related quality of life: A contrast between individuals with foot/ankle and knee OA. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, PQ, Canada. Perruccio AV, **Gandhi R**, Lau JTC, Syed K, Mahomed NN, Rampersaud YR. Peer-reviewed (Poster).
- 2014 Jun Depression and overall burden of symptomatic joints: an examination among individuals undergoing hip and knee replacement for osteoarthritis. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, QC, Canada. **Gandhi R**, Bugg AC, Zywiell MG, Mahomed NN, Perruccio AV. Peer-reviewed (Podium).
- 2014 Jun Multi-joint osteoarthritis is associated with increased in-hospital resource utilization for

- patients undergoing total hip arthroplasty Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, QC, Canada. Zywiell M, Djelic D, Chaudhary R, Rampersaud YR, **Gandhi R**, Mahomed NN, Perruccio AV. Peer-reviewed (Poster).
- 2014 Jun Routine topical tranexamic acid use in knee arthroplasty reduces transfusion rates without increased risk of venous thromboembolic events. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, QC, Canada. Zywiell M, Jan M, Perruccio AV, Rampersaud YR, Evans HMK, Prabhu A, **Gandhi R**. Peer-reviewed (Poster).
- 2014 Jun The impact of gastric bypass surgery compared to TKA on knee symptoms. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, QC, Canada. Zywiell M, Okrainec A, Jackson T, Kassam H, Perruccio AV, Penner T, Urbach D, **Gandhi R**. Peer-reviewed (Podium).
- 2014 Jun The routine use of topical tranexamic acid in total hip arthroplasty provides clinical and economic benefits without increasing the incidence of venous thromboembolic events. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association. Montreal, QC, Canada. Zywiell M, Jan M, Perruccio AV, Rampersaud YR, Evans HMK, Prabhu A, **Gandhi R**. Peer-reviewed (Podium).
- 2014 Jun Multi-joint Arthritis Is Associated With Increased Health Resource Utilization For Patients Undergoing TKA. Combined Meeting of the American Orthopaedic Association and Canadian Orthopaedic Association; June 18-21, 2014, Montreal, QC, Canada. Zywiell M, Chaudhary R, Rampersaud YR, **Gandhi R**, Mahomed NN, Perruccio AV. Peer-reviewed (Podium).
- 2014 Apr Biological Considerations in clinical outcomes research: Understanding the role of Inflammation and OA phenotypes. McMaster University, Grand Rounds Invited Speaker. Hamilton, Ontario, Canada. Non peer-reviewed (Podium).
- 2014 Mar Relationship between the Alpha and Beta angle in diagnosing femoroacetabular Impingement. Clinical Epidemiology and Biostatistics research day. Hamilton, Ontario Khan M, Ranawat A, Williams D, **Gandhi R**, Choudur H, Parasu N, Simunovic N, Ayeni OR. Peer-reviewed (Poster)
- 2014 Factors Associated with Return-to-Work following Work-Related Foot and Ankle Injuries. GTA Rehab Network's Best Practices Day. Toronto, Ontario, Canada. **Gandhi R**, Yak A, Wong S, Veljkovic A, Lau J Peer-reviewed (Poster).
- 2013 Risk Factors for Revision Anterior Cruciate Ligament Reconstruction in Ontario - A population based study with 5 Year Follow-up. Canadian Orthopaedics Association. Winnipeg, Manitoba, Canada. Koshbin A, Wasserstein D, Dwyer T, **Gandhi R**, Mahomed NN, Ogilvie-Harris D. Peer-reviewed (Poster).
- 2013 A population-based matched cohort study of total knee arthroplasty following cruciate ligament reconstruction. Canadian Orthopaedics Association. Winnipeg, Manitoba, Canada. Peer-reviewed (Poster).
- 2013 Shoulder dislocation in Ontario, Canada from 1994 to 2011: The incidence, rate, and risk factors for recurrence. Canadian Orthopaedics Association. Winnipeg, Manitoba, Canada. Leroux T, Wasserstein D, **Gandhi R**, Veillette C, Mahomed N, Ogilvie-Harris D. Peer-reviewed (Podium).
- 2012 Nov A Prospective Study of Asymptomatic Pulmonary Embolism and after Hip and Knee

- Arthroplasty. Canadian Arthroplasty Society. London, Ontario, Canada. McSweeney S, Syed K, Davey JR, Mahomed NN, **Gandhi R**. Peer-reviewed (Podium).
- 2012 Nov The effect of topical tranexamic acid on blood loss on transfusion in total joint arthroplasty. Canadian Arthroplasty Society. London, Ontario, Canada. Peer-reviewed (Podium).
- 2012 Determinants of the likelihood of returning to work in a chronic pain population. Canadian Agency for drugs and technologies in Health Symposium. "Evidence Matters: Outcomes, Efficiency, Impact". Ottawa, Ontario, Canada. Hamer H, **Gandhi R**, Wong S, Yak A, Mahomed NN. Peer-reviewed (Poster).
- 2011 Jul A Prospective Study of Asymptomatic Pulmonary Embolism after Hip and Knee Arthroplasty. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. **Gandhi R**, Salonen D, Geerts WH, Khanna M, McSweeney S, Syed K, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2011 Jul Advanced Age, Obesity and Continuous Catheter Femoral Nerve Blockade are Independent Risk Factors for Post-operative Falls Following Primary Total Knee Replacement. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Farlinger C, Wasserstein D, Brull R, Briggs N, Muir O, Mahomed NN, **Gandhi R**. Peer-reviewed (Podium).
- 2011 Jul Evaluating a Case Series. Instruction Course Lecture: Evidence Based Orthopaedics. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Peer-reviewed (Podium).
- 2011 Jul Meta-analysis and Systematic Review of Clinical Outcomes Comparing Mobile-bearing and Fixed-bearing Total Knee Arthroplasty. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Peer-reviewed (Podium).
- 2011 Jul Obesity and Knee arthroplasty. Instruction Course Lecture: Evidence Based Orthopedics. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Peer-reviewed (Podium).
- 2011 Jul Predictors of Complications and Re-operation after Knee Cruciate Ligament Reconstruction in Ontario 1992-2008. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Peer-reviewed (Podium).
- 2011 Jul Prevalence of Patients with No Clinically Significant Improvement Following Total Knee Replacement. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Peer-reviewed (Podium).
- 2011 Jul Preventing Infection in Hip Arthroplasty. Instruction Course Lecture. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Peer-reviewed (Podium).
- 2011 Jul The Influence of Patient, Provider and Surgical Factors on Revision Anterior Cruciate Ligament Reconstruction (ACLR) in Ontario. Canadian Orthopaedic Association (COA). St. John's, Newfoundland and Labrador, Canada. Peer-reviewed (Podium).
- 2011 Jul A Prospective Study of Asymptomatic Pulmonary Embolism after Hip and Knee Arthroplasty. Canadian Orthopaedic Association. St. John's, Newfoundland and Labrador, Canada. **Gandhi R**, Salonen D, Khanna M, McSweeney S, Syed K, Davey JR, Mahomed NN, Peer-reviewed (Podium).
- 2011 Jul Advanced Age, Obesity and Continuous Catheter Femoral Nerve Blockade are

- Independent Risk Factors for Post-operative Falls Following Primary Total Knee Replacement. Canadian Orthopaedic Association. St. John's, Newfoundland and Labrador, Canada. Farlinger C, Wasserstein D, Brull R, Briggs N, Muir O, Mahomed NN, **Gandhi R**, Peer-reviewed (Podium).
- 2011 Jul Meta-analysis and Systematic Review of Clinical Outcomes Comparing Mobile-bearing and Fixed-bearing Total Knee Arthroplasty. Canadian Orthopaedic Association. St. John's, Newfoundland and Labrador, Canada. **Gandhi R**, Smith H, Jan M, Davey JR, Mahomed NN, Peer-reviewed (Podium).
- 2011 Jul Predictors of Complications and Re-operation after Knee Cruciate Ligament Reconstruction in Ontario 1992-2008. Canadian Orthopaedic Association. St. John's, Newfoundland and Labrador, Canada. Wasserstein D, **Gandhi R**, Mahomed NN, Ogilvie-Harris D, Peer-reviewed (Podium).
- 2011 Jul Prevalence of Patients with No Clinically Significant Improvement Following Total Knee Replacement. Canadian Orthopaedic Association. St. John's, Newfoundland and Labrador, Canada. Alzahrani K, **Gandhi R**, deBeer J, Petruccielli D, Mahomed NN. Peer-reviewed (Podium).
- 2011 Jul The Influence of Patient, Provider and Surgical Factors on Revision Anterior Cruciate Ligament Reconstruction (ACLR) in Ontario. Canadian Orthopaedic Association. St. John's, Newfoundland and Labrador, Canada. Wasserstein D, **Gandhi R**, Mahomed NN, Ogilvie-Harris D, Peer-reviewed (Podium).
- 2010 Oct Atypical Femur fractures and bisphosphonate use in a Canadian Tertiary Care Academic Hospital. American Society for Bone and Mineral Research. Toronto, Ontario, Canada. Cheung AM, Veillette C, Bleakney R, Syed K, Young C, McDonald-Blumer H, Tile L, Cardew S, **Gandhi R**, Kapral M, Davey JR, Mahomed NN, Ridout R. Peer-reviewed (Podium).
- 2010 Jun Microarray Analysis of the Pro-inflammatory Role of the knee Joint fat pad in osteoarthritis. Canadian Orthopaedic Association. Edmonton, Alberta, Canada. **Gandhi R**, Takahashi M, Virtanen C, Syed KA, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2010 Jun Predictors of an Improved Functional Outcome with In Patient rehab for Joint replacement patients. University of Toronto, Canadian Orthopaedic Association. Edmonton, Alberta, Canada. Rizek R, **Gandhi R**, Mahomed NN. Peer-reviewed (Podium).
- 2010 Jun Complications Following minimally invasive total knee replacement as compared to traditional Incision Techniques: A Meta-Analysis. Canadian Orthopaedic Association. Edmonton, Alberta, Canada. **Gandhi R**, Smith H, Rizek R, Mahomed NN. Peer-reviewed (Podium).
- 2010 Jun Metabolic Syndrome Increases the Risk of Prevalent Spine Osteoarthritis. Canadian Orthopaedic Association. Edmonton, Alberta, Canada. **Gandhi R**, Woo K, Mahomed NN, Rampersaud YR. Peer-reviewed (Podium).
- 2010 Jun Patient Concerns about Undergoing Elective Musculoskeletal Surgery. Canadian Orthopaedic Association. Edmonton, Alberta, Canada. **Gandhi R**, Hudak P, Syed KA, Veillette C, Davey JR, Mahomed NN, Rampersaud YR. Peer-reviewed (Podium).
- 2010 Jun The synovial fluid Adiponectin-Leptin ratio predicts pain with knee osteoarthritis. Canadian Orthopaedic Association. Edmonton, Alberta, Canada. **Gandhi R**, Takahashi M, Smith H, Rizek R, Mahomed NN. Peer-reviewed (Podium).
- 2010 Jun Complications Following minimally invasive total knee replacement as compared to



- traditional Incision Techniques: A Meta-Analysis. Canadian Orthopaedic Association (COA). Edmonton, Alberta, Canada. Peer-reviewed (Podium).
- 2010 Jun Metabolic Syndrome Increases the Risk of Prevalent Spine Osteoarthritis. Canadian Orthopaedic Association (COA). Edmonton, Alberta, Canada. Peer-reviewed (Podium).
- 2010 Jun The synovial fluid Adiponectin-Leptin ratio predicts pain with knee osteoarthritis. Canadian Orthopaedic Association (COA). Edmonton, Alberta, Canada. Peer-reviewed (Podium).
- 2009 Jul Defining Obesity in an Asian population undergoing knee and hip replacement. Canadian Orthopaedic Association (COA). Whistler, British Columbia, Canada. Razak F, **Gandhi R**, Davey JR, Mahomed NN. Peer-reviewed (Poster).
- 2009 Jul Ethnicity and patient's perception of risk in joint replacement surgery. Canadian Orthopaedic Association (COA). Whistler, British Columbia, Canada. **Gandhi R**, Razak F, Davey JR, Mahomed NN. Peer-reviewed (Poster).
- 2009 Jul Predicting longer term outcomes in total knee arthroplasty. Canadian Orthopaedic Association (COA). Whistler, British Columbia, Canada. **Gandhi R**, Dhotar H, Razak F, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2009 Jul Predicting Patient Dissatisfaction following Joint Replacement Surgery. Canadian Orthopaedic Association (COA). Whistler, British Columbia, Canada. **Gandhi R**, Davey JR, Mahomed NN. Peer-reviewed (Poster).
- 2009 Jul Antibiotic Bone Cement and the Incidence of Deep Infection following total knee arthroplasty. Canadian Orthopaedic Association (COA). Whistler, British Columbia, Canada. **Gandhi R**, Razak F, Davey JR, Syed K, Pathy R, Mahomed N. Peer-reviewed (Podium).
- 2009 Jul Metabolic Syndrome and the Incidence of Symptomatic DVT following primary total knee arthroplasty. Canadian Orthopaedic Association (COA). Whistler, British Columbia, Canada. **Gandhi R**, Razak F, Tso P, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2009 Jul The relationship between body habitus and leptin in a knee osteoarthritis population. Canadian Orthopaedic Association (COA). Whistler, British Columbia, Canada. **Gandhi R**, Takahashi M, Syed K, Davey JR, Mahomed NN. Peer-reviewed (Podium).
- 2009 Jul Limiting Bias in Clinical Trials. Instruction Course Lecture: Evidence Based Orthopedics. Canadian Orthopaedic Association (COA). Whistler, Alberta, Canada. Peer-reviewed (Podium).
- 2009 Feb What's new in DVT prophylaxis? Stryker-Arthroplasty 2009. Whistler, British Columbia, Canada.
- 2009 Feb What's the Evidence for Cross-Linked Polyethylene in Hips? Stryker-Arthroplasty 2009. Whistler, British Columbia, Canada.
- 2008 Jun The Epidemiology of Cartilage Repair Techniques. CORS symposium: Articular Cartilage Repair: From Bench to Bedside to Books. Canadian Orthopaedic Association (COA). Quebec City, Quebec, Canada. Peer-reviewed (Podium).
- 2005 Jun Does Patient Perception of Alignment Affect Total Knee Arthroplasty Outcome? Canadian Orthopaedic Association (COA). Montreal, Quebec, Canada. **Gandhi R**, de Beer J, Petrucci D, Winemaker M. Peer-reviewed (Podium).
- 2005 May Incidence and Timing of Myocardial Infarction Following Total Joint Replacement Surgery. Canadian Orthopaedic Association (COA). Montreal, Quebec, Canada. **Gandhi**

- R**, Petruccelli D, Devereaux PJ, Adili A, Hubmann M, de Beer J. Peer-reviewed (Podium).
- 2003 Oct Primary Total Knee Arthroplasty in Patients Receiving Workers' Compensation Benefits. Canadian Orthopaedic Association (COA). Winnipeg, Manitoba, Canada. De Beer J, Petruccelli D, **Gandhi R**, Winemaker M. Peer-reviewed (Podium).
- 2003 May Primary Total Knee Arthroplasty in Patients Receiving Workers' Compensation Benefits. Canadian Orthopaedic Association (COA). Winnipeg, Manitoba, Canada. de Beer J, Petruccelli D, **Gandhi R**, Winemaker M. Peer-reviewed (Poster).

### 3. LOCAL

#### Abstracts and Other Papers

- 2015 Jun Sex, Canadian Society for Epidemiology and Biostatistics 2015 Conference, June 1-4, 2015, Mississauga, ON, CAN. Perruccio AV, Power JD, Badley EM, Gandhi R.
- 2014 Nov "Ortho-evidence" Journal Club: Arthroplasty Expert Panelist. Ontario Orthopaedic Association. Toronto, Ontario, Canada. (Podium).
- 2014 Nov Case Presentations in Adult hip and knee reconstruction: Peri-prosthetic Fractures. Ontario Orthopaedic Association, Toronto, Ontario, Canada. (Podium).
- 2013 May Complications Following Hip Arthroscopy: A Systematic Review and Meta-analysis. ISAKOS Annual Meeting. Toronto, Ontario, Canada. Kowalczyk M, Bhandari M, Farrokhyar F, Wong I, Chahal M, Neely S, Gandhi R, Ayeni OR. Peer-reviewed (Poster).
- 2013 May Surgical and post op Clinical Decision Making in the management of complex hip and knee joint replacements. Musculoskeletal Conference. Toronto, Ontario, Canada.
- 2012 Jan Hip, Knee, Foot and Ankle Arthritis and their causes. University Health Network. Toronto, Ontario, Canada. **Gandhi R**, Lau J, Non peer-reviewed (Podium).
- 2012 Determinants of the likelihood of returning to work in a chronic pain population. Best Practices Day Conference. Toronto, Ontario, Canada. Hamer H, **Gandhi R**, Wong S, Yak A, Mahomed N, Peer-reviewed (Poster).
- 2012 Factors Associated with Return-to-Work following Work-Related Upper Extremity Injuries. University of Toronto Hand Surgery Research Day (Ralph Manktelow). Toronto, Ontario, Canada.
- 2011 Jan Hip and Knee Arthroplasty for 2011. Smith and Nephew National Sales Meeting. Toronto, Ontario, Canada. Non peer-reviewed.
- 2010 Nov How to conduct a survey. Principles and Practice of Clinical Research. Mississauga, Ontario, Canada. Non peer-reviewed.
- 2010 Nov Writing your paper for publication. Principles and Practice of Clinical Research. Mississauga, Ontario, Canada. Non peer-reviewed.
- 2010 Sep Oxinium THR for AVN. Hip health. Mississauga, Ontario, Canada.
- 2010 Sep Hip Impingement. Hip health. Mississauga, Ontario, Canada.
- 2010 Sep All you need to know in 2010 - hip arthroplasty. Hip health. Mississauga, Ontario, Canada.
- 2010 Jul Causation and Bias. HPME, University of Toronto. Ontario, Canada.

2010 Jun	The Pro-inflammatory Role of the Infra-patellar fat pad in knee Osteoarthritis. MaRS Microarray Centre. Toronto, Ontario, Canada.
2010 Jan	Rivaroxaban - the UHN Experience. Thrombosis in Musculoskeletal Rehabilitation. Toronto, Ontario, Canada.
2009 Nov	Bearing Surface Options: Total hip Arthroplasty. Hip Health. Mississauga, Ontario, Canada.
2009 Sep	Bias Detective. Principles and Practice of Clinical Research. Mississauga, Ontario, Canada.
2009 Sep	Outcomes Assessment. Principles and Practice of Clinical Research. Mississauga, Ontario, Canada.
2009 Apr	An approach to patients with hip pain. The Third University Health Network Musculoskeletal and Arthritis Day. Toronto, Ontario, Canada.
2009 Apr	Timing of Joint Replacement Surgery in OA. The Third University Health Network Musculoskeletal and Arthritis Day. Toronto, Ontario, Canada.
2008 Nov	Critical Appraisal: Observational Studies. Principles and Practice of Clinical Research. Mississauga, Ontario, Canada.
2007 Oct	Blood Loss in Revision Knee Replacement Surgery. Stryker Advances in Revision Knee Replacement Surgery. Toronto, Ontario, Canada.
2007 Oct	DVT Prophylaxis in Total Joint Arthroplasty. Stryker Advances in Revision Knee Replacement Surgery. Toronto, Ontario, Canada.

# Warren CW Latham BScH MD FRCSC

## APPOINTMENTS

Fall	2012	<b>Lecturer</b> , University of Toronto, Dept of Surgery
Fall	2012	<b>Associate Clinical Staff</b> , TWH (Altum)
Spring	2012	<b>Fellowship Supervisor</b> , University of Toronto Combined Foot and Ankle Fellowship
Spring	2011	<b>CBC Resident Supervisor</b> , University of Toronto, Foot and Ankle surgery
Summer	2008	<b>Clinical Staff appointment</b> , Dept of Surgery, Scarborough Hospital (Birchmount)

## EDUCATION

<b>1.1.1.1.2008.</b>	<b>Clinical Fellowship</b> , Division of Orthopedic Surgery: Toronto Western Hospital: Subspecialty Interest: Foot and Ankle deformity correction and reconstruction
<b>2006 - 2007</b>	<b>Clinical Fellowship</b> , Division of Orthopedic Surgery: Toronto Western Hospital: Subspecialty Interest: Adult Hip and Knee Reconstruction; Primary and Revision Surgery
<b>2001 - 2006</b>	<b>Residency</b> ; Royal College Orthopedic Surgery Training Program, University of Toronto
<b>1997 - 2001</b>	<b>Medical Doctorate</b> , University of British Columbia's Faculty of Medicine
<b>1992 - 1997</b>	<b>Bachelors of Science (Honours)</b> , Queen's University, Life Sciences major, graduated with First Class Standing

## Academic Teaching as Faculty

### Mount Sinai Cadaveric Training lab:

Aug	2015	U of T residents: Surgical Approach's in Foot and Ankle Surgery
April	2015	U of T residents : Ankle Arthroscopy
April	2014	COFAS: cadaver lab instructor: techniques in foot and ankle surgery
November	2013	U of T arthroscopy lab : foot and ankle surgery
October	2012	Wright Medical: Inbone TAR surgical technique
November	2012	Smith and Nephew: Forefoot surgical techniques
November	2011	Wright Medical: Valor Nail surgical technique
November	2011	Smith and Nephew: Ankle Arthroscopic techniques

April 2011	Arthrex: Forefoot surgical techniques
February 2011	Arthrex: COFAS Ankle arthroscopy lab

University of Toronto Orthopedic Residents:

April 2014	National Orthopedic Resident Royal College examination preparation
April 2013	Orthopedic Resident Down Day teaching: Ankle Osteoarthritis
April 2011	CBC resident training program staff member
March 2011	Case Presentations to 5 <sup>th</sup> year residents for Practice Royal College Exam (TWH)
May 2010	Case Presentations to 5 <sup>th</sup> year residents for Practice Royal College Exam (TWH)

Scarborough Hospital:

May 2012	Department of Surgery education rounds: LIPUS in orthopaedic surgery
November 2010	Emergency medicine rounds : Common Orthopedic injuries in the ED
Sept – Nov 2009	Training of Physiotherapist for triage of Foot and Ankle patients (LHIN Foot and Ankle Triage Program)

Fracture Rounds: Toronto Western Hospital

July – Dec 2006	Orthopedic Case Presentations for Junior Residents
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ASCM

Feb – Mar 2007	Undergraduate Medical Education – Physical Examination skills
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Academic Presentations

COFAS biannual mtg April 2013	Moderator: Professor Panel Discussion: “Hindfoot Deformity”
COA Annual mtg: June 2013	Moderator Foot and Ankle surgery ICL: The diabetic foot Presenter: Managing ankle fractures in the diabetic patient
COA Annual mtg: June 2012	“PTT transfer: A surgical technique”
COFAS biannual mtg: April 2012	Expert panel discussion on hindfoot fusions

Toronto City Wide Foot and Ankle Rounds:  
April 2012                    “The evidence for the use of bone stimulation in foot and ankle patients.”

Scarborough Hospital:                    Dept of Surgery Education Rounds  
February 2012                    “Complex Hindfoot arthrodesis: is bone stimulation a viable adjunct to surgery”

Toronto City Wide Foot and Ankle Rounds:  
April 2011                    Case Presentation: “Treating an infected nonunion tibial pilon fracture with a Stealth frame”

Canadian Diabetes Association: Academic Presentation  
April 2011                    “Diabetic Foot: Charcot and other deformities”

C.S.O.T: Annual National meeting: Academic Presentation  
April 2010                    “Complex talar fractures: treatment and prognosis”

City Wide: Orthopedic Technologist rounds.  
Sept, 2008:                    ‘Complex fractures of the Hindfoot”

Division Rounds: Hospital for Sick Children.  
May 20, 2004:                    Musculoskeletal Infections in the Pediatric Population  
June 18, 2004:                    Pediatric Knee Pain: A Differential Diagnosis  
January 8, 2006:                    Fractures Involving the Lateral Condylar Physis  
March 17, 2006:                    Idiopathic and Congenital Scoliosis  
June 16, 2006:                    The Limping Child

Upper Extremity Rounds: St. Michaels’ Hospital  
February 15, 2005:                    Complex Carpal Injuries  
April 11, 2005:                    Dupuytren’s Contracture of the Hand  
June 21, 2005:                    Upper Extremity Infections

Foot and Ankle Rounds: St. Michael’s hospital  
March 29, 2005:                    Flatfoot in the Adult  
May 25, 2005:                    Surgical Techniques: Ankle Arthrodesis

University of Toronto Resident Research Day

May 24, 2004                    PCEA vs PCA Comparing the efficacy of modalities post operatively in spinal fusion patients  
Supervisor: R Rampersaud MD FRCPC

University of Toronto Kennedy Professor Day

November 3, 2004                      Comparing Perioperative Outcomes of Minimal Access vs. Open Posterior Instrumented Lumbar Fusion  
Supervisor: R Rampersaud MD FRCPC

### **Professional Affiliations**

**2014- present**                      **Scarborough Hospital, Division of Surgery Secretary**  
**2010 – present**                      ***International Member, American Foot and Ankle Society (AOFAS)***  
**2009 – present**                      ***Member, Canadian Foot and Ankle Society (COFAS)***  
**2008- present**                      ***Member, Canadian Orthopedic Association***  
**2001 - present**                      ***Member, American Association of Orthopedic Surgeons (AAOS)***  
**2001 - 2006**                      ***Member, Professional Association of Interns and Residents of Ontario (PAIRO)***  
**2001 - 2006**                      ***Member, Canadian Medical Association (CMA)***  
**2001 - 2006**                      ***Member, Canadian Orthopedic Association (COA)***  
**1998 - 2001**                      ***Member, British Columbia Medical Association (BCMA)***

### **Recent meetings:**

2015                      COA: Vancouver, BC: Invited Faculty for Expert Panel on treatment of Neuromuscular Disorders of the Foot and Ankle  
2015                      COFAS: Whistler , BC: Invited Faculty: Surgical Complications in Foot and Ankle Surgery  
2014                      U of T COFAS Foot and Ankle meeting: Invited Faculty and Organizing committee  
2014                      COA: Montreal  
2013                      Wright Medical: Advances in Foot and Ankle Surgery: New York  
2013                      COFAS : Canadian Retreat: Osoyoos

### **PEER-REVIEWED PUBLICATIONS**

**Latham WC, Lau JT. The Hintegra Prosthesis: Design Issues and Implementation Techniques that lead to revision surgery . AAOS monograph series. in press**

**Latham WC, Lau JT. Global Total Ankle Arthroplasty Systems Available. *Total Ankle Replacement : An Operative Manual*. Chapter. Lipincott/Wilkins . in press**

**Latham WC, Lau JT. Bone Stimulation: A review of its use as an adjunct to Foot and Ankle Reconstruction. *Techniques in Orthopedics*. 2011; 26: 14-21**

Mulligan, Feilotter, Coulon, Boag, Dorion-Bonnet, Duboue, **Latham WC**, Eng, Longy. Analysis of the 10q23 chromosomal region and the PTEN gene in human sporadic breast carcinoma. *British Journal of Cancer*. 1999;79:718-723.

Goetz, Alkasspooles, **Latham WC**. Relationship between patient age and CD4+ lymphocyte repletion following successful virologic responses to highly active anti-retroviral therapy. *Sixth Conference on Retroviruses and Opportunistic Infections*. Chicago, IL. 1999;335:131. Abstract.

## **PUBLICATIONS – NON-PEER REVIEWED**

Histology CD-ROM, UCLA Medical School, Los Angeles, CA

- Developed for medical undergraduate education.  
Supervisor: *Dr. Anju Relan*

Pediatric Clinical Skills CD-ROM, produced by University of British Columbia medical students

- Topic Editor, January 2000 - May 2000

**Latham WC**. Searching for a Tumour Suppressor Gene on Chromosome 7q in Human Sporadic Breast Cancer. April 1996. *Undergraduate Thesis*, Queen's University Pathology Department.

**Latham WC**. Subtalar joint mechanics and pathogenesis. October 2012. *Orthopedia* (online resource).

## **PUBLICATIONS - SUBMITTED**

**Latham WC**, Gourlay W. Long term outcomes of graft function after transplantation of donor kidneys with multiple renal arteries. 1999. Submitted to *Journal Of Urology*.

Mulligan, Feilotter, Coulon, McVeigh, Boag, Dorion-Bonnet, Duboue, **Latham WC**, Eng, Mulligan and Longy. *Loss of Heterozygosity in the Cowden Disease Critical Region in Human Sporadic Breast Carcinoma*. 1996. Submitted to *Cancer Research*.

**Latham WC**, Rampersaud R. *Comparison of outcomes in PSIF using minimally invasive vs. open techniques*. Spine 2006

- Division of Orthopedic Surgery, Department of Surgery, University of Toronto

**Latham WC**, Rampersaud R. *PCA vs PCEA in posterior instrumented spinal fusion patients*. Spine 2006

- Division of Orthopedic Surgery, Department of Surgery, University of Toronto

**Latham WC**. *What is a Foot and Ankle subspecialist*. Submitted to Health Chronicle. Aug 2011

## **HONOURS & AWARDS**

2006	Fellow of the Royal College of Surgeons of Canada
2005	Licentiate Medical Council of Canada
2004	Sopman Humanitarian Award
2000	Victoria Herman Van Dine Scholarship in Medicine
2000	Florence E Heighway Summer Research Award
1999	Douglas and Jean Bailey Scholarship for academic achievement



1998                      David and Anne Beach Scholarship for academic achievement

## Non Academic Achievements

**2015**                      **Image Intensifier and Fluoroscopy operator license**  
2010-present

- Member Leaside United Church
- Hospital Restructuring Committee (appointed)
- OMA liaison for MSA (medical staff association)
- Scarborough Hospital Community Outreach Program Volunteer
- ☐ Rolph Road Soccer Association Head Coach

2001 - 2007

- Royal College CanMeds 2000 Committee
- University of Toronto Residents Without Borders
- Canadian Residency Matching Service (CaRMS) Orientation Volunteer

1999 - 2001

- Surgery Online Interest group
- Canadian History Association
- Queen's Alumni Outdoor Club
- Executive Committee Member, Mentorship Program
- *Director*, Surgery Breakfast Club
- *Volunteer*, Surgical Education CD ROM

1998 - 1999

- *Assistant Vice President*, Medical Undergraduate Society (MUS)
- *Student Director*, Mentorship Program
- *Committee Member*, Hep C admission policy
- UBC Medical School Orientation Week Committee
- Hadley Cup Soccer Champion

1996 – 1997

- *Guyanese Director*, Queen's Project on International Development (QPID)
- ☐ Direct supervision of the development and implementation of summer projects within Guyana, South America

1996

- Queen's Medical Outreach Cooperant
- ☐ 3 month Malarial survey and Health Education in Remote Villages

1994 - 1997

- Peer Health Educator (Queens Student Health Service)
- QFA: Special Projects Coordinator (1995 – 1996)
- Queen's First Aid Member
- 📁 On campus first aid unit run by student volunteers

## **Privileges**

### **Southlake Regional Hospital**

2011                      Courtesy Staff Privileges

### **Etobicoke General Hospital**

2010                      Clinical Associate: Temporary Privileges

### **Toronto Western Hospital**

2008-present              Clinical Associate: Division of Orthopedic surgery

### **Scarborough Grace Hospital**

2007-present              Active Staff: Division of Orthopedic surgery

### **University of Toronto Orthopedic Clinical Fellow:**

2007                      Toronto Western Hospital: Supervisor: *Dr. Johnny Lau* : Foot and Ankle Surgery

2006                      Toronto Western Hospital: Primary and Revision Adult Lower Extremity Reconstruction. Supervisors: *Dr. Rod Davey, Dr. Nizar Mahomed*

2006                      Etobicoke General Hospital: Locum Privileges, on call coverage

2006                      Scarborough Grace Hospital: Locum Privileges, on call coverage

### **University of Toronto Orthopedic Surgery Resident:**

2005

- Knee & Shoulder Arthroscopy, Orthopedic and Arthritic Hospital. Supervisor: *Dr. Paul Marks*
- Adult Foot & Ankle Reconstruction, Toronto Western Hospital. Supervisor: *Dr. Johnny Lau*
- Pediatric Tumour/ Spine/ Foot and Ankle, Hospital For Sick Children. Supervisors: *Dr. Sevan Hopyan, Dr. Stephen Lewis, Dr. James Wright*

2004

- Orthopedic Trauma, Sunnybrook Health Sciences Centre. Supervisors: *Dr. Terry Axelrod, Dr. Robin Richards, Dr. Hans Kreder, Dr. Albert Yee*
- Orthopedic Trauma, St. Michael's Hospital. Supervisors: *Dr. James Waddell, Dr. Emil Schemitsch, Dr. Earl Bogoch*

2003

- Senior Arthroplasty, Toronto Western Hospital. Supervisor: *Dr. Rod Davey*
- Musculoskeletal Tumour, Mount Sinai Hospital (Chief Resident). Supervisor: *Dr. Jay Wunder*
- Pediatric Orthopedics, Hospital For Sick Children. Supervisors: *Dr. William Cole, Dr. Unni Narayanan*
- Upper and Lower limb Arthroscopy, Toronto Western Hospital. Supervisor: *Dr. Darrell Ogilvie Harris, Dr. Johnny Lau*

2002

- Orthopedic Trauma, St. Michael's Hospital. Supervisors: *Dr Emil Schemitsch, Dr. Rod McBroom*
- Adult Spine, Toronto Western Hospital. Supervisors: *Dr. Raj Rampersaud, Dr. Stephen Lewis*
- Hand, Toronto Western Hospital. Supervisors: *Dr. Brent Graham, Dr. Herb Von Schroeder*

2001

- Rotating Internship, St. Michael's Hospital & Toronto East General Hospital

Summer 2000

- Trauma Sub-Internship, Cedar-Sinai Hospital, Los Angeles, CA : Supervisor:

June - August 1998

**Research Assistant**, Los Angeles Veterans Administration Hospital, Los Angeles, CA  
Supervisor: *Dr. Mathew Goetz*

June - September 1997

**Excursion Leader**, Camp Outlook for High-Risk Youth (Algonquin Park, Ontario)

June - September 1996

**Volunteer**, Queen's Medical Outreach to Guyana, South America

A 3 month volunteer work term in Guyana, South America. Project: Malarial Survey Barima river region

June - September 1995

**Research Assistant**, Pathology Department at Queen's University. Pre-thesis work on putative breast cancer tumour suppressor gene.  
Supervisor: *Dr. Lois Mulligan*

## REFERENCES

Dr. Johnny Lau

Foot and Ankle surgery  
Associate Professor, University of Toronto  
Toronto Western Hospital  
Toronto, Ontario  
(416) 603-5732  
[drjohnnylau@gmail.com](mailto:drjohnnylau@gmail.com)

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(416) 603-5732 or [rod.davey@uhn.on.ca](mailto:rod.davey@uhn.on.ca)

Dr. Timothy Daniels

Head of Foot and Ankle Program  
St. Michael's Hospital  
Associate Professor, University of Toronto  
Adjunct Scientist in the Keenan Research Centre  
Toronto, Ontario  
(416) 864-5392  
[DanielsT@smh.ca](mailto:DanielsT@smh.ca)

# **Dr. Warren C. W. Latham**

## **Medicine Professional Corporation**

Orthopedic Surgeon

385 Silver Star Blvd., Suite 206

Scarborough, ON M1V 0E3

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December 7<sup>th</sup>, 2015

Personal Injury Lawyers  
Ottawa, ON

RE: Ms. Client

Date of Loss: March XX, 20XX – Motor Vehicle Accident  
File No.

Date of Exam:

Subjective current interview from

<b>CREDENTIALS</b>
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I am a specialist Orthopedic Surgeon; I attended the Faculty of Medicine at the University of British Columbia, attained a degree of Doctor of Medicine in 2001 and completed my Orthopedic Surgery residency at the University of Toronto in 2006. I completed my fellowship in hip and knee surgery in 2007, followed by a fellowship in foot and ankle surgery at Toronto Western Hospital with Dr. Johnny Lau. I became a fellow of the Royal College of Surgeons of Canada with specialist certification in Orthopedic Surgery in 2006. I became a lecturer at the University of Toronto in 2013. I am a fellow of the American Orthopedic Foot and Ankle Society, the Canadian Orthopedic Foot and Ankle Society; I am a member of the University of Toronto Foot and Ankle Fellowship Program. I am a full-time active staff physician at the Scarborough Hospital in Toronto. I work for Toronto Western Hospital, where I have staff privileges and I work for Altum, which is a private WSIB clinic. I am a published author in foot and ankle surgery. I train fellows from the University of Toronto at Scarborough Hospital as of 2013.

## MOTOR VEHICLE COLLISION

A brief synopsis of the motor vehicle collision on March XX, 20XX:

Ms. Client was crossing Albert Street in Ottawa in a West bound direction while using the pedestrian crosswalk. As she was crossing Albert Street with the right of way, she was impacted on the right side by a Brink's armored truck. Ms. Client's ankle was crushed by the front wheel of the Brink's armored truck and she sustained severe and traumatic injuries to her right lower leg.

## RELEVANT PAST MEDICAL HISTORY

She had previously documented history of right foot pain (which is in relation to a pes planus deformity). She had documented history of a rotator cuff tear. The patient had previous visits for trigger finger 1<sup>st</sup> finger at Ottawa Hospital and had an injection of the A1 pulley of the 1<sup>st</sup> finger on May 13, 2009. She had complaints of right shoulder pain with possible rotator cuff pathology, dictated October 14, 2011 by Dr. Lapner. She was diagnosed by Dr. Lapner with significant bicep subluxation as well as partial thickness supraspinatous tear, upper third subscapularis tear,

Diagnosed with chronic venous insufficiency June 23, 2010. Probably related to being an ex-smoker with low probability of having a DVT.

She had a previous EMG in August 2011, confirmation of left median nerve entrapment consistent with carpal tunnel syndrome.

Also had a fall in which she reported to the Emergency Department July 5, 2011 with an injury to the right shoulder, right ankle and right hip. She was on a 3-foot step ladder and fell onto her

right shoulder, right ankle and right hip. There was a question of an avulsion fracture of the cuboid. No fracture to the right shoulder. She was referred to the orthopedic clinic on an out-patient basis.

She also had a right cataract surgery in October 2010, performed at Ottawa Civic Hospital.

Since the collision on March XX, 20XX which caused her injuries, she now continues to suffer from physical and psychological impairments. She suffers from the injury of open bimalleolar fracture of the right ankle grade IIIA Gustilo, fibular fracture, degloving injury to the right ankle, right shoulder pain, lower back pain, depression and anxiety.

#### DOCUMENTS REVIEWED

We have reviewed the records including Ottawa Hospital notes, Emergency Department notes, triage assessment, emergency physician notes, general practitioner records, notes from TRAC Group Rehabilitation, physiotherapy reports, ambulance call reports and psychological.

#### RECORD REVIEW AND HISTORY

Record Review from Ottawa Hospital records. History of hospital records, the patient was admitted on March XX, 20XX after a collision with a motor vehicle. She had a grade IIIA Gustilo injury. She was taken to the operating room, she was admitted through the Emergency Department stabilized and taken to the operating room for an open fracture. From the operative record, Dr. Wai performed an irrigation and debridement of the open wound with debridement with external fixation and open reduction. The patient consented to an external open reduction external fixation with irrigation and debridement prior to surgery by Dr. Eugene Wai. The surgery was relatively unremarkable. The post-operative plan was to get a CT scan and then plan

for definitive fixation with subsequent soft tissue coverage. Gentamycin beads were implanted at the time of surgery. The skin was partially closed, sterile dressings were applied.

The patient was referred to plastic surgery service for her medial open wound. She was seen post-operative day 1, a consultation with plastic surgery service suggested VAC care until wound closure and definitive management of the fracture. Of note, in the surgery the patient was noted to have a good dorsalis pedis pulse post-operatively. The patient was seen by plastic surgery service after a repeat irrigation and debridement performed by Dr. Phan and Dr. Kopka on March 24, 2014, again without complication. A note was made of a highly unstable ankle. K-wire fixation was inserted medially.

A repeated surgery March 26, 2014 for an I&D right ankle, removal of ex-fix, definitive ORIF was performed by Dr. Gofton with VAC application. This was a definitive fixation surgery. The plastic surgery service saw the patient post-op day 1 and agreed with using VAC negative pressure dressing in order to further heal the wound.

On March 31, 2014, plastics noted that there was a 4 x 12 cm wound which was clean with exposed tendons, that the patient may require a secondary closure or skin grafting of the wound. On April 3, there was suggestion that VAC should be continued with possible operation in the subsequent weeks based on overall swelling, until swelling was reduced, this was post-operative day 10. The swelling was reduced enough for plastics intervention. There was apparently a conference between Dr. Gofton and Dr. Allen, the attending plastic surgeon, about soft tissue planning. VAC therapy continued until post-operative day 19, April 14; again note was made of swelling control required in order to have definitive wound closure or a grafting. Surgical incision from Dr. Gofton's open reduction internal fixation were at this point healed. The patient was ultimately taken to the operating room on April 16, 2014, the soft tissue defect was closed using a rotation flap and split-thickness skin graft of the right medial ankle performed by Dr. Allen without complication.



The patient was discharged with diagnoses of right compound medial malleolar fracture, distal fibular fracture, GE reflux, and chronic anxiety.

On physical exam from the date of her admission on the discharge summary noted she had a compound medial malleolar fracture, distal fibular fracture, large medial ankle soft tissue defect, neurovascularly intact on presentation with irreducible ankle fracture dislocation of the ankle.

She was discharged to convalescent care to follow up with plastic surgery, as well as orthopedics in one to two weeks following discharge. She was non-weightbearing on her limb at that point.

Emergency department notes, triage assessment, paramedic notes and emergency physician notes were also reviewed, they are consistent with the history.

From our current interview today, this patient recounted similar events, she had difficulty recalling all of the surgeries that have been undertaken in the exact order, but her account is consistent with her hospital records. This account of this was directly from the claimant herself.

<b>RADIOLOGY REVIEW</b>
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Review of radiology, the patient has an x-ray of her right ankle from May 21, 2009 ordered by Dr. Thompson; outcome of the study is osteoarthritis of the right ankle, associated medial joint space narrowing, osteophyte formation, medial tilt of the talus also seen, diffuse soft tissue swelling associated, only small osteophytes noted in the medial malleolus on the left; bilateral hallux valgus, 3<sup>rd</sup> and 4<sup>th</sup> metatarsals are shortened bilaterally presumed to be developmental. Osteoarthritis of the left 2<sup>nd</sup> MTP joint, left 5<sup>th</sup> MTP joint; bilateral subtalar osteoarthritis was also evident, worse on the right with flattening and collapse as well as an os naviculare. This was termed to be severe bilateral subtalar osteoarthritis, worse on the right than on the left.

X-ray of her foot from July 7, 2010 shows no change from previous x-rays; bilateral hallux valgus, congenitally short 3<sup>rd</sup> and 4<sup>th</sup> metatarsals, severe OA of the right subtalar joint. She has imaging of lumbosacral spine from October 7, 2010 which show possible inflammatory arthropathy involving the pubic symphysis which appears isolated, degenerative change in the lumbosacral spine multiple levels, they appear stable.

CT scan of the right ankle dated March 23, 2014, ordered by Dr. Eugene Wai. Impression is oblique intraarticular medial malleolar fracture, fixed with 2 pins, this was post-external fixation initial procedure. One of the pin tips is in the syndesmotic space. Oblique intraarticular fracture of the posterior lateral tibial plafond, complex comminuted distal fibular fracture, marked disruption of the syndesmosis, large open laceration anteromedial aspect of distal tibia; oblique longitudinally oriented structure either bone fragment or penetrating foreign body imbedded posteromedially between the flexor digitorum and tibialis posterior nerve, prior subtalar ankylosis, exophytic bone at the subtalar calcaneus likely result of impingement.

Intraoperative radiograph of the ankle on March 24, two images taken in the OR using image intensifier, shows application of the external fixator frame. Transfixion of the medial malleolar fracture appears unchanged; comminuted distal fibular fracture is again noted, no significant change.

Fluoroscopic images on March 26 show fixation of the distal fibula with buttress plate and numerous screws as well as high syndesmotic screws, medial malleolus which is fixed with 2 screws as well.

There is an AP, lateral, oblique and mortise view radiographs from May 1, 2014 which show the tibiotalar joint is asymmetric, widened laterally, no change from previous; can be followed up with future radiographs. Medial malleolar screws are unchanged, medial malleolar soft tissue

defect has been closed. The patient was still in a plaster slab, no change in position of comminuted distal fibular fracture reduced with lateral plate and screws.

May 22<sup>nd</sup>, another x-ray ordered by Dr. Gofton showed no significant interval change. No change in known collapse of the talocalcaneal joint. No presence of osseous complications.

July 3, 2014, no unfavorable interval change, satisfactory progressive healing of bimalleolar fracture; fracture line is still visible indicating incomplete bony union, no hardware failure or complication apparent; the ankle mortise is congruent, joint spaces maintained, talar dome and syndesmoses are intact. Note is made of pes planus deformity of the right foot.

August 14, 2014, repeat radiographs showed collapsed subtalar joint which was present prior to surgery still visualized; progressive healing of the fibular fracture. Less distinct fracture lines, especially medial malleolus which has become less apparent.

September 11, 2014, x-ray of the ankle showed satisfactory post-op appearance, comminuted fracture has undergone open reduction internal fixation, hardware remains intact, further evidence of healing.

I have another x-ray which is recent from Riverside Campus dated October 2, 2015 showed lateral fibular plate and screw, syndesmotomic screw, 2 medial malleolar screws are seen transfixing the tibia and fibular. There is no fracture through the orthopedic hardware. There is mild interval increase lucency surrounding the syndesmotomic screw, likely representing motion at that site. There is smooth periosteal reaction along the medial tibial cortex adjacent to the syndesmotomic screw. Some irregular callus/periosteal reaction is also seen along the syndesmotomic screw laterally in the interosseous space. There has been bony union of the posterior malleolus fracture. Incomplete union of the lateral malleolar fracture. Advanced ankle arthritis, there is no ankle effusion, there is mild degenerative changes intertarsal and TMT joints. Bone mineralization is diminished. Overall impression, mildly increased periprosthetic loosening

surrounding the syndesmotic screw likely represents motion at that side; non-united lateral malleolar fracture; advanced subtalar and ankle osteoarthritis.

#### SUBJECTIVE ORAL HISTORY

The patient was interviewed today. She said that primarily she has difficulty walking for more than an hour. She has difficulty walking a number of blocks. She has to take transportation now to do grocery shopping. Prior to her injury she had taken tours of Europe in 2013. She was extremely active. She could walk for approximately an hour and 15 to 20 minutes at a time. She has difficulty walking on uneven surfaces. She has to use anti-inflammatories as well as Tylenol #3. She uses Voltaren cream. She has not tried an orthoses for management. She has been using physiotherapy since the date of her discharge in 2014. She has had spine surgery in July 2015 for a lumbar spine spondyloarthropathy. Her pain is primarily mechanical in nature, 8 to 10 with activity; 3 to 4 with no mechanical activity. She continues to experience pain that affect her lower limb and ankle, as well as swelling. Standing, walking, bending, crouching, dynamic balance and general mobility tolerances are impacted by the injury and the pain and discomfort. She walks with a cane or a walker. She has ongoing self-care difficulties as well as psychosocial difficulties related to the injury. Her reports of pain commensurate with the previous reports including to the TRAC Group occupational therapist. She has fatigue, she reports feeling very tired after walking even short distances. She has waking at night due to pain in her ankle.

#### PHYSICAL EXAM

This patient presents with a swollen lower limb. She walks with an antalgic gait using a cane. She walks at a slow paced. Her range of motion is limited to approximately 0 degrees of dorsiflexion, she has crepitus with range of motion testing; her active and passive dorsiflexion are the same. She has a gastroc contracture. She has an irreducible subtalar joint on range of motion testing. She stands with a valgus hindfoot and has crepitus with attempt at reduction of

her subtalar joint. She has subfibular impingement. She stands with a pes planus deformity, the hindfoot and midfoot. Pain with palpation of os naviculare, subfibular area; alignment, hindfoot valgus; forefoot and midfoot abduction, unable to do a single stance heel raise. Ankle range of motion reduced to neutral with active and passive dorsiflexion. Subtalar joint has decreased range of motion and is difficult to reduce into position. With ankle range of motion and subtalar range of motion there was crepitus. The skin envelope appears to be intact. The patient has some hyperesthesia along the course of her SPN nerve. Her skin graft and rotational flap over the medial malleolus is well-healed. She appears to be her stated age. Her surgical scars laterally are well-healed.

#### IMPRESSION

This is a patient who suffered an open fracture dislocation of her ankle. She had pre-existing ankle and subtalar osteoarthritis. Her ankle fracture has gone on to a non-union of the lateral malleolus based on most recent imaging, with worsening of her ankle osteoarthritis and subtalar arthritis and worsening deformity related to lateral malleolar non-union.

Specific questions from your letter dated August 24, 2015. I would appreciate if you could carry out a review of Ms. Client's medical records. I would also request that you conduct a thorough medical examination of Ms. Client and advise me, in your medical opinion, on the following:

1) Your diagnosis of the nature and extent of the injuries sustained by Ms. Client relating to the motor vehicle accident of March XX, 20XX?

The patient suffered an open Gustilo IIIA fracture dislocation of the right ankle. Injuries appeared to be isolated to that area.

2) Your description of the impairments, if any, sustained by Ms. Client and a description of the nature of the impairments.

She has ongoing non-union of her lateral malleolus which has reduced overall walking tolerance, she has ongoing permanent mechanical pain.

3) Your prognosis as it relates to her injuries?

She is approximately a year and a half since her injury and surgery. She likely has a non-union of the malleolus which will not heal. She had pre-existing degenerative arthritis of the ankle joint and subtalar joint which also have symptomatology which has worsened due to the nature of the injury, prolonged immobilization post-operatively as well as continued instability of the ankle joint as noted by Dr. Gofton and Dr. Wai.

4) Your opinion on whether Ms. Client's condition and impairments are permanent and if so if you could provide us with a calculation relating to the degree of lower limb impairment experienced by our client?

These conditions are permanent. Using the American Medical Association calculation for the degree of lower limb impairment, based on muscle atrophy, decreased range of motion, the diagnosis itself and continued non-union, as well as worsening of instability, the worsening of arthritis in the ankle joint; it would be approximately 35 to 40 percent lower extremity impairment. Consistent with 10 percent whole person impairment.

5) If it is your opinion that Ms. Client suffered from pre-existing medical condition(s) and impairment(s) before the March XX, 20XX collision, could you please list those conditions and impairments and explain whether they have been exacerbated by the collision in 2014.

6) If the answer to question 5 is positive, please describe the nature of the exacerbation.

Yes, she had documented radiographic evidence of ankle osteoarthritis as well as subtalar osteoarthritis and they were likely exacerbated by the injury itself due to ankle instability due to the nature of the fracture. Ankle arthritis has worsened and subtalar arthritis has worsened related to valgus position of the ankle, progressive related to instability of the ankle joint.

7) In your medical opinion, had the motor vehicle accident of March XX, 20XX not occurred would Ms. Client's pre-existing medical condition(s) have worsened naturally?

Yes it would have worsened naturally related to the amount of deformity which was already present in her previous x-rays as well as osteoarthritis.

8) In the event that our client does suffer from a lower limb impairment, will she require the use of mobility devices? If so, could you kindly suggest the types of mobility devices she will require over her lifetime?

I believe she would require an AFO brace. She continued non-union of her fibula related to her injury, as well as ankle and subtalar osteoarthritis. An AFO brace is an ankle foot orthosis, it is a rigid orthosis without joints for motion, in order to prevent motion in the ankle and subtalar joint when walking.

9) In your medical opinion, in light of her current impairments is Ms. Client able to continue to carry out usual household responsibilities?

She has a fairly severe deformity as well as severe osteoarthritis of her ankle as well as a non-union of her fibula, it may be difficult for her to carry out ADLs related to standing as she has significant mechanical pain with standing.

10) In your opinion was the collision of March XX, 20XX the cause of Ms. Client's current medical complaints?

She has related to recent imaging has an ongoing non-union of her fibula, this will continue to be a pain generator. Certainly exacerbation of the instability of the ankle has led to more pain with mechanical activity for her.

11) In light of our client's injuries and impairments could you kindly provide a list of medical treatment recommendations that would further assist her recovery or allow her to maintain the progress she has made?

I believe this patient should have a revision open reduction internal fixation fibula with a TTC or tibiototalcalcaneal fusion with local and iliac crest bone graft in order to decrease the patient's amount of pain. Certainly if she is not amenable to that operation, also a subtalar fusion with total ankle arthroplasty would be reasonable for continued motion of the ankle joint. But she has lost a significant amount of ankle joint motion, she would certainly benefit from a hindfoot procedure in order to lessen her pain.

12) In light of our client's injuries and impairments could you kindly provide a list of rehabilitation treatment recommendations that would assist our client in completing her regular activities of daily living?

There really is none. This patient has end-stage osteoarthritis of her ankle. An Exogen bone stimulator may be helpful at this late stage for non-union of her fibula, however there is marginal evidence to support the use of that at this point.

13) In light of your findings, would you recommend that Ms. Client be assessed for orthotic insoles?



Absolutely and also an AFO brace would be more helpful as it would provide more stability of her ankle, subtalar joint and media malleolar pain with walking.

The specific citations related to opinion:

- Ankle Osteoarthritis; Hintermann, Kauffman and Mann, 9<sup>th</sup> Edition
- Fractures in the Adult, Rockwood and Green, 5<sup>th</sup> Edition
- Campbell's Operative Orthopedics 10<sup>th</sup> Edition
- Post-traumatic Ankle Arthritis after Ankle Related Fractures; Journal of Orthopedic Trauma, January 23, 2009 Edition, Valderrabano
- Tibial Plafond Fracture by Dr. Wigle; Journal of Bone and Joint Surgery, February 2003, Issue 85
- Treatment of Severe Tibial Pilon Fractures, Dr. Blauth; Journal of Orthopedic Trauma, March/April 2001
- Long Term Results of Ankle Arthrodesis Following Post-traumatic Arthritis by Charles Saltzman; Journal of Bone and Joint Surgery, February 2001, 83<sup>rd</sup> Issue

## DISCLOSURE STATEMENT

All of the above analyses are based upon the available information at the time of this assessment, including the history given by the client, available medical records, and the findings from his assessment. It is assumed that the information provided to me is correct. If more information becomes available at a later date, an additional report may be required. Such information may or may not change the opinions rendered in this evaluation.

Any medical recommendations offered are provided as guidance and not as medical orders.

Client Name: Client  
Date of Loss: March XX, 20XX  
Page | **14**

I hope that this report is useful in further management of Ms. Client's issues. Should you require any further information, please do not hesitate me through my office.

Yours truly,

A handwritten signature in blue ink, appearing to read 'W. Latham', with a long horizontal flourish extending to the right.

Warren Latham BScH, MD,FRCSC

WL/ap

Dr. Michael Lehr D.C., Dip.Ac., CDTT, Hons. BSc.

Allevio Pain Management  
240 Duncan Mills Road, Suite 101  
North York, Ontario M3B 3S6  
Tel: (416) 840-5990 ext.24  
Fax: 647-427-4100  
[Michael.Lehr@AllevioClinic.com](mailto:Michael.Lehr@AllevioClinic.com)



## EMPLOYMENT

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Allevio Pain Management Clinic, North York, Ontario Chiropractor/Acupuncture/Independent Medical Evaluator	2012 - Present
Union Ergonomics, Woodbridge, Ontario Chiropractor/Acupuncture/Clinical Director	2010 - Present
Downsview Wellness Clinic, North York, Ontario Chiropractor/Acupuncture/Clinical Director	2010 - Present
Health Matters Chiropractic Center, Vaughan, Ontario Chiropractor/Acupuncture Associate	2006 - Present
Regain Health/Pain Management/Professional Chronic Pain Associates North York, Ontario Chiropractor/Acupuncture/Clinical Director (Physical Team)/ Independent Medical Evaluator	2008 - 2010
Allied Medical Associates, North York, Ontario Independent Medical Evaluator	2008 - 2010
Canadian Chronic Pain Associates, Etobicoke, Ontario Chiropractor/Acupuncture/Clinical Director (Physical Team)/Independent Medical Evaluator	2008
Sheppard Chronic Pain Associates, North York, Ontario Chiropractor/Acupuncture/Clinical Director (Physical Team)	2007 - 2008
Specialist Group, North York, Ontario Independent Medical Evaluator	2006 - 2008
Integris Healthcare Center, North York, Ontario Chiropractor/Acupuncture/Clinical Director (Physical Team)	2004 - 2008
South Riverdale Medical Center/Herbert K. Lee Clinic, North York, Ontario Clinical Internship	2002 - 2003

## EDUCATION

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Canadian Memorial Chiropractic College, Toronto, Ontario Doctor of Chiropractic	2003
Acupuncture Council of Ontario, Toronto, Ontario Diploma of Acupuncture: Clinical Levels 1 & 2	2003
NBCE (National Board Chiropractic Examinations), Professional Licensing Body in USA NBCE Part 1 & 2	2003
University of Toronto, Toronto, Ontario	1999

## MEMBERSHIPS & PROFESSIONAL AFFILIATIONS

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- Member of Canadian College of Chiropractors
- Member of Canadian Chiropractic Association
- Member of Ontario Chiropractic Association
- Member of Acupuncture Council of Ontario
- Member of International Association for the Study of Pain
- Member of Canadian Pain Society

## SEMINARS & CONFERENCES

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- |   |               |
|---|---------------|
| • DC Tracts Bracing and Orthotics   | June 2012     |
| • Acupuncture Council of Ontario - General Members Conference   | April 2012    |
| • Clinical Acupuncture - Myofascial Pain and Trigger Points   | April 2012    |
| • Clinical Acupuncture - Neurophysiological Mechanisms of Acupuncture and Treatment of Neurological Conditions, Toronto, ON | January 2011  |
| • Clinical Acupuncture - Evidence Based Acupuncture of Common Sport Medicine Conditions, Toronto, ON                        | November 2010 |
| • Clinical Acupuncture - Treatment of the Chronic Pain Patient, Toronto, ON   | November 2008 |
| • Canadian Chiropractic Association Clinical Note Taking Seminar, Toronto, ON   | June 2007     |
| • Motor Vehicle Accident/SABS Conference, Toronto, ON   | February 2007 |

## CLINICAL DOCUMENTATION/INDEPENDENT MEDICAL EVALUATIONS/COURTROOM EXPERIENCE

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- |  |                |
|--|----------------|
| Chronic pain expert witness courtroom experience   | 2004 - Present |
| Clinical expertise in the review of documentation/assessment of patient for the purposes of generating OCF-18, OCF-3, OCF-22, OCF-23 and Form 1, as well as independent medical/legal evaluations, disability evaluations, rebuttal reports (benefits and treatment), progress reports for insurers, section 42 assessments, discharge reports and multidisciplinary chronic pain assessments. |                |

## ADDITIONAL TRAINING

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- |  |               |
|--|---------------|
| • Certified Decompression Traction Therapist (CDTT), Toronto, Ontario        | February 2011 |
| • Shockwave Therapy, Toronto, Ontario  | June 2009     |
| • Compression Garment/Hosiery Fitter, Toronto, Ontario                       | October 2010  |
| • Canadian Fitness Professionals Personal Training Program, Toronto, Ontario | December 2005 |

## AWARDS

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- Scarborough Recognition Award Recipient, Scarborough, Ontario

## COMMUNITY OUTREACH PROGRAMS

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- Soccerfest Caribbean Invitational Soccer Tournament, North York, Ontario 2011, 2012
- MS Walk for the Cure, Etobicoke, Ontario 2006 - 2011
- Canadian Memorial Chiropractic College 5K Run/Walk, Toronto, Ontario 2003

References available upon request

**NAME:** Allan G. Swayze, MD., D.Psych., FRCPC.

**PLACE OF BIRTH:** Toronto, Canada

**CITIZENSHIP:** Canadian

**ADDRESS:** 200 St. Clair Avenue West, Suite 305  
Toronto Ontario M4V1R1  
Telephone 416 789 3458

## **EDUCATION**

Medical Training, University of Toronto (MD 1966)

Post Graduate Psychiatric Training University of Toronto

Fellowship, Royal College of Physicians & Surgeons, Psychiatry 1971

## **QUALIFICATIONS & ACADEMIC APPOINTMENTS**

Lecturer, University of Toronto 1970-1977

Diploma in Psychiatry, University of Toronto 1966-2014

Certificate in Psychiatry, Royal College 1971-2014

Fellowship in Psychiatry, Royal College 1971-2014

Assistant Professor of Psychiatry, University of Toronto 1977-2014

## **HOSPITAL APPOINTMENTS (past and present)**

### **North York General Hospital, 1986 to Present**

2006-2014	Consulting Staff (Present)
1986-2006	Active Staff
1987-2010	Consultant Psychiatrist, Genetics Program
1994-2004	Cross Appointment, Dept. of Genetics
1987-1991	Associate Psychiatrist In Chief
1986-1996	Coordinator, Consultation Liaison
1988-1990	President, NYGH Branch, Ontario Medical Assoc.
1998-2001	Member, Consultation Liaison Team
1989-1991	Coordinator, Psycho-Geriatric Multi-Disciplinary Program

1986-1998	Teacher, Intern & Family Practice Residents
1987-1994	Medical Advisory Committee
1989-1992	Member, Palliative Care Team
1998-2006	Member, Huntington Disease Genetics Predictive Team
1999-2006	Member, Familial Breast Cancer Genetic Predictive Team
1988-2006	Member, Genetics Prenatal Diagnostic Support Team
1998-1999	Study, Bipolar Disorder Genetics Research With Clarke Institute (CAMH)
1993-2012	Member Genetics Program Advisory Council
1988-1995	Member, Genetic Predictive Test For Huntington's
1991-1994	Member, Lomotrigine Effects in Huntington's
2000-2001	Member, Bereavement Multi-Disciplinary Committee
2000-2001	Member, Psychosocial Committee, Provincial Advisory Committee on New Genetic Predictive Technology

### **University of Toronto Faculty of Medicine**

1991-1997	University of Toronto Student Affairs Faculty of Medicine	Member, Board of Assessors
1997-2006	University of Toronto Student Affairs, Faculty of Medicine & Occupational Therapy, Physiotherapy, and Radiation Therapy	Chair, Board of Medical Assessors

### **Sunnybrook & Womens College Health Science Centre Toronto**

1996-2003	Courtesy Staff
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### **Sunnybrook Regional Cancer Centre, University of Toronto**

1996-1998	Advisor, Research Project, Hereditary Breast Cancer
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**Toronto General Hospital**

1979-1995 Associate Staff Dept. of Psychiatry

**Womens College Hospital, University of Toronto**

1970-1971	Courtesy Staff
1971-1972	Associate Staff
1972-1986	Active Staff
1986-2003	Courtesy Staff
1973-1974	Acting Chief, Psychiatry
1972-1985	Assoc. Chief, Psychiatry
1983-1984	Acting Chief, Psychiatry
1979-1980	Vice President, Medical Staff Association
1980-1981	President, Medical Staff Association
1980-1981	Member, Board of Governors
1973-1985	Director, Inpatient Psychiatric Unit
1973-1985	Coordinator, Consultation-Liaison Team
1971-1985	Teacher, Rotating Interns/Family Practice Residents
1972-1985	Member, Medical Advisory Committee

**St. Michael's Hospital, university of Toronto**

1968-1971	Active Staff, Dept. of Psychiatry
1968-1971	Coordinator, Consultation Liaison Team
1968-1971	Teacher, Psychiatric Residents
1968-1971	Inpatient Psychiatric Unit Team Member

**HOSPITAL COMMITTEES**

- Library Committee
- Medical Records Committee
- Credentials Committee
- Infection Control Committee
- Pharmacy Committee
- Ethics Committee
- Educational Committee
- Medical Advisory Committee



## **ACADEMIC POSITIONS at the UNIVERSITY OF TORONTO**

Lecturer, University of Toronto 1970-1977

Diploma in Psychiatry, University of Toronto 1966-2014

Certificate in Psychiatry, Royal College 1971-2014

Fellowship in Psychiatry, Royal College 1971-2014

Assistant Professor of Psychiatry, University of Toronto 1977-2014

## **AWARDS AND SPECIAL HONOURS**

Teacher of the Year Award, 1989-1990 North York General Hospital

## **MISCELLANEOUS APPOINTMENTS**

- Advisory Committee, Wellness Program, Law Society of Upper Canada
- Advisory Committee, Niagara on the Lake Hospital
- Canadian Back Education Association, Lecturer
- Director, Rosehill Institute of Human Relations
- Workplace Safety & Insurance Board, Consultant
- Academy of Medicine, Secretary – Section of Psychiatry
- Grace Hospital Toronto, Consultant

## **PROFESSIONAL MEMBERSHIPS**

Ontario Medical Association

Ontario Psychiatric Association

Canadian Psychiatric Association

College of Physicians & Surgeons of Ontario

North York General Hospital Medical Staff Association

Royal College of Physicians & Surgeons



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## **Rahul Pathak**

### **EDUCATION**

**Ross University School of Medicine**  
Highest Honors - Medical Doctor (M.D.)

***Dominica, West Indies***  
***December 2009***

**New York Institute of Technology**  
Cum Laude in Life Sciences

***Westbury, NY***  
***December, 2005***

### **ACADEMIC TRAINING:**

**New York University Medical Center**  
**Interventional Pain Management Fellowship**

***New York, NY***  
***July 2014-Present***

Duties include Inpatient Consultation, Outpatient Ambulatory Clinic, Palliative Care, Psychiatry, Physical Medicine & Rehabilitation, and Anesthesiology

**Stony Brook University Hospital**  
**Neurology Residency**

***Stony Brook, NY***  
***July 2011-June 2014***

Responsibilities include Inpatient Neurology Wards, Stroke Unit, Night Float, Inpatient Consultation, Outpatient Ambulatory Clinic, Pediatric Neurology, Psychiatry and Research Opportunity

**Staten Island University Hospital**  
**Preliminary Medicine Intern Year**

***Staten Island, NY***  
***July 2010-June 2011***

*Preliminary Internal Medicine Program (PGY 1)* - Duties included 7 months of Inpatient Medicine Service, Intensive care rotations in Medical ICU, Coronary Care Unit, Night Float, Electives in Neurology, Infectious Diseases and Ambulatory Medicine Clinic

### **WORK EXPERIENCE:**

**Stony Brook University Hospital**  
**Neurology Chief Resident**

**Stony Brook, NY**  
*July 2013-June 2014*

Created the annual residents rotation, call, and lecture schedules. Established a muscular dystrophy rotation at an affiliate hospital.

**Endo Pharmaceuticals**  
**Internship in Technical Operations Division**

**Westbury, NY**  
*July 2002-August 2004*

Assisted in the conversion of medication formulation records to a digital format.  
Helped make feasibility batches for a particular formulation that the company was researching

**New York Institute of Technology**  
**Research Assistant**

**Westbury, NY**  
*January 2005-December 2005*

Performed literature searches on DNA-RNA-protein nanotechnology, then organized articles for Dr. Claude E. Gagna.

**Peer Tutor**

*September 2002-December 2002*

Assisted students individually in introductory Calculus.

**ACADEMIC MEMBERSHIPS/SCHOLARSHIPS:**

**Alpha Omega Alpha Medical Honor Society**  
Member

*2014-Present*

One of only two residents nominated from Stony Brook Hospital based on academic and teaching merits

**Teacher of the Year - Neurology**  
Stony Brook University Hospital

*2013-2014*

**Teacher of the Year - Neurology**  
Stony Brook University Hospital

*2012-2013*

**American Society of Interventional Pain Physicians**  
Member

*2012-Present*

**American Academy of Neurology**  
Member

*2010-Present*

**American College of Physicians**  
Member

*2007-Present*

**Phi Eta Sigma National Honor Society**

*2003-2005*

**Theodore K. Steele Memorial Scholarship**

*2002*

## **HOSPITAL COMMITTEES:**

### **Clinical Advisory Committee**

Aids in transition to electronic medical records and diagnosis based order sets.

## **CERTIFICATIONS:**

- Successfully completed USMLE Step I, II CK/CS, III 2007-2010
- Certified in Basic Life Support/ACLS/PALS by the American Heart Association

## **ABSTRACTS:**

### **Neuraxial Interventions in Multiple Epiphyseal Dysplasia**

Case report describing sliding spondylolisthesis in a patient with Multiple Epiphyseal Dysplasia presenting for routine pain evaluation.

*1<sup>st</sup> Prize New York Neurology Society on 9/2013*

### **Assessing Etiologies of Stroke Readmissions**

Analyzing Stony Brook stroke admissions from 2011 – 2012 for co – morbidities, MRI findings, age, and gender then correlating rates of readmission. Found high NIH stroke scales correlated to more readmissions

## **GRAND ROUNDS:**

### **Neuromyelitis Optic, Thymectomy and Common Variable Immune Deficiency linked to BAFF**

Describing the relation between NMO, MG s/p Thymectomy, and CVID to BAFF. In addition illustrating the first case report connecting all three disorders

## **ONGOING RESEARCH PROJECTS:**

### **IVIG for Complex Regional Pain Syndrome**

Measuring baseline autonomic testing, infusing IVIG, then retesting and analyzing pain scores

## **LANGUAGE FLUENCY:**

- English
- Hindi
- Spanish

## **HOBBIES & INTERESTS:**

- Performing stand-up comedy, playing golf, and visiting museums.

# MATHEW A. PLANT. MD . FRCSC .

41 Frederick Street, Orillia, ON. L3V 5W6

T: (705) 329-1811

F: (705) 329-1911

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## *EDUCATION*

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2008 – 2014	<b>Division of Plastic and Reconstructive Surgery The University of Toronto</b> Specialty Training in Plastic Surgery
2004 – 2008	<b>Schulich School of Medicine and Dentistry The University of Western Ontario</b> M.D.
2001 – 2004	<b>University of Waterloo</b> Enrolled in BSc (Hons) program

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## *QUALIFICATIONS, CERTIFICATIONS AND LICENSES*

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2014	<b>Royal College of Physicians and Surgeons (Canada) Plastic Surgery</b>
2010	<b>Royal College of Physicians and Surgeons (Canada) Principles of Surgery</b>
2010	<b>Licentiate of the Medical College of Canada</b>
2008	<b>Canadian Medical Protective Association</b>
2008	<b>College of Physicians and Surgeons of Ontario (CPSO# 88388)</b>

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## *RELEVANT EMPLOYMENT HISTORY*

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2014 - current	<b>Locum Plastic Surgeon, Orillia Soldiers' Memorial Hospital</b> Full-time Plastic Surgeon (on locum contract) providing emergent and elective surgical care in all domains of plastic surgery with an emphasis on hand and peripheral nerve, skin cancer and breast reconstruction.
2014 - current	<b>Locum Plastic Surgeon, Rouge Valley Health System</b> Locum Plastic Surgeon providing coverage for emergency call and clinics.
2014 - current	<b>Seminar Leader, Ethics and Professionalism. University of Toronto Faculty of Medicine.</b> Lectured undergraduate medical students at the University of Toronto on various topics regarding ethics and professionalism.

2014 - current	<b>Director, Division of Plastic Surgery, Clearview Institute</b> Responsible for the creation and day-to-day operation of the division of plastic surgery at the clearview vision institute.
2013 - current	<b>Section Author, Plastic Surgery, QxMD Software Inc.</b> Responsible for providing content in Plastic Surgery for point of care medical calculation application.
2012 - current	<b>Physician Examiner, Centre for the Evaluation of Health Professionals Educated Abroad</b> Responsible for Assessing Foreign-Trained Physicians for Suitability to Practice Medicine in Canada.
2008 - 2010	<b>Invited Judge, StudentAwards.com RBC Royal Bank Scholarship for First Year Medical and Dental Students</b> Judged Essay Submissions in a National Scholarship Competition for First-Year Medical Students. 2 Consecutive Years.
2004	<b>Course Instructor, Kaplan Test Prep</b> Taught Courses in Biological Sciences and Verbal Reasoning Sections of MCAT Prep course for students at the University of Toronto, York University and McMaster University.

#### PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

2015 - current	<b>Canadian Society of Plastic Surgeons</b> <i>Active Member</i>
2015 - current	<b>American Society of Plastic Surgeons</b> <i>Candidate Member</i>
2014 - current	<b>Canadian Society for Aesthetic Plastic Surgery</b> <i>Candidate Member</i>
2014 - current	<b>Royal College of Physicians and Surgeons</b> <i>Fellow, Plastic Surgery</i>
2013 – 2014	<b>Royal College of Physicians and Surgeons</b> <i>Resident Member</i>
2013	<b>Division of Plastic and Reconstructive Surgery, University of Toronto</b> <i>Run Coordinator, Canadian Breast Cancer Foundation Run for the Cure</i>
2011, 2013	<b>Division of Plastic and Reconstructive Surgery, University of Toronto</b> <i>Team Coordinator, CSPS Challenge Cup</i>
2009 – current	<b>Doctors Against Racism and Antisemitism (DARA)</b> <i>Member</i>
2008 – 2015	<b>Canadian Society of Plastic Surgeons</b> <i>Junior Member</i>

2008 – 2015	<b>American Society of Plastic Surgeons</b> <i>Resident Member</i>
2009 – 2010	<b>Professional Association of Internes and Residents of Ontario</b> <i>Representative, Toronto Surgery</i>
2007 - 2008	<b>The Schulich School of Medicine Admissions Committee</b> <i>Interviewer</i>
2005 – 2006	<b>Hippocratic Council, The Schulich School of Medicine and Dentistry</b> <i>Orientation coordinator</i>

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#### *PEER-REVIEWED PUBLICATIONS*

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2015	<b>Plant, M.A.,</b> Fish, J (2015). <u>Resident Use of the Internet, E-Mail, and Personal Electronics in the Care of Surgical Patients.</u> <i>Teaching and Learning in Medicine.</i> 27(2): 215-223
2012	<b>Plant, M.A.,</b> Sade, S., Hong, C., Ghazarian D.M.D. (2012). <u>Syringocystadenocarcinoma Papilliferum in situ of the Penis.</u> <i>Eur J. Dermatol.</i> 22(3): 405-406
2011	<b>Plant, M.A.,</b> Panchapakesan, V. (2011). <u>Digital Artery Pseudoaneurysm in a Patient with Previous Radial Artery Harvest.</u> <i>Can J Plast Surg.</i> 19(4): 148-150.
2010	<b>Plant, M.A.,</b> Fialkov, J. (2010). <u>Total Scalp Avulsion with Microvascular Reanastomosis: A Case Report and Review of the Literature.</u> <i>Canadian Journal of Plastic Surgery.</i> 18(3): 112-115.
2009	<b>Plant, M.A.,</b> Scilley, C.G., Speechley, M. (2009). <u>Single-Stage Immediate Breast Reconstruction Using a Skin Sparing Incision and Definitive Saline Implants Compared with a Two-stage Reconstruction Using Tissue Expansion Plus Implant.</u> <i>Canadian Journal of Plastic Surgery.</i> 17(4):117-123.
2007	<b>Plant, M.A.,</b> Scilley, C.G. (2007). <u>Ulnar Artery Pseudoaneurysm in a Patient with Factor IX Deficiency (Hemophilia B).</u> <i>Canadian Journal of Plastic Surgery.</i> 15(4):223-225.

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#### *ABSTRACTS, POSTER AND PODIUM PRESENTATIONS*

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2014	<b>Plant, M.A.,</b> Mull, A., Novak, C.B., Mackinnon, S.E., Fish, J.S. (2014). <u>Technology use and Communication Habits of Surgical Residents in Canada and the United States: A Comparison of Two Large Training Centers.</u> <i>Canadian Journal of Plastic Surgery.</i> 22(2):134 Presented at The 68th Annual Meeting of the Canadian Society of Plastic Surgeons, June 27, 2014. Montreal, Quebec.
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- 2014 **Plant, M.A.,** Mull, A., Novak, C.B., Mackinnon, S.E., Fish, J.S. (2014). Personal Electronic Device use and Communication Habits of Surgical Residents in Canada and the United States: A Comparison of Two Large Training Centers. *Podium Presentation given at The University of Toronto Division of Plastic and Reconstructive Surgery Annual Research Day, Toronto, Ontario, February 21, 2014. Toronto, Ontario.*
- 2013 **Plant M.A.,** Novak, C.B., von Schroeder, H., and McCabe, S. (2013). The Use of Smartphone Photography in Acute Hand Trauma Referrals. *Canadian Journal of Plastic Surgery.* 21(2):139. *Presented at The 67<sup>th</sup> Annual Meeting of the Canadian Society of Plastic Surgeons, May 30, 2013. Calgary, Alberta.*
- 2013 **Plant, M.A.,** Fish, J.S. (2012). The Use of Personal Electronics, Email and the Internet in the Care of Surgical Patients. *Canadian Journal of Plastic Surgery.* 21(2):110 *Presented at The 67th Annual Meeting of the Canadian Society of Plastic Surgeons, May 30, 2013. Calgary, Alberta.*
- 2013 **Plant M.A.,** Novak, CB., von Schroeder, H., and McCabe, S. (2013). The Use of Smartphone Photography in Acute Hand Trauma Referrals *Podium Presentation given at The University of Toronto Division of Plastic and Reconstructive Surgery Annual Research Day, Toronto, Ontario, February 22, 2013. Toronto, Ontario.*
- 2012 Viana R, Chan T, Lanc D, Soo S, Burke C, Zurawska U, Zurawska J, Krause J, **Plant M.A.,** Speechley M. (2012). Effects of structured debate versus standard small-group discussion in medical ethics education. *Poster 54, Canadian Conference on Medical Education, April 2012. Banff, Alberta.*
- 2012 **Plant, M.A.,** Fish, J.S. (2012). The Use of Personal Electronics, Email and the Internet in the Care of Surgical Patients. *Podium Presentation given at The University of Toronto Division of Plastic and Reconstructive Surgery Annual Research Day, Toronto, Ontario, February 10, 2012. Toronto, Ontario.*
- 2007 Chan, T., Holding, C., Krause, J., **Plant, M.A.,** Soo, S., Viana, R., Zurawska, J., Zurawska, U., Speechley, M., Flanagan, P. (2007). A Systematic Review of Small-Group Learning Methods with Respect to Ethical Issues. *Poster presented at The Margaret P. Moffat Graduate Research Day, March 22, 2007. London, Ontario*

#### CLINICAL TRIALS

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- 2012 - ongoing **Plant, M.A.,** Antonyshyn, O., Fialkov, J. Hair Regrowth After Bicoronal Incision. *A Randomized Blinded Comparison of Hair Growth Following Either Beveled or Standard Bi-coronal Scalp Incisions. Clinicaltrials.gov Identifier NCT0155741*