

MASSIEH MOAYEDI, PhD

- Associate Professor • UTCSPPain Scientist •
 - Co-Director • Centre for Multimodal Sensorimotor and Pain Research •
 - Canada Research Chair (Tier 2) in Pain NeuroImaging •
 - Faculty of Dentistry • University of Toronto •
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An internationally renowned researcher leading pain neuroimaging in Canada and collaborating with leading international researchers to determine predictors and individual characteristics of chronic pain to develop targeted treatment strategies

EMPLOYMENT:

- 2022-** **Associate Professor**
UTCSPPain Scientist (Awarded January 2021; Salary Award)
Canada Research Chair (Tier 2) in Pain NeuroImaging (Awarded Oct 2022; Salary Award)
Faculty of Dentistry
University of Toronto, Canada
- 2016-2022** **Assistant Professor**
UTCSPPain Scientist (Awarded January 2021; Salary Award)
Faculty of Dentistry
University of Toronto, Canada
- 2012-2016** **Honorary Research Fellow**
Department of Neuroscience, Physiology and Pharmacology,
University College London, London, UK
Royal Society Endorsement as a scientist with “Exceptional Promise”

ACADEMIC APPOINTMENTS:

- 2021-** **Affiliate Scientist**
Division of Clinical & Computational Neuroscience
Krembil Research Institute, University Health Network, Toronto, Canada
- 2019- 2021** **Visiting Scientist**
UCL-Great Ormond Street Institute of Child Health
University College London, London, UK
- 2016-** **Scientific Associate Staff**
Department of Dentistry, Mount Sinai Hospital, Toronto, Canada
- 2012- 2022** **Affiliate Scientist**
Department of Neural and Pain Sciences
School of Dentistry, University of Maryland, Baltimore, MD, USA

ACADEMIC COMMITTEES & SERVICE:

International

- 2022** **Member**, Local Arrangement Committee, IASP World Congress 2022
- 2022-** **Founding Member and co-Lead**, Neuroimaging of Pain Special Interest Group, IASP
- 2018-2022** **Member**, Fellowships, Grants and Award Working Group, International Association for the Study of Pain

National

- 2021-** **Member**, Awards and Grants Committee, Canadian Pain Society
- 2021-** **Member**, Nominations Committee, Canadian Pain Society
- 2020-** **Member**, Orofacial Pain Working Group, Network for Canadian Oral Health and Research
- 2020-** **Member**, Equity, Diversity and Inclusion Committee, Canadian Pain Society
- 2018-** **Member**, Scientific Program Committee, Canadian Pain Society

Local

- 2022-** **Member**, Graduate Student Awards Committee, Faculty of Dentistry, University of Toronto
2021- **Member**, Human Research Ethics Board, University of Toronto
2020 **Member**, Faculty of Dentistry Strategic Plan Working Group – Global Visibility and Impact
2020- **Member**, SickKids Pain and Precision Medicine Working Group
2018- **Co-Chair**, UTCSP Research Committee
2018- **Member**, UTCSP Executive Committee
2016-2018 **Member**, UTCSP Interfaculty Pain Curriculum (IPC) Committee
2016-2018 **Member**, UTCSP IPC Evaluation and KT Working Group

EDUCATION:

- 2007-2012** **Doctor of Philosophy, Collaborative Program in Neuroscience**
Institute of Medical Science
University of Toronto, Canada
Structural brain abnormalities in temporomandibular disorder
<http://hdl.handle.net/1807/34816>
- 2002-2007** **Honours Bachelor of Science, Biology**
University of Ottawa, Canada

PUBLICATIONS:

(† indicates equal contributions, * indicates trainee supervised or co-supervised by me)

Articles in Preparation:

1. SA Fatemi*, S Bourke*, G Hadjis*, T Moriarty, I Boileau, DP Finn, **M Moayedi**. Correlations between Circulating Endocannabinoids and Individual Differences in Pain Sensitivity: A Pilot Study. *In Preparation*.
2. P Mouseli*, S Sagheer*, WD Reid*, **M Moayedi***, I Cioffi*. A Predictive Model of Facial Pain Evoked by Repeated Tooth Clenching based on Functional Muscle Recordings. *In Preparation*.
3. M Mockford*, **M Moayedi†**, JS Lewis†. Resting State Functional Connectivity of the Extrastriate Body area in complex regional pain syndrome: a pilot study. *In Preparation*.

Peer-Reviewed Articles:

Submitted for Peer-Review:

1. MA Cormie*, B Kaya*, GE Hadjis*, PE Mouseli* and **M Moayedi**. Insula-Cingulate Structural and Functional Connectivity: An Ultra-High Field MRI Study. *Under Revision for Cerebral Cortex*
2. B Kaya*x, RC Lord, E Potter, C Dale, **M Moayedi**. Gender, Body Image, and Pain: Inclusivity Leads to Improved Understanding of Pain Mechanisms. *Under Revision for PAIN*
3. B Kaya*, I Cioffi, **M Moayedi**. Delineation of the Trigeminal-Lateral Parabrachial-Central Amygdala Tract in Humans: An Ultra-High Field Diffusion MRI Study. *Under Review at PAIN*

Published (since my promotion to Associate Professor at the University of Toronto in Jan 2022):

1. S Park, R Park, D Westwood, **M Moayedi**, JS Khan. Peripheral Magnetic Stimulation for Acute Postoperative Pain: A Systematic Review and Meta-analysis. *Journal of Pain (in press)*
2. JS Khan, D Westwood, **M Moayedi**. Ultrasound-guided repetitive pulsed peripheral magnetic stimulation provides pain relief in refractory glossopharyngeal neuralgia: a case report. *Canadian Journal of Pain* 7(1):2157250, 2023
3. DJ Douglas, SE Perschbacher, **M Moayedi**, EWN Lam. Optimizing effective dose and image quality in cone beam CT sialography. *Oral Surg Oral Med Oral Pathol Oral Radiol* Accepted, 2022
4. LJ Ayoub*, J Zhu, S Lee*, N Mugisha*, K Patel, E Duerden, J Stinson, M Verriotis, M Noel, D Kong, M Moayedi, MP McAndrews†. Age-related effects on the anterior and posterior hippocampal volumes in 6-21 year olds: A model selection approach. *Hippocampus* 33(1):37-16, 2023.
5. B Kaya*, P Geha, I de Araujo, I Cioffi, **M Moayedi**. Identification of Central Amygdala and Trigeminal Motor Nucleus Connectivity in Humans: An Ultra-High Field Diffusion MRI Study. *Human Brain Mapping* 44(4):1309-19, 2023. DOI:10.1002/hbm.26104

Published (after my appointment as Assistant Professor at the University of Toronto):

6. M Verriotis, C Sorger*, J Peters, KK Seunarine, C Clark, SM Walker†, **M Moayedif**†. Abnormal medial prefrontal connectivity to the salience network in pediatric neuropathic pain. *Front Pain Res* 3:918766, 2022. DOI: 10.3389/fpain.2022.918766
7. Signature for Pain Recovery IN Teens (SPRINT): Protocol for a multi-site prospective signature study in chronic musculoskeletal pain. *BMJ Open* 12(6):e061548, 2022. doi: 10.1136/bmjopen-2022-061548
8. JJ Lobo, LJ Ayoub*, **M Moayedif**†, SJ Linnstaedt†. Interaction between hippocampal volume, FKBP5 genetic vulnerability, and childhood trauma is associated with chronic multisite pain in the UK Biobank cohort. *Scientific Reports* 12(1):6511, 2022.
9. A Noorani, PSP Hung, JY Zhang, K Sohng, N Laperriere, **M Moayedif**, M Hodaie. Pain relief reverses hippocampal abnormalities in trigeminal neuralgia. *JPain* 23(1):141-155, 2022.
10. EE Truffyn, **M Moayedif**, J O’Leary, SC Brown, D Ruskin, EG Duerden. Sensory function and psychological factors in children with Complex Regional Pain Syndrome Type 1. *J Child Neurol* 36(10):823-830, 2021.
11. LJ Ayoub*, MP McAndrews, A Barnett, KCJ Ho*, I Cioffi, **M Moayedif**. Baseline Resting-State Functional Connectivity Determines Subsequent Pain Ratings to a Tonic Ecologically Valid Experimental Model of Orofacial Pain. *PAIN* 162(9):2397-2404, 2021.
12. **M Moayedif**†, N Noroozbahari†, K Themelis, G Hadjis*, TV Salomons, R Newport, JS Lewis. The structural and functional connectivity neural underpinnings of body image. *Human Brain Mapping* 42(11):3608-3619, 2021.
13. H Zhang, I Lecker, C Collymore, A Dokova, M C Pham, SF Rosen, H Crawhall-Duk, M Zain, AJ D’Souza, C Cho, V Michalidis, HW Steenland, WJV Lee*, **M Moayedif**, TL Sterley, J Bains, JA Stratton, JR Matyas, J Biernaskie, D Dubins, I Vukobradovic, A Bezginov, AM Flenniken, LJ Martin, JS Mogil, RP Bonin. Cage-lid hanging behavior as a translationally relevant measure of pain in mice. *PAIN* 162(5): 1416-1425, 2021.
14. T Phaneuf*, A Kishen, **M Moayedif**, EWN Lam. Effectiveness of Commercial Software-Enhanced Image Artifact Reduction Software. *J Endodontics* 47(5):820-826, 2021.
15. TV Imbriglio, BV Freeman, M Thaut, **M Moayedif**, HC Tenenbaum, I Cioffi. Music Modulates Awake Bruxism in Chronic Painful Temporomandibular Disorders. *Headache* 60(10): 2389-2405, 2020.
16. **M Moayedif**, G Krishnamoorthy*, PYT He, A Agur, I Weissman-Fogel, HC Tenenbaum, EWN Lam, KD Davis, L Henderson, I Cioffi. Structural abnormalities in the temporalis musculo-aponeurotic complex in chronic muscular temporomandibular disorders. *PAIN* 161: 1787-1797, 2020.
17. T Thang*, A Kishen, **M Moayedif**, PN Tyrrell, W Zhao, S Perschbacher. The effects of physical photostimulable phosphor (PSP) plate artifacts on the radiologic interpretation of periapical inflammatory disease. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology* 129(6): 621-628, 2020.
18. Y Guo, RJ Buffachi, M Kilintari, **M Moayedif**, G Novembre, L Hu, GD Iannetti. Ultra-low frequency neural entrainment to pain. *PLoS Biol* 18 (4), e3000491, 2020.
19. M Verriotis, **M Moayedif**, C Sorger*, J Peters, K Seunarine, C Clark, SM Walker. The feasibility and acceptability of research magnetic resonance imaging in adolescents with moderate–severe neuropathic pain. *PAIN Reports* 5(1): e807, 2020.
20. LJ Ayoub*, A Barnett, A Leboucher*, M Goloskly*, DA Seminowicz, MP McAndrews, **M Moayedif**. The medial temporal lobe in nociception: a meta-analytic and functional connectivity study. *PAIN* 160(6):1245-1260, 2019.
21. **M Moayedif**, M Hodaie. Trigeminal nerve and white matter brain abnormalities in chronic orofacial pain disorders. *PAIN Reports* 4(4): e755, 2019.
22. LJ Ayoub*, DA Seminowicz, **M Moayedif**. A meta-analytic study of experimental and chronic orofacial pain excluding headache disorders. *Neuroimage: Clinical* 20: 901-912, 2018
23. PW Fettes, **M Moayedif**, KAM Dunlop, F Mansouri, F Vila-Rodriguez, P Giacobbe, KD Davis, RW Lam, SH Kennedy, ZJ Daskalakis, DM Blumberger, J Downar. Abnormal Functional Connectivity of Frontopolar Subregions in Treatment-Nonresponsive Major Depressive Disorder. *Biol Psychiatry: Cogn Neurosci Neuroimaging* 3(4):337-347, 2017.
24. L Avivi-Arber, Z Seltzer, M Friedel, J Lerch, **M Moayedif**, KD Davis, BJ Sessle. Widespread volumetric brain changes following tooth loss in female mice. *Front Neuroanat.* 10:121, 2017.

25. VA Mathur†, **M Moayedi**†, ML Keaser, SA Khan, CS Hubbard, M Goyal, DA Seminowicz. High frequency migraine is associated with lower acute pain sensitivity and abnormal insula activity related to migraine pain intensity, attack frequency, and pain catastrophizing. *Front Hum Neurosci*. 10: 489, 2016. DOI: 10.3389/fnhum.2016.00489.

Published (prior to my appointment at the University of Toronto):

26. **M Moayedi**, G Di Stefano, MT Stubbs, B Djeugam, M Liang, GD Iannetti. Nociceptive-evoked potentials are sensitive to behaviourally relevant stimulus displacements in egocentric coordinates. *eNeuro*. 3(3), e0151-15.2016: 1-12, 2016, DOI: 10.1523/ENEURO.0151-15.2016.
27. YH Tu, ZG Zhang, A Tan, WW Peng, YS Hung, M Moayedi, GD Iannetti, L Hu. Alpha and gamma oscillation amplitudes synergistically predict the perception of forthcoming nociceptive stimuli. *Hum Brain Mapp* 37(2): 501-14, 2016.
28. A Adnan†, A Barnett†, **M Moayedi**†, C McCormick, M Cohn, MP McAndrews. Distinct hippocampal functional networks revealed by tractography-based parcellation. *Brain Struct Func* 221(6):2999-3012, 2016. DOI:10.1007/s00429-015-1084-x
29. **M Moayedi**, M Liang, AL Sim, L Hu, P Haggard, GD Iannetti. Laser Evoked Vertex Potentials Predict Defensive Motor Actions. *Cereb Cortex* 25 (12): 4789-98, 2015.
30. **M Moayedi**, TV Salomons, KAM Dunlop, J Downar, KD Davis. Connectivity-based Parcellation of the Human Frontal Polar Cortex. *Brain Struct Func* 220(5): 2603-16, 2015 DOI: 10.1007/S00429-014-0809-6
31. TV Salomons, **M Moayedi**, N Erpelding, KD Davis. A Brief Cognitive-Behavioural Intervention for Pain Reduces Secondary Hyperalgesia. *PAIN* 155(8): 1446-52, 2014.
32. A Kucyi, **M Moayedi**, I Weissman-Fogel, MB Goldberg, BV Freeman, HC Tenenbaum, KD Davis. Enhanced medial prefrontal-default mode network functional connectivity in chronic pain and its association with pain rumination. *J Neurosci* 34(11): 3969-75, 2014.
33. DD Desouza, **M Moayedi**, DQ Chen, KD Davis, M Hodaie. Sensorimotor and pain modulation brain abnormalities in trigeminal neuralgia: a paroxysmal, sensory-triggered neuropathic pain. *PLoS ONE* 8(6): e66340. DOI: 10.1371/journal.pone.0066340, 2013.
34. N Erpelding, **M Moayedi**, KD Davis. Cortical thickness correlates of pain and temperature sensitivity. *PAIN* 153(8): 1602-09, 2012.
35. **M Moayedi**, I Weissman-Fogel, TV Salomons, AP Crawley, BV Freeman, HC Tenenbaum, MB Goldberg, KD Davis. White matter brain and trigeminal nerve abnormalities in temporomandibular disorder. *PAIN* 153(7): 1467-77, 2012.
36. TV Salomons†, **M Moayedi**†, I Weissman-Fogel, AP Crawley, BV Freeman, HC Tenenbaum, MB Goldberg, KD Davis. Perceived Helplessness is Associated with Individual Differences in the Central Motor Output System. *Eur J Neurosci* 35(9): 1481-87, 2012.
37. **M Moayedi**, I Weissman-Fogel, TV Salomons, AP Crawley, BV Freeman, HC Tenenbaum, MB Goldberg, KD Davis. Abnormal gray matter aging in chronic pain patients. *Brain Res* 1456: 82-93, 2012.
38. A Kucyi, **M Moayedi**, I Weissman-Fogel, M Hodaie, KD Davis. Hemispheric asymmetry in white matter connectivity of the temporoparietal junction with the insula and prefrontal cortex. *PLoS One* 7(4): e35589. doi: 10.1371/journal.pone.0035589, 2011
39. **M Moayedi**, I Weissman-Fogel, KS Taylor, AP Crawley, BV Freeman, HC Tenenbaum, MB Goldberg, KD Davis. Contribution of chronic pain and neuroticism to abnormal forebrain gray matter in patients with temporomandibular disorder. *Neuroimage* 55(1): 277-86, 2011.
40. I Weissman-Fogel, **M Moayedi**, HC Tenenbaum, MB Goldberg, BV Freeman, KD Davis. Abnormal cortical activity in patients with temporomandibular disorder evoked by cognitive and emotional tasks. *PAIN* 152(2): 384-96, 2011.
41. I Weissman-Fogel, **M Moayedi**, KS Taylor, G Pope, KD Davis. Cognitive and default-mode resting state networks in males and females: Do male and female brains 'rest' differently? *Human Brain Mapping* 31(11): 1713-26, 2010.

Preprints:

(† indicates equal contributions, * indicates my trainee)

None at the moment

Peer-Reviewed Commentaries and Review Articles (published after my appointment to the University of Toronto):

1. **M Moayed**. The challenges of brain white matter imaging: proceed with caution. *PAIN* Accepted, 2023.
2. **M Moayed**, TV Salomons, LY Atlas. Pain Neuroimaging in Humans: A Primer for Beginners and Non-Imagers. *J Pain* 19(9): 961.e1-961.e21, 2018.
3. DA Seminowicz, **M Moayed**. The dorsolateral prefrontal cortex in acute and chronic pain. *J Pain* 18 (9) 1027-1035, 2017.
4. **M Moayed**. Advances in multivariate pattern analysis for chronic pain: an emerging but imperfect field. *PAIN Reports* 1(3): e580, 2016.

Peer-Reviewed Commentaries and Review Articles (published prior to my appointment to the University of Toronto):

5. KD Davis, A Kucyi, **M Moayed**. The Pain Switch: An "ouch" detector. *PAIN* 156 (11), 2164-2166, 2015.
6. **M Moayed**. All roads lead to insula. *PAIN* 155(10):1920-1921, 2014
7. GD Iannetti, TV Salomons, **M Moayed**, A Mouraux, KD Davis. Beyond metaphor: contrasting mechanisms of social and physical pain. *TiCS* 17(8): 371-378, 2013
8. KD Davis, **M Moayed**. Central Mechanisms of Pain Revealed Through Functional and Structural MRI. *J Neuroimmune Pharmacol* 8(3): 518–34, 2013
9. **M Moayed**, KD Davis. Theories of pain: from Specificity to Gate Control. *J Neurophysiol* 109(1): 5-12, 2013
10. **M Moayed**, DD Desouza, N Erpelding. Making sense of gray matter abnormalities in chronic orofacial pain--synthesizing divergent findings. *J Neurosci* 31(35):12396-7, 2011
11. **M Moayed**, I Weissman-Fogel. Is the insula the "how much" intensity coder? *J Neurophysiol* 102: 1345-47, 2009

Book Chapters:

Published (after my appointment to the University of Toronto):

1. **M Moayed**, KD Davis. Neural mechanisms underlying pain. In P Karoly and G Crombez (Eds), *Motivational Perspectives on Chronic Pain: Theory, Research and Practice*, Oxford University Press, Oxford. Accepted on March 8, 2018.
2. **M Moayed**, TV Salomons. Brain Imaging of Experimental Pain. In A Battaglia (Ed), *An Introduction to Pain and Nervous System Disorders*, Wiley-Blackwell, Oxford, pp. 227-48, 2016.

Published (prior to my appointment to the University of Toronto):

3. **M Moayed**, KD Davis. Functional and structural neural abnormalities in temporomandibular disorders. In AV Apkarian (Ed), *The Brain Adapting with Pain: Contribution of Neuroimaging Technology to Pain Mechanisms*, IASP Press, pp. 343-354, 2015

F1000 Post-Publication Peer Review:

1. J Dostrovsky, **M Moayed**: F1000Prime Recommendation of [Sprenger et al., *J Neurosci* 2015, Mar 11; 35(10):4248-57]. In F1000Prime, 09 Jun 2015; DOI: 10.3410/f.725387434.793507192.F1000Prime.com/725387434#eval793507192
2. J Dostrovsky, **M Moayed**: F1000Prime Recommendation of [Ritter C et al., *J Neurosci* 2014,34(13):4634-9]. In F1000Prime, 02 Dec 2014; DOI: 10.3410/f.718326306.793501896.F1000Prime.com/718326306#eval793501896
3. J Dostrovsky, **M Moayed**: F1000Prime Recommendation of [Henderson LA et al., *J Neurosci* 2013,33(17):7574-82]. In F1000Prime, 10 Jul 2013; DOI: 10.3410/f.718024741.793479547.F1000Prime.com/718024741#eval793479547

4. J Dostrovsky, **M Moayed**: F1000Prime Recommendation of [Kucyi A et al., Proc Natl Acad Sci U S A 2013, 110(46):18692-7]. In F1000Prime, 14 Jan 2014; DOI: 10.3410/f.718156856.793489497.F1000Prime.com/718156856#eval793489497
5. J Dostrovsky, **M Moayed**: F1000Prime Recommendation of [Favilla S et al., Neuroimage 2014, 90:153-62]. In F1000Prime, 03 Apr 2014; DOI: 10.3410/f.718237246.793492932.F1000Prime.com/718237246#eval793492932
6. J Dostrovsky, **M Moayed**: F1000Prime Recommendation of [Quiton R et al., Neuroimage Clin 2014]. In F1000Prime, 04 Aug 2014; DOI: 10.3410/f.718508838.793497873.F1000Prime.com/718508838#eval793497873

COMPETITIVE SALARY FUNDING:

Awarded:

- 2023-2028 Canada Research Chair (Tier 2) in Pain NeuroImaging
CAD500,000 (Salary Support), CAD100,000 (Research Support)
Canada Research Chairs
PI: **M Moayed**
- 2021-2024 UTCSP Pain Scientist
CAD300,000 (Salary Support)
University of Toronto Centre for the Study of Pain
PI: **M Moayed**

COMPETITIVE RESEARCH FUNDING:

Under Review:

- 2023-2028 Hippocampus, Fornix, and Cognition in Chronic Pain
CAD1,465,000
Canadian Institutes of Health Research
Project Grant
PI: M Hodaie (Nominated Principal Applicant), MP McAndrews (co-PI)
Co-Is: **M Moayed**, D Kong, PSP Hung, P Srisaikaew, M Walker

Awarded:

- 2022-2027 Identification of the risk factors and salivary biomarkers associated with the transition from acute to chronic pain-related temporomandibular disorders as well as its persistence
CAD306,000
Canadian Institutes of Health Research
Project Grant
PI: AM Velly
Co-Is: C Beraldo Meloto, BE Cairns, I Cioffi, Z Der Khatchadourian, S Elsaraj, M Ernberg Malin, R Friesen, I Karp, GJ Lavigne **M Moayed**, F Samim, E Schiffman, BJ Sessle, V Singh, P Svensson.
- 2022-2027 Investigating the Relationship between Endocannabinoids, Pain Sensitivity and Brain Structure and Function
CAD933,000
Canadian Institutes of Health Research
Project Grant
PI: **M Moayed**
Co-Is: D Finn, LY Atlas, I Boileau
- 2022-2027 Exploring Novel Brain Circuits in Chronic Painful Temporomandibular Disorders
CAD150,000 (Trainee Salary Awards)
Ontario Government

Early Researcher Award
PI: **M Moayed**

- 2021-2026 Identifying a novel neuromuscular biomarker signature of chronic temporomandibular disorders
CAD830,025
Canadian Institutes of Health Research
Project Grant: Institute of Musculoskeletal Health and Arthritis Bridging Grant
PIs: I Cioffi, **M Moayed**
Co-Is: A Agur, P Chiodini, P Dolce, L Henderson, W Reid
- 2021-2023 Exploring the relationship between gender, body image and pain – a mixed models approach
CAD250,000
New Frontiers in Research Fund
Exploration
PI: **M Moayed** (Nominated Principal Applicant) and RC Lord (co-Principal Applicant)
Co-Is: C Dale, E Potter
- 2021-2022 Repetitive magnetic stimulation for pain modulation—an exploratory study
CAD5,000
Faculty of Dentistry, University of Toronto
Seed Grant
PI: **M Moayed**
Co-I: J Khan, DA Seminowicz
- 2020-2022 A novel model for Pain-Cognition interactions in health and in chronic pain
CAD20,000
Faculty of Dentistry, University of Toronto
Bridge Grant
PI: **M Moayed** and MP McAndrews
- 2020-2021 Exploring a novel brain circuit in painful temporomandibular disorders
CAD5,000
Faculty of Dentistry, University of Toronto
Seed Grant
PI: I Cioffi and **M Moayed**
Co-I: B Kaya
- 2020-2025 Elucidating the Role of Memory in the Transition from Acute to Chronic Pediatric Pain
CAD661,725
Canadian Institutes of Health Research
Project Grant
PI: M Noel
Co-Is: M. Brindle, J Chorney, J Katz, C Lebel, **M Moayed**, R Mychasiuk, N Rasic, J Sumpton, J Vinall, T Williamson, F Ferri de Barros, D Parsons.
- 2019-2026
R61: USD5,361,128 (2019-2022); R33: USD3,563,959 (2023-2026)
National Institutes of Health
R61/R33 HEAL Initiative
PI: L Simons
Site PIs: **M Moayed**, J Stinson, RC Coghill

- 2018-2023 Baseline brain and behavioural predictors of treatment response in pediatric MSK pain
CAD210,430
Canadian Institutes of Health Research
Project Grant: Human Development, Child and Youth Health Bridging Grant
PI: **M Moayed**
- 2018-2023 Identifying pain-specific connectivity in the human brain
CAD187,940
Natural Sciences and Engineering Council
PI: **M Moayed**
- 2018-2024 The Centre for Multimodal Somatosensory and Motor Research
CAD280,000 + CAD42,000 operating costs
Canada Fund for Innovation
Ontario Research Fund
PIs: **M Moayed**, I Cioffi
- Completed:**
- 2020-2022 Identifying a novel neuromuscular biomarker signature of chronic temporomandibular disorders
CAD100,000
Canadian Institutes of Health Research
Project Grant: Institute of Musculoskeletal Health and Arthritis Bridging Grant
PIs: I Cioffi, **M Moayed**
Co-Is: A Agur, P Chiodini, P Dolce, W Reid
- 2020 An Investigation of the neural mechanisms of pain-memory interactions
CAD5,000
Faculty of Dentistry, University of Toronto
Seed Grant
PI: **M Moayed** and MP McAndrews
Co-I: LJ Ayoub, S Audrain
- 2018 Pain-cognition interactions: testing the branching system in pain
CAD5,000 (in form of free MRI scanning)
ToNI Stimulus Grant
PIs: **M Moayed**, MP McAndrews
- 2018 The Role of Psychosocial Stress in Brain-Immune Interactions in Periodontal Disease
CAD10,000 (in form of free MRI scanning)
ToNI Stimulus Grant
PIs: C Quinonez, **M Moayed**, N Gomaa
- 2018 Hippocampal and amygdalar developmental plasticity in chronic pain: a pilot study
CAD5,000 (in form of free MRI scanning)
ToNI Stimulus Grant
PI: **M Moayed**
Co-Is: D Ruskin, E Duerden, F Campbell, J Stinson, MP McAndrews, S Kronenberg
- 2018 Atypical processing of affective touch associated with Autism Spectrum Disorder
CAD10,000 (in form of free MRI scanning)
ToNI Stimulus Grant

PI: R Bonin
Co-I: **M Moayed**

- 2017-2019 Mechanism-based evaluation of paediatric chronic pain
CAD28,000
UCL-UofT Joint Call for Collaborative Projects and Exchange Activities
PIs: **M Moayed** and S Walker
Co-Is: M Verriotis, R Howard, C Clark, J Stinson, D Ruskin, F Campbell
- 2017-2018 Non-invasive brain stimulation to target neural underpinnings of body perception to treat complex regional pain syndrome
USD 15,000
IASP Collaborative Research Grant, International Association for the Study of Pain
PI: **M Moayed**
Co-Is: JS Lewis, J Downar, I Weissman-Fogel
- 2017-2019 Hippocampal function in chronic pain
CAD 10,000
New Researcher Fund, Connaught Fund, University of Toronto
PIs: **M Moayed**, MP McAndrews
- 2017-2018 Hippocampal plasticity in chronic orofacial pain
USD 5,000
Research Grant, American Academy of Orofacial Pain
PI: **M Moayed**
Co-Is: J Lerch, S Beggs, R Traub, MP McAndrews
- 2017-2018 A neurocomputational investigation of pain-cognition interactions
USD 20,000
IASP Early Career Research Grant, International Association for the Study of Pain
PI: **M Moayed**
Co-Is: MP McAndrews and BJ Seymour
- 2017-2020 Physiological and Psychological factors affecting the pain response during orthodontic treatment and individual adaptations to changes in dental occlusion
USD 20,000
American Association of Orthodontists
PI: I Cioffi
Co-Is: **M Moayed**
- 2017-2020 Exploring brain networks and patient descriptions of body perception related to musculoskeletal pain to discover new targets for future treatment
GBP 204,069.27
Arthritis Research UK
PI: JS Lewis
Co-Is: **M Moayed**, J Adams, R Newport and TV Salomons
- 2015-2016 Brain imaging neural changes in response to visual illusion treatment for chronic pain
GBP 30,000
Universities of West England QR Grant.
PI: JS Lewis
Co-Is: **M Moayed**, TV Salomons

PRESENTATIONS

Conference Presentations:

**indicates international invitation or global audience*

- 2023.04.14 The Role of the Hippocampus in Acute, Chronic Musculoskeletal, and Chronic Neuropathic Pain. US Association Study of Pain, Durham, North Carolina, USA*
- 2023.03.20 Peripheral Magnetic Stimulation for Pain. University of Toronto Centre for the Study of Pain Annual Scientific Meeting, Toronto, ON, Canada.
- 2022.11.10 Peripheral Magnetic Stimulation for Pain. UCSD Pain and Neuroscience Symposium, San Diego, CA, USA*
- 2022.09.22 A Motivational Framework for Pain-Cognition Interactions. International Association for the Study of Pain World Congress, Toronto, ON, Canada*
- 2022.06.10 A motivational framework for pain cognition interactions. International Society for Behavioural Neuroscience, St-John's, NFLD, Canada*
- 2022.05.12 Central Mechanisms of Pediatric Chronic Pain: Insights from Novel Neuroimaging Studies. M Noel, L Simons, **M Moayedi**, M Lopez-Sola. 42nd Annual Scientific Meeting, Canadian Pain Society, Montreal, QC, Canada.
- 2022.05.11 Biopsychosocial Drivers and Consequences of Musculoskeletal Pain with Reflection from a Patient's Perspective. L Stone, **M Moayedi**, R Hovey. 42nd Annual Scientific Meeting, Canadian Pain Society, Montreal, QC, Canada.
- 2022.04.27 Palmitoylethanolamide is Positively Correlated To Heat Pain-Evoked Brain Activity. SA Fatemi*, S Bourke, G Hadjis, T Moriarty, I Boileau, DP Finn, **M Moayedi**. 12th Congress of the European Pain Confederation. Dublin, Ireland
- 2021.10.15 *Pain-cognition interactions: a translational framework. Irish Pain Society Annual Meeting, Virtual Meeting.
- 2021.01.28 Baseline Resting-State Functional Connectivity Determines Subsequent Pain Ratings to a Tonic Ecologically Valid Experimental Model of Orofacial Pain. LJ Ayoub*, MP McAndrews, A Barnett, JKC Ho, I Cioffi, **M Moayedi**. IASP Virtual Series on Pain & Expo. Virtual Meeting.
- 2021.01.13 *Why Pain Matters -- From Basic Somatosensation to a Global Challenge. Society for Neuroscience Global Connectome. Virtual Meeting.
- 2020.11.12 *The neural mechanisms of temporomandibular disorders: insights from structural and functional MRI. 7th Iranian Human Brain Mapping Conference. Virtual Meeting.
- 2019.04.03 The meaning of a painful stimulus modulates neurophysiological responses. Symposium Title: Stress and cognitive processes regulating the experience of pain and touch. Canadian Pain Society, Annual General Meeting. Toronto, ON, Canada
- 2019.04.03 Structural and functional brain and trigeminal nerve abnormalities in temporomandibular disorders (TMD). Symposium Title: Temporomandibular disorders: insights from musculature, brain, and genes. Canadian Pain Society, Annual General Meeting. Toronto, ON, Canada
- 2018.09.14 *Novel mechanistic insight for chronic orofacial pains from multimodal assessment: insights from behaviour, musculature, and the nervous system. International Association for the Study of Pain 17th World Congress in Pain. Boston, MA, USA
- 2017.11.15 Abnormal hippocampal connectivity in neuropathic chronic back pain. LJ Ayoub*, A Leboucher*, M Golosky*, DA Seminowicz, MP McAndrews, **M Moayedi** (Session Co-Chair) Advances in Pain Neuroimaging. Society for Neuroscience Conference, Washington, DC, USA
- 2017.09.12 Structural and functional abnormalities in chronic orofacial pain disorders: a meta-analytic study. 8th Scientific Meeting of the TMJ Association, Bethesda, MD, USA
- 2016.11.15 White matter structure in chronic migraine is related to disease characteristics. Pain Imaging Nanosymposium. Society for Neuroscience Conference. San Diego, CA, USA
- 2014.11.17 The frontal polar cortex may encode the cognitive load of pain. Pain Imaging: From Neural Circuits to Perception Nanosymposium. Society for Neuroscience Conference. Washington DC, USA

- 2014.11.17 Dishabituation of nociceptive ERPs is dependent on changes of stimulus location in egocentric coordinates. Pain Imaging: From Neural Circuits to Perception Nanosymposium. Society for Neuroscience Conference, Washington DC, USA
- 2013.10.10 Structural brain imaging in chronic pain: just an epiphenomenon? Topical Seminar Organiser & Speaker. European Federation of IASP Chapters Congress: Pain in Europe VIII. Florence, Italy
- 2010.11.15 White matter abnormalities in temporomandibular disorder. Pain Imaging Nanosymposium, Society for Neuroscience Conference. San Diego, CA, USA

Academic/Invited Presentations

- 2023.01.11 Neural and muscular mechanistic insights for chronic temporomandibular disorders. Institute of Psychology, Chinese Academy of Sciences, Beijing, China (*Virtual*)
- 2022.10.20 Neuromuscular abnormalities in temporomandibular disorders. University of Galway, Ireland
- 2022.06.08 The role of the insula in Pain. SEEG Course, Miami, FL, USA
- 2022.03.28 What can Neuroimaging tell us about Pain. John Hopkins University, Baltimore, MD, USA
- 2022.03.24 The Neural Underpinnings of Individual Differences in Pain. Bath Pain Service, Bath, UK
- 2020.05.28 Understanding pain-cognition interaction using a translational framework. University of Birmingham, Birmingham, UK
- 2019.02.20 Understanding pain-cognition interaction using a translational framework. National University of Ireland, Galway, Ireland
- 2019.02.12 Pain Imaging: Towards a translational framework. Research Day, Faculty of Dentistry, University of Toronto, Toronto, ON
- 2018.12.5 Understanding pain-cognition interactions using a translational framework. Ebbinghaus Empire Lecture Series, Department of Psychology, University of Toronto, Toronto, ON
- 2018.11.30 How Precision Health Will Inform Pain Management, Panel Member, Centre to Advance of Chronic Pain Research, University of Maryland, Baltimore, MD
- 2018.11.12 Pain neuroimaging: towards a translational framework. Imaging for Dummies, Pain in Child Health (PICH2GO), SickKids Hospital, Toronto, ON
- 2018.10.30 Pain neuroimaging: towards a translational framework. Stanford Biobehavioural Pediatric Pain Lab, Stanford University, Palo Alto, CA
- 2018.10.11 Pain neuroimaging: towards a translational framework. Consortium d'imagerie en Neurosciences et Santé Mentale de Québec (CINQ), Université Laval, Quebec, QC
- 2018.05.16 Pain neuroimaging: a primer. UHN Arthritis Program, Toronto Western Hospital, Toronto, ON
- 2018.02.20 A brief (and superficial) Overview of Pain Neuroimaging. DiBS Seminar Great Ormond Street Hospital—Institute of Child Health, University College London, London, UK
- 2016.01.11 EEG Event-Related Data Processing and Analysis, University of Maryland Baltimore, MD, USA
- 2013.10.17 Structural brain abnormalities in temporomandibular disorder. University of Modena, Modena, Italy
- 2012.02.28 Structural brain abnormalities in temporomandibular disorder. University of Toronto Centre for the Study of Pain Annual Meeting. Faculty Club, Toronto, ON, Canada
- 2011.04.11 Structural brain abnormalities in temporomandibular disorder. CIHR STIHR: Cell Signalling in Mucosal Inflammation & Pain Annual Meeting. Old Mill, Toronto, ON, Canada.
- 2011.03.31 Gray and white matter abnormalities in temporomandibular disorders. Education Round, Wasser Pain Management Centre, Mount Sinai Hospital, Toronto, Canada
- 2011.02.25 Gray and white matter abnormalities in temporomandibular disorders. PaIN Group Weekly Meeting, FMRIB Centre, University of Oxford, Oxford, UK
- 2011.02.24 Gray and white matter abnormalities in temporomandibular disorders. Plasticity Group Weekly Meeting, FMRIB Centre, University of Oxford, Oxford, UK
- 2011.02.23 Gray and white matter abnormalities in temporomandibular disorders. Iannetti Lab, Department of Neuroscience, Physiology and Pharmacology, University College London, London, UK
- 2010.10.28 Brain imaging of chronic pain: new insights. CIHR STIHR: Cell Signalling in Mucosal Inflammation & Pain. Webinar: Toronto, ON, Canada.

Public Lectures:

- 2016.09.28 Beyond the pain matrix: Elucidating pain mechanisms using structural and functional MRI.
Hamilton Dental Research Study Club, Hamilton, ON, Canada
- 2010.10.06 What is (chronic) pain? Workshop for Inter-Disciplinary Exchange and Novelty. “WIDEN: On Pain!” Panel Discussion: Toronto, ON, Canada.
- 2010.02.10 What is (chronic) pain? Junior Fellow Lecture Series. Massey College, Toronto, ON, Canada

Abstracts/Posters:

(† indicates equal contributions, * indicates my trainee)

- 2022.09 Hippocampal damage is related to lower pain sensitivity in patients with temporal lobe epilepsy.
LJ Ayoub*, P Mouseli*, P Bandari, MP McAndrews, **M Moayedi**
International Association for the Study of Pain’s 2022 World Congress on Pain
Toronto, ON Canada
- 2022.09 Pain experiences in patients with temporal lobe epilepsy.
LJ Ayoub*, C Dale, P Bandari, MP McAndrews, **M Moayedi**.
International Association for the Study of Pain’s 2022 World Congress on Pain
Toronto, ON Canada
- 2022.09 Cortical structural and functional connectivity between the insula and cingulate cortex.
M Cormie*, B Kaya*, G Hadjis*, P Mouseli*, **M Moayedi**
International Association for the Study of Pain’s 2022 World Congress on Pain
Toronto ON, Canada
- 2022.09 Brain activation to iso-salient stimuli of different modalities.
G Hadjis*, J Ong-Tone, **M Moayedi**
International Association for the Study of Pain’s 2022 World Congress on Pain
Toronto ON, Canada
- 2022.04 Hippocampal volume, *FKBP5* genetic risk alleles, and childhood trauma interact to increase vulnerability to chronic multisite musculoskeletal pain.
JJ Lobo, LJ Ayoub*, **M Moayedi**, SD Linnstaedt
Society for Biological Psychiatry Meeting
New Orleans, LA USA
- 2022.04 Pressure pain thresholds are positively correlated with circulating endocannabinoids and n-acylethanolamines.
SA Fatemi*, S Bourke, T Moriarty, I Boileau, DP Finn, **M Moayedi**.
12th Congress of the European Pain Confederation
Dublin, Ireland
- 2022.04 Delineation of central amygdala and the trigeminal motor nucleus connectivity in humans: An ultra-high field diffusion MRI study.
B Kaya*, P Geha, I de Araujo, I Cioffi, **M Moayedi**
12th Congress of the European Pain Confederation
Dublin, Ireland
- 2021.11 Trigeminal nerve abnormalities are related to pain intensity in myogenic temporomandibular disorders: A probabilistic tractography study.
B Kaya*, I Cioffi, LA Henderson, **M Moayedi**
Society for Neuroscience meeting
- 2021.11 Developmental trajectory of the trigeminal nerve: A diffusion tensor imaging study.
EE Osokin*, B Kaya*, I Cioffi, **M Moayedi**
Society for Neuroscience meeting
- 2020.02 A cognitive branching model of pain-interference.
G Hadjis*, AY Yin*, A Yu, R Sotoodeh*, DA Seminowicz, MP McAndrews, **M Moayedi**
University of Toronto Faculty of Dentistry Annual Research Day
Toronto, ON, Canada
- 2019.09 A cognitive branching model of pain-interference.
G Hadjis*, YA Lin*, R Sotoodeh*, DA Seminowicz, MP McAndrews, **M Moayedi**
7th International Symposium on Motivation and Cognitive Control, Berlin, Germany

- 2019.05 Structural brain and functional connectivity changes in children with neuropathic pain: preliminary results
M Verriotis, C Sorger, J Peters, K Seunarcic, SM Walker, C Clark, **M Moayed**
7th International Congress on Neuropathic Pain, London, UK
- 2019.05 The Medial Temporal Lobe in Nociception: A Meta-Analytic and Functional Connectivity Study
L Ayoub*, MP McAndrews, **M Moayed**
Krembil Research Day, Toronto, ON
- 2019.02 A new model of pain-cognition interactions
YA Lin*, **M Moayed**
Dentistry Research Day, Toronto, ON
- 2018.11 Abnormal hippocampal and amygdalar volume in children with chronic pain
M Moayed, S Lee*, LJ Ayoub*, J Vinall, C Lebel, M Noel
Society for Neuroscience, San Diego, CA
- 2018.09 The effects on photostimulable phosphor (PSP) plates artifacts on the diagnosis of periapical inflammatory disease.
T Thang*, **M Moayed**, SE Perschbacher
69th Annual session of the American Academy of Oral and Maxillofacial Radiology (AAOMR), San Antonio, TX
- 2018.09 Structural abnormalities of the temporalis tendon in patients diagnosed with chronic orofacial pain conditions.
G Krishnamoorthy*, TPY He, L Henderson, A Agur, **M Moayed**, I Cioffi
69th Annual session of the American Academy of Oral and Maxillofacial Radiology (AAOMR), San Antonio, TX
- 2018.09 Persistent orofacial pain drives salience network plasticity in the human brain
LJ Ayoub*, I Cioffi **M Moayed**
IASP 17th World Congress on Pain, Boston MA
- 2017.10 Quantifying photostimulable phosphor (PSP) plates artifacts to standardize radiologic quality assurance.
Thang T*, **Moayed M**, Perschbacher SE.
68th Annual session of the American Academy of Oral and Maxillofacial Radiology (AAOMR), St. Louis, MO
- 2017.05 A Role for the Medial Temporal Lobe in Nocieptive Processing: A meta-analytic study
LJ Ayoub*, M Golosky*, MP McAndrews, **M Moayed**
Krembil Research Day Meeting, Toronto, ON Canada
- 2017.03 A Role for the Medial Temporal Lobe in Noccieptive Processing: A meta-analytic study
LJ Ayoub*, M Golosky*, MP McAndrews, **M Moayed**
Challenge of Chronic Pain, Cambridge, UK
- 2016.11 Neural correlates of a visuo-haptic illusion
M Moayed, K Themelis, TV Salomons, R Newport, JS Lewis
Society for Neuroscience Conference, San Diego, CA
- 2016.09 The Impact of Trait Mindfulness on Sensory, Biological and Cognitive Aspects of Pain
R Harrison, **M Moayed**, TV Salomons
IASP 16th World Congress on Pain, Yokohama, Japan
- 2016.09 Resting state functional connectivity of periaqueductal gray and primary somatosensory cortex is associated with individual differences in conditioned pain modulation
R Harrison, **M Moayed**, TV Salomons
IASP 16th World Congress on Pain, Yokohama, Japan
- 2016.09 Structural and functional abnormalities in chronic orofacial pain disorders: a meta-analytic study
SA Khan*, L Ayoub*, DA Seminowicz, **M Moayed**
Temporomandibular Joint Association 8th Scientific Meeting, Bethesda, MD
- 2015.10 The laser-evoked potential and threat.
M Moayed, M Liang, GD Iannetti

- Pain Translational Research Conference, Chinese Association for Physiological Sciences, Chongqing, China,
- 2014.11 Loss of teeth in genetically-mapped recombinant inbred mouse strains as a model to study the genetic control of orofacial sensorimotor functions and the associated functional and sMRI-defined plasticity of the orofacial sensorimotor cortex post-injury
L Avivi-Arber, M Friedel, J Lerch, Y Hayashi, G Landzberg, **M Moayedi**, KD Davis, Z Seltzer, BJ Sessle
- 2014.10 Society for Neuroscience Conference, Washington DC
Nociceptive ERPs are sensitive to distal-to-proximal heterosegmental changes in stimulus location.
M Moayedi, G Di Stefano, G Cruccu and GD Iannetti
- 2014.10 IASP 15th World Congress on Pain, Buenos Aires, Argentina
Brain potentials elicited by nociceptive stimuli and their relation to defensive actions
M Moayedi, AL Sim, M Liang, and GD Iannetti
- 2013.05 IASP 15th World Congress on Pain, Buenos Aires, Argentina
Laser-evoked EEG responses and defensive reactions
M Moayedi and GD Iannetti
- 2012.08 The 4th International Congress on Neuropathic Pain, Toronto, Canada
Medial prefrontal resting-state connectivity is associated with pain rumination in temporomandibular disorder
M Moayedi, A Kucyi, I Weissman-Fogel, BV Freeman, MB Goldberg, HC Tenenbaum, KD Davis
- 2012.08 IASP 14th World Congress on Pain, Milan, Italy
Cognitive behavioural therapy for pain reduces secondary hyperalgesia
TV Salomons, N Erpelding, **M Moayedi**, KD Davis
- 2012.08 IASP 14th World Congress on Pain, Milan, Italy
Brain gray matter reflects pain response strategies during a cognitive interference task
N Erpelding, **M Moayedi**, KD Davis
- 2012.07 IASP 14th World Congress on Pain, Milan, Italy
Diffusion tensor imaging (DTI) of the brain in pedohebephilic men: Preliminary analyses
SJ Lafaille, **M Moayedi**, DM Mikulis, TA Girard, M Kuban, T Blak, JM Cantor
- 2011.06 International Academy of Sex Research Annual Conference, 2012, Estoril, Portugal
Abnormal gray matter aging in patients with temporomandibular disorder
M Moayedi, I Weissman-Fogel, TV Salomons, BV Freeman, MB Goldberg, HC Tenenbaum, KD Davis
- 2011.06 Organization for Human Brain Mapping Conference, Quebec City, Canada
White Matter Mechanisms of Helplessness in Chronic Pain
TV Salomons, **M Moayedi**, I Weissman-Fogel, BV Freeman, MB Goldberg, HC Tenenbaum, KD Davis
- 2011.06 Organization for Human Brain Mapping Conference, Quebec City, Canada
Cortical correlates of temperature and pain sensitivity
N Erpelding, **M Moayedi**, K.D. Davis
- 2011.06 Organization for Human Brain Mapping Conference, Quebec City, Canada
Right and left temporoparietal junctions exhibit different structural connectivity profiles
A Kucyi, **M Moayedi**, I Weissman-Fogel, KD Davis
- 2010.11 Organization for Human Brain Mapping Conference, Quebec City, Canada
Interoceptive cortical thickness correlates with pain-related personality factors
Q Wu, **M Moayedi**, U Blankstein, KS Taylor, JWY Chen, I Weissman-Fogel, M Hodaie, KD Davis
- 2010.11 Society for Neuroscience Conference, San Diego
Cortical thickness in anterior cingulate cortex is associated with self-reported helplessness in temporomandibular disorder
TV Salomons, **M Moayedi**, I Weissman-Fogel, KS Taylor, AP Crawley, BV Freeman, HC

- Tenenbaum, MB Goldberg, KD Davis
Society for Neuroscience Conference, San Diego, CA
- 2010.06 Cortical gray matter reflects fMRI pain responses and cognitive modulation strategies during pain
N Erpelding, **M Moayedi**, DA Seminowicz, AP Crawley and KD Davis.
Organization for Human Brain Mapping Conference, Barcelona, Spain
- 2009.06 Cortical thickness abnormalities in the somatosensory and cingulate cortices in patients with temporomandibular disorder
M Moayedi, I Weissman-Fogel, HC Tenenbaum, MB Goldberg, KD Davis. Organization for Human Brain Mapping Conference, San Francisco, CA
- 2009.06 Comprehensive brain analysis of resting-state functional connectivity
H Wong, **M Moayedi**, I Weissman-Fogel, KD Davis, D Mikulis, A Crawley
Organization for Human Brain Mapping Conference, San Francisco, CA
- 2009.06 Abnormal cortical responses to emotional and cognitive interference tasks in patients with temporomandibular disorder
I Weissman-Fogel, **M Moayedi**, HC Tenenbaum, MB Goldberg, KD Davis. Organization for Human Brain Mapping Conference, San Francisco, CA
- 2008.11 Fractional anisotropy of cerebral white matter is related to neuroticism and extraversion: a diffusion tensor imaging study.
M Moayedi, I Weissman-Fogel, KS Taylor, KD Davis.
Society for Neuroscience Conference, Washington DC
- 2008.11 Cognitive, emotional and default-mode resting state networks in males and females: do male and female brains 'rest' differently?
I Weissman-Fogel, KS Taylor, **M Moayedi**, KD Davis.
Society for Neuroscience Conference, Washington DC.

AWARDS

Training Awards

- 2013-2016 CIHR Postdoctoral Fellowship (\$45,000/year + 5,000/year Research & Travel)
- 2012-2013 IASP Scan|Design BY INGER & JENS BRUUN|International Trainee Fellowship USD\$50,000
- 2009-2012 CIHR Banting and Best Canada Graduate Scholarship Doctoral Research Award (\$30,000/year + CAD\$5,000/year Research & Travel)
- 2009-2012 CIHR Strategic Training Program: Cell Signals in Mucosal Inflammation and Pain \$25,500/year – Declined *in lieu* of CIHR Banting and Best CGS award
- 2008 Univelor/Lipton Graduate Fellowship in Neuroscience (\$2,500)
- 2007 IMS entrance scholarship (5,000)
- 2007-2008 Ontario Graduate Scholarship (\$15,000)
- 2007-2009 CIHR Strategic Training Program Grant: Pain: Molecules2community (\$20,000)

Travel Awards

- 2014 TMJA Young Investigator Travel Award
- 2014 Guarantors of Brain Travel Award (£800)
- 2015 IASP 15th Congress on Pain Travel Award (US\$900 + Free Registration)
- 2013 4th International Congress on Neuropathic Pain Travel Award (US\$950 + Accommodation)
- 2012 IASP 14th Congress on Pain Travel Award (€700 + Free Registration)
- 2009-2012 Massey College Travel Award (\$250-500)
- 2009 Center for Research Education and Training, University Health Network Travel Award (\$500)
- 2008 CAN-NAC Travel Award for Society for Neuroscience Conference (\$300)

Merit Awards

- 2011 CIHR-INMHA Brain Star Award – Awarded for Moayedi et al *Neuroimage* 2011 (\$1,500)
- 2011 Institute of Medical Science Alan Wu Poster Presentation Award (\$750)

TRAINEES

Graduate Students

Supervisor/Co-Supervisor

- 2022.09 Matthew Mockford
University of Toronto
Thesis Title: *TBD*
Present Position: MSc Student
- 2022.09 Batu Kaya
University of Toronto
Thesis Title: *TBD*
Present Position: MSc Student
- 2022.09 Suha Sagheer
University of Toronto
Thesis Title: *TBD*
Present Position: MSc Student
- 2022.07 Stephanie Bourke
University of Toronto/University of Galway
Thesis Title: *TBD*
Present Position: International Visiting Graduate Student
- 2021.09 Pedram Mouseli
University of Toronto
Thesis Title: Identifying a neuromuscular biomarker for pain severity in chronic myofascial temporomandibular disorders
Present Position: PhD Student
- 2021.09 Evgeny E Osokin
University of Toronto
Thesis Title: Peripheral Magnetic Stimulation for Pain
Present Position: MSc Student
MIBS Sergey Berezina Award (\$88,000)
- 2019.09 Georgia Hadjis
University of Toronto
Thesis Title: Investigating Pain-Cognition Interactions
Present Position: PhD Student
Ontario Graduate Scholarship (\$15,000)
Fredrick Banting and Charles Best Canadian Graduate Scholarship – Master’s (CGS M; \$17,500)
- 2017.05 Lizbeth Ayoub
University of Toronto
Thesis Title: The role of the hippocampus in pain
Present Position: PhD Student
CIHR Banting and Best Canada Graduate Scholarship Doctoral Research Award (CAD\$30,000/year + CAD\$5,000 Research & Travel Allowance/year)
Ontario Graduate Scholarship (\$15,000)
UTCSP Pain Scientist Trainee Award (\$15,000)
1st Prize Poster Presentation Dentistry Research Day 2018 (\$200)
Wilson G. Harron Bursary University of Toronto, Faculty of Dentistry (\$5000)
University of Toronto Open Fellowship Award (\$5000)
Massey College Bursary (\$2500), Massey College, University of Toronto
The Hon. H.N.R. Jackman Bursary (\$2500), Massey College, University of Toronto 2017-2018
- 2017.09 Trevor Thang
University of Toronto
Thesis Title: Developing a Quantitative Artifact Metric for Photo-Stimulable Phosphor

(PSP) Plates to determine a threshold for Diagnostic Hindrance
Present Position: Assistant Professor, Western University
1st Prize Poster Presentation Dentistry Research Day (\$200)
Poyton Graduate Award for Research in Oral Radiology
Albert G. Richards Graduate Student Research Award (AAOMR)
Fredrick Banting and Charles Best Canadian Graduate Scholarship – Master’s (\$17,500)

2017.09 Gaurav Krishnamoorthy
University of Toronto
Thesis Title: Temporalis muscle abnormalities in temporomandibular disorders
Present Position: Oral and Maxillofacial Radiology Staff, Princess Margaret Hospital

Academic Program Advisory Committee Member

2020 - Jinyoung Jang
University of Toronto
Thesis Title: The Effect of Photostimulable Phosphor (PSP) Plate Artifacts on Dental Caries Diagnosis.
Present Position: MSc Specialist Student in Oral and Maxillofacial Radiology

2020 - Melinda Hector
University of Toronto
Thesis Title: TBD.
Present Position: MSc

2019 - 2021 Danielle Douglas
University of Toronto
Thesis Title: Cone Beam Computed Tomography (CBCT) Sialography: Development and optimization of a novel imaging protocol.
Present Position: Oral and Maxillofacial Radiologist

2018 - 2020 Shahrzad Firouzian
University of Toronto
Thesis Title: Individual Variability and Sex Differences in Conditioned Pain Modulation and the Impact of Resilience, and Conditioning Stimulus Pain Unpleasantness and Salience
Present Position: MSc Student

2018 - 2020 Alborz Noorani
University of Toronto
Thesis Title: Hippocampal plasticity in trigeminal neuralgia.
Present Position: MSc Student

2018 - 2020 Tyler Phaneuf
University of Toronto
Thesis Title: Comparing Software-Based Artifact Reduction Algorithms.
MSc Specialist Student in Endodontics
Present Position: Assistant Professor, Faculty of Dentistry, University of Saskatchewan

2016 - 2019 Tina Imbriglio
University of Toronto
Thesis Title: The effects of music on the habitual activity of masticatory muscles and on daytime tooth clenching in patients affected with masticatory muscle pain and pain-free volunteers.
MSc Specialist Student in Orthodontics
Present Position: Orthodontist, University of Rochester

2016 - Natalie Osborne
University of Toronto
Thesis Title: Examining plasticity and treatment outcomes of carpal tunnel surgery.
Present Position: MSc Specialist Student in Orthodontics

Undergraduate Summer Research Students

2021 Sayyed Alisina Fatemi

University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Pain Specific connectivity in the brain
NSERC Undergraduate Summer Research Award (\$5,000)
 2019 Remi (Jae) Huh
 University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Pain Specific connectivity in the brain
NSERC Undergraduate Summer Research Award (\$5,000)
 2019 Cindy Xiao
 University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Trigeminal nerve abnormalities in chronic orofacial pain disorders
 2018 Jeremy Ho
 University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Brain plasticity driven by a novel tonic model of pain
 2018 Andrew Yu
 University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Neurocomputational approaches to identify the value of pain
 2018 Amy (Ying) Lin
 University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Investigating the cognitive load of pain: a new model
1st Prize Undergraduate Oral Presentation Dentistry Research Day 2019 (\$700)
 2018 & 2019 Virginia Lee
 University of Toronto
 Role: Principal Supervisor June 2019-August 2019
 Thesis/Project Title: A murine study of MR-detectable brain abnormalities in chronic pain
 2017 Tony He
 University of Toronto
 Role: Co-Supervisor
 Thesis/Project Title: Abnormalities in the muscles of mastication in TMD
 2017 John Kandala
 University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Identifying pain-specific functional connectivity
 2017 Joanna Man
 University of Toronto
 Role: Principal Supervisor
 Thesis/Project Title: Structural connectivity of the salience network

Bachelor's Honours Project

2020 Evgeny Osokin
 University of Toronto
 Role: Principal Supervisor
 Project Title: Developmental trajectory of trigeminal nerve structure: a diffusion imaging study
 2019 Jade Ong-Tone
 University of Toronto
 Role: Principal Supervisor
 Project Title: Identifying pain specific brain connectivity
 2019 Gianluca Guglietti

2019 University of Toronto
 Role: Principal Supervisor
 Project Title: Impact of pain on pediatric brain development
 Yago Gaspar

2018 University of Toronto
 Role: Principal Supervisor
 Project Title: Hippocampal plasticity in chronic pain
 Nancy Mugisha

2017 University of Toronto
 Role: Principal Supervisor
 Project Title: Hippocampal plasticity in chronic pain
 Steven Lee

2015 University of Toronto
 Role: Principal Supervisor
 Project Title: Hippocampal plasticity in chronic pain
 Brice Djeugam

2014 University College London
 Role: Co-Supervisor
 Project Title: Dissecting the relationship between the vertex potential and defensive motor actions
 Matthew Stubbs

2014 University College London
 Role: Co-Supervisor
 Project Title: Vertex potentials reflect threatening changes in stimulus location
 Alena Sim

University College London
 Role: Co-Supervisor
 Project Title: Event-Related Potentials and Defensive Movements

Research Assistants

2020- Reem Mustafa
 University of Toronto
 Role: Principal Supervisor
 Project: Galvanic Skin responses to aversive stimuli – a tool for salience matching

2020- Matthew Cormie
 University of Toronto
 Role: Principal Supervisor
 Project: Ultra-High Field investigation of Insula-MCC connectivity

2020 - Sayyed Alisina Fatemi
 University of Toronto
 Role: Principal Supervisor
 Project: Endocannabinoids and Pain

2020 - Batu Kaya
 University of Toronto
 Role: Principal Supervisor
 Project: Brainstem Pathways in Orofacial Pain

2020 - Matthew Mockford
 University of Toronto
 Role: Principal Supervisor
 Project Title: SPRINT

2019 - 2020 Gianluca Guglietti
 University of Toronto
 Role: Principal Supervisor

2018 - 2021 Project Title: Cognitive branching and pain
Present Position: MSc Student, McGill
Andrew Yu
University of Toronto
Role: Principal Supervisor
Project Title: N/A (Technical Support in Lab)

2018 - 2020 Present Position: Dentist
Georgia Hadjis
University of Toronto
Role: Principal Supervisor
Project Title: Cognitive branching and pain

2018 Present Position: PhD student, University of Toronto
Daniel (Pouria) Tehrani
University of Toronto
Role: Principal Supervisor
Project Title: Investigating the Socioeconomic status

2016-2017 Present Position: Undergraduate Student
Lizabeth Ayoub
University of Toronto
Role: Co-Supervisor
Project Title: The role of the hippocampus in pain processing

2016 Present Position: PhD Candidate, University of Toronto
Mitchell Golosky
University of Toronto
Project Title: Hippocampal activity in pain: a meta-analysis
Present position: Medical Resident

Undergraduate Volunteers

2018-2019 Nasim Noroozbahari
University of Toronto
Principal Supervisor
Project Title: The neural underpinnings of visual illusion
Present Position: Dental Student, UBC

2016 – 2017 Aziliz Leboucher
University of Toronto
Principal Supervisor
Project Title: Hippocampal connectivity in chronic pain
Present Position: Project Manager, Philosophy Department, École Normale Supérieure, Paris, France

PEER REVIEW

Editorial Board Memberships

2020 – Associate Editor, Pain Research Methods, *Frontiers in Pain Research*
2021 – Editorial Board Member, *PAIN Reports*
2018 – Editorial Board Member, Section on Pain Measurement and Imaging, *PAIN*

Journals

Arthritis & Rheumatology (2)	Annals of Clinical and Translational Neurology (1)
Annals of Neurology (2)	Biological Psychiatry (5)
Brain Research (3)	Brain Topography (3)
Brain Imaging and Behavior (1)	Cephalagia (2)
Cerebral Cortex (7)	Clinical Pharmacology & Therapeutics (1)

Consciousness and Cognition (1)	
Current Biology (1)	eNeuro (4)
Experimental Brain Research (1)	Gender Medicine (1)
Harvard Review of Psychiatry (1)	Human Brain Mapping (5)
Journal of Oral, Facial and Headache Pain	Journal of Neuroscience (5)
Journal of Pain (21)	Journal of Physiology (3)
Journal of Urology (1)	Neurobiology of Pain (3)
Neuroimage (3)	NeuroImage: Clinical (2)
Neuropharmacology (1)	PAIN (79)
Pain Medicine (1)	Pain Reports (6)
Pain Practice (2)	PLoS Biology (1)
PLoS One (4)	Progress in Neurobiology (1)
Psychosomatic Medicine (1)	Science Translation Medicine (1)
Scientific Reports (4)	Sexual Abuse: A Journal of Research and Treatment (1)

Grant Reviews

2021- Member, College of Reviewers, Canadian Institutes of Health Research
 2022- Member, College of Experts, VersusArthritis, UK

Reviewer

2021 Fonds de Recherche du Québec – Nature et Technologies
 2020 Canadian Institutes of Health Research, Project Grant – BSB

External Reviewer

2022 UCSD CCRC Pilot Study Grant
 2019-2022 Natural Sciences and Engineering Research Council
 2018, 2019 German Research Foundation
 2018 Arthritis Research UK Foundation Fellowship
 2018 Quebec Pain Research Network Inter-Network Pilot Project Competition
 2018 University of Maryland, Baltimore's (UMB), new Institute for Clinical and Translational Research (ICTR) Accelerated Translational Incubator Pilot (ATIP) Grant Program
 2018 United States-Israel Binational Science Foundation

Honors and Fellowships

2022-2027 Canada Research Chair (Tier 2) in Pain NeuroImaging
 2017 Fellow of the Kavli Summer Institute in Cognitive Neuroscience
 2016-2017 Fellow of the Royal Society of the Arts and Manufactures
 2012-2016 Honorary Research Fellow, Division of Biosciences, University College London
 2011-2012 James C. Cummings Junior Fellow in the Arts, Trinity College, University of Toronto
 2008-2012 Junior Fellowship, Massey College, University of Toronto