



Date Submitted: 2017-02-28 17:25:41

**Confirmation Number: 659790** 

Template: NSHRF CV

## Dr. Javeria Ali Hashmi

Correspondence language: English

Date of Birth: 3/10

## **Contact Information**

The primary information is denoted by (\*)

#### **Address**

Primary Affiliation (\*)

Nova Scotia Health Authority Pain Management Unit 4th Floor Dickson Building 5820 University Avenue Room 4086 Halifax Nova Scotia B3H 1V7 Canada





## Dr. Javeria Hashmi

## **Degrees**

2006/1 - 2010/6 Doctorate, PhD, Neuroscience, University of Toronto

Degree Status: Completed Supervisors: Dr. Karen Davis

2001/9 - 2004/2 Master's Thesis, MSc, Pharmacology and Toxicology, University of Western Ontario

Degree Status: Completed

Supervisors: Dr. James L Henry

## Recognitions

2014/6 Research award

Organization of Human Brain Mapping

Prize / Award

2014/5 Neal Alan Mysell Research Award in Psychiatry, Harvard Medical School

Harvard Medical School

Prize / Award

2012/6 Research Award

Organization of Human Brain Mapping

Prize / Award

# **Employment**

2015/8 Canada Research Chair Tier II (Pain), Assistant Professor

Anesthesia, Pain Management and Perioperative Medicine, Medical School, Dalhousie

University

2012/9 - 2015/7 Harvard Research Fellow

Psychiatry and Neurology, Harvard Medical School

2010/2 - 2012/8 Postdoctoral Research Fellow

Physiology, Northwestern University Medical School

2004/3 - 2004/12 Research Assistant

Physiology and Pharmacology, University of Western Ontario

### **Affiliations**

The primary affiliation is denoted by (\*)

(\*) 2015/8 Assistant Professor, Anesthesia, pain management and perioperative medicine, Dalhousie

University

# **Research Funding History**

Awarded [n=5]

Co-applicant Radiology Research Foundation

Principal Applicant : Steven Beyea

**Funding Sources:** 

2016/5 - 2017/5 Dalhousie University

Total Funding - 5,000 (Canadian dollar)

Funding Competitive?: Yes

Principal Applicant Canada Research Chair Tier II in Pain

**Funding Sources:** 

2016/10 - 2021/10 Canadian Institutes of Health Research (CIHR)

Total Funding - 500,000 (Canadian dollar)

Funding Competitive?: Yes

Principal Applicant Canada Foundation for Innovation (CFI) & John R. Evans Leaders Fund (now in process

for matching funds from NSRIT)

**Funding Sources:** 

2017/5 - 2018/5 Canada Foundation for Innovation (CFI)

John R. Evans Leaders Fund

Total Funding - 312,000 (Canadian dollar)

Funding Competitive?: Yes

Principal Applicant NSERC Discovery Grant

**Funding Sources:** 

2016/5 - 2020/5 Natural Sciences and Engineering Research Council of Canada

(NSERC)

Total Funding - 159,000 (Canadian dollar)

Funding Competitive?: Yes

Co-applicant Nova Scotia Health Research Foundation (NSHARF)

Principal Applicant: John Hanly

**Funding Sources:** 

2016/5 - 2018/5 Capital District Health Authority (The) (CDHA) (Nova Scotia)

Total Funding - 15,000 (Canadian dollar)

Funding Competitive?: Yes

# Student/Postdoctoral Supervision

Master's Thesis [n=1]

Co-Supervisor Christopher O'Grady (In Progress), Dalhousie University

Student Degree Start Date: 2015/9

#### Post-doctorate [n=1]

Principal Supervisor Manyoel Lim (Completed), Dalhousie University

Student Degree Start Date: 2010/3

Project Description: Neuromagnetic studies on cortical somatosensory and auditory

functions in healthy subjects and patients with fibromyalgia

Present Position: Postdoctoral Fellow

## Research Associate [n=1]

Principal Supervisor Andrew McIntyre (Completed), Dalhousie University

Student Degree Start Date: 2004/9
Present Position: Research Associate

# **Community and Volunteer Activities**

2017/5 Panelist, Pain Research Forum

Invited panelist for online webinar on www.painresearchforum.org. Speaker: Dr. Luana

Colloca

2015/12 Scientific Consultation, BBC One

Scientific consultation for documentary on the topic of the brain's role in chronic back pain,

Program title: 'Doctor in the House' by Jack Rampling

2010/1 Peer reviewer, Scientific Journals

PAIN, Journal of Pain, Scientific Reports, Journal of Neuroscience Methods, Plos One,

Cerebral Cortex, Frontiers in Neuroscience and more

2013/9 - 2015/4 Organizer, Host and Facilitator, MGH/HST Martinos Center for Biomedical Imaging

Brainmap Seminar Series, Harvard-MIT Martinos Center

2013/11 - 2014/7 Organizer, Host and Facilitator, MGH/HST Martinos Center for Biomedical Imaging

New Advances in Pain Imaging Journal Club

# **Knowledge and Technology Translation**

2015/9 Steering committee member, Research Uptake Strategies

Group/Organization/Business Serviced: Dal Pain Network

Target Stakeholder: Academic Personnel

Outcome / Deliverable: Dal Pain Network aims to develop a platform that will allow knowledge transfer and communication between pain experts from different disciplines and sub-disciplines. We currently have three mandates: 1. Research: To provide collaborative platform to foster research on the fundamental mechanisms of chronic pain Socio-Economic: To engage local pain researchers in a global movement towards developing tools, technologies, agents and new ideas that can assist with developing a robust clinical strategy and health care policy to tackle the challenge imposed by chronic pain on society 3. Funding: To create a unified identity with a focus on pain research and translation excellence, which will improve access to major research funding sources Evidence of Uptake/Impact: The Dalhousie Pain Network has demonstrated a successful track record by hosting several public and academic forums to disseminate research findings and educate Nova Scotian pain patients. For the last 4 years this group has organized and put on Dal Pain Research Day (2016) which featured an acclaimed key note speaker (Dr. Irene Tracey) along with poster sessions with awards for trainees and fostered discussions and collaborations. This group has also hosted a Pain Colloquium (February 2017) on the topic of potential benefits and limitations of using opioids highlighting chronic pain management, and participated in an information workshop with Human Resources at Dalhousie University highlighting the question of dealing with chronic pain in the workplace.

References / Citations / Web Sites: https://medicine.dal.ca/research/pain-group/about/ Steering%20Committee.html

Activity Description: Participated in organization of events, updating of website, planning activities for upcoming events.

### International Collaboration Activities

2015/7 CollaboratorUnited States

Collaboration with Dr Sara Lazar at Harvard Medical School to investigate the neural mechanisms of mindfulness meditation with fMRI and magnetoencephalography

2015/7 Collaborator, United States

Collaboration with Dr Randy Gollub and Dr Jian Kong on investigating the neural mechanisms underlying placebo analgesia. Two abstracts from this collaboration were accepted by Society for Neuroscience meeting (2015) and International Association for the

Study of Pain (2017).

2015/7 Collaborator, United States

Collaborator with Dr Tal Kenet and Dr Sheraz Khan on a project investigating

the development and maturation of brain networks with resting state

magnetoencephalography. One manuscript co-authored with this collaborator is in revision

for re-submission.

2013/11 Collaborator, Canada

Collaboration on a review article with Dr Karen Davis at University of Torono

## **Presentations**

 (2017). Is large-scale brain connectivity functionally meaningful?. Lecture at Dr. Leslie Phillmore's course in the Department of Psychology and Neuroscience, Canada

Main Audience: Researcher

2. Dr. Karen D. Davis, PhD (Speaker) Dr. Jason J. McDougall, PhD (Speaker) Dr. Javeria Ali Hashmi, PhD (Chair and Speaker). (2017). Biomarkers for chronic pain. Canadian Pain Society Annual Meeting, Halifax, 2017, Canada

Main Audience: Researcher

- 3. (2016). Brain Analytics for Precision Medicine. Medical Neuroscience Seminar Series, Canada Main Audience: Researcher
- 4. (2016). Role of large-scale neural communication in conscious perception. Department of Psychology and Neuroscience Colloquium, Halifax, Canada

Main Audience: Researcher

- 5. (2016). Role of large-scale neural communication in conscious pain perception. Speaker at Grand Rounds, Dalhousie University, Department of Anesthesia, Pain Management and Perioperative Medicine, Canada Main Audience: Knowledge User
- 6. (2016). Brain analytics for precision medicine. Lecture at for Stan Matwin's course "Machine Learning for Big Data", Canada

Main Audience: Knowledge User

- 7. (2016). Brain Analytics for Precision Medicine. Grand Rounds, Dalhousie University, Department of Anesthesia, Pain Management and Perioperative Medicine., Canada Main Audience: Knowledge User
- 8. (2015). Brain network properties predict individual variability in analgesia related to psychological aspects of treatment in chronic pain patients. Fifth International Meeting of the Special Interest Group on Neuropathic Pain (NeuPSIG). Session title: Brain Imaging in Neuropathic Pain: role in assessing mechanisms and treatment effects., Nice, France

Main Audience: Knowledge User

9. (2014). Spectral signatures of network development in resting state MEG. Oral session speaker. Session title: Lifespan Development. Annual meeting of the Organization for Human Brain Mapping, Hamburg, Germany

Main Audience: Researcher

10. (2013). Predictive dynamics in brain networks of chronic pain patients. Annual Pain Therapeutics Summit, Boston, United States

Main Audience: Decision Maker

11. (2013). Predictive dynamics in brain networks of chronic pain patients. Invited plenary lecture. Queens University, Kingston, Canada

Main Audience: Researcher

- 12. (2013). Predictive dynamics in brain networks of chronic pain patients. Speaker at Brainmap Seminar Series, MGH/HST Martinos Center for Biomedical Imaging, Boston, United States Main Audience: Researcher
- 13. (2012). Brain networks for placebo analgesia in a clinical trial for chronic back pain. Nanosymposium speaker. Session title: Pain and Imaging II. Society of Neuroscience Annual Conference, Washington DC, United States

Main Audience: Researcher

14. (2012). Functional brain networks that predict transition from sub-acute to chronic pain. Speaker and awardee at interactive poster session. Annual meeting of the Organisation for Human Brain Mapping,, Beijing, China

Main Audience: Researcher

## **Text Interviews**

2013/08/08 News, Pain Research Forum. Brain Activity Shifts as Pain Becomes Chronic. Lower back

pain signals move from nociceptive regions to areas involved with emotional aspects of

pain by Abdul-Kareem Ahmed, Pain Research Forum

2013/01/08 News, Pain research Forum. Peering at the Brain for Clues to Treatment Response.

Imaging studies suggest potential biomarkers for inter-individual variability in placebo

response and opioid analgesia by Megan Stephan, Pain Research Forum.

## **Publications**

## **Journal Articles**

Hashmi, J.A, Loggia, M, Khan, S, Gao, L., Kim J, Napadow, V, Brown E.N, Akeju OJ. (2017).
 Dexmedetomidine Disrupts the Local and Global Efficiencies of Large-scale Brain Networks. Commentary by George Mashour. Title: Network Inefficiency: A Rosetta Stone for the Mechanism of Anesthetic-induced Unconsciousness. Anesthesiology -The Journal of the American Society of Anesthesiologists. 126(3): 419-430.

First Listed Author

Accepted

Refereed?: Yes

2. Khan S\*, Hashmi, J.A\*. Gollub, R.L, Kong, J, Hamalainen, M.S, Stufflebeam S, Kenet T \*equal contribution. (2017). Spectral signatures of network development in resting state MEG. Nature Communications. First Listed Author

I list Listed Addition

Revision Requested

Refereed?: Yes

3. Khan, S, Hashmi, J.A, Mamashli, F, Bharadwaj H.M, Ganesan, S, Michmizos, K.P, Kitzbichler, M.G, Zetino, M, Garel K.A, Hamalainen, M.S, Kenet T.(2016). Altered onset response dynamics in somatosensory processing in autism spectrum disorder. Frontiers in Neuroscience. 10 Co-Author

Published

Refereed?: Yes

4. Mamashli, F., Khan, S., Bharadwaj, H., Michmizos, K., Ganesan, S., Garel, K.-L. A., Ali Hashmi, J., Herbert, M. R., Hämäläinen, M. and Kenet, T.(2016). Auditory processing in noise is associated with complex patterns of disrupted functional connectivity in autism spectrum disorder. Autism Research.

Co-Author

Published

Refereed?: Yes

5. Vachon-Presseau, E, Te´ treault, P, Petre, B, Huang, L, Berger, S, Torbey, S, Baria, A.T, Mansour, A.R, Hashmi, J.A, Griffith, J.W, Comasco, E, Schnitzer, T, Baliki, M.N, and Apkarian A.V.(2016). Corticolimbic anatomical characteristics predetermine risk for chronic pain. Brain.

Co-Author

Accepted

Refereed?: Yes

6. Chen, X, Spaeth, RB, Freeman, SG, Scarborough, DM, Hashmi, J.A, Wey, H–Y, Egorova, N, Vangel, M, Mao, J, Wasan, AD. Edwards, RR, Gollub,RL, Kong,J.(2015). The modulation effect of longitudinal acupuncture on resting state functional connectivity in knee osteoarthritis patients. Molecular Pain.

Co-Author

Accepted

Refereed?: Yes

T. Hashmi, J.A, Kong J, Spaeth R, Khan S, Kaptchuk T, Gollub R.L.(2014). Functional Network Architecture Predicts Psychologically Mediated Analgesia Related to Treatment in Chronic Knee Pain Patients. Journal of Neuroscience. 34: 3924–3936.

First Listed Author

Published

Refereed?: Yes

8. Spaeth R, Camhi S, Hashmi J.A, Vangel M, Wasan A.D, Edwards R.E, Gollub R.L, Kong, J.(2013). A Longitudinal Study of the Reliability of Acupuncture Deqi Sensations in Knee Osteoarthritis. Evidence-based Complementary and Alternative Medicine.

Co-Author

Published

Refereed?: Yes

9. Hashmi J.A, Davis K.D.(2013). Deconstructing Sex Differences in Pain Sensitivity.PAIN. 155: 10-13.

First Listed Author

Published

Refereed?: Yes

 Hashmi J.A, Baliki M.N, Huang L, Torbey S, Herman K, Schnitzer T.J, Apkarian A.V.(2013). Shape shifting pain: Chronification of back pain shifts brain representation from nociceptive to emotional circuits. Brain. 136: 2751–2768.

First Listed Author

Published

Refereed?: Yes

11. Hashmi J.A, Baria A, Baliki M.N, Huang L, Schnitzer TJ, Apkarian A.V.(2012). Brain networks predicting placebo analgesia in a clinical trial for chronic back pain. PAIN. 153: 2393–2402.

First Listed Author

Published

Refereed?: Yes

12. Hashmi J.A, Baliki M.N, Huang L, Parks E.L, Chanda M.L, Schnitzer T.J, Apkarian A.V.(2012). Lidocaine patch (5%) is no more potent than placebo in treating chronic back pain when tested in a randomised double blind placebo controlled brain imaging study. Molecular Pain. 24: 8:29.

First Listed Author

Published

Refereed?: Yes

13. Cecchi, G.A., Huang, Hashmi J.A, Centeno M, Rish, I Apkarian, A.V. (2012). Predictive Dynamics of Human Pain Perception. PLoS Computational Biology. 10: 1371.

Co-Author

Published

Refereed?: Yes

### **Conference Publications**

1. Anesthesia disrupts local and global communication in large-scale brain networks. Organization of Human Brain Mapping

Abstract

First Listed Author

Accepted

2. Hashmi, J.A, Khan, S, Lieser, J., Mincucci, D, Gollub R.L, Kong J. (2016). Local efficiency in resting state brain networks predicts experimental and clinical placebo analgesia in five separate studies. International Association for the Study of Pain

Abstract

First Listed Author

Submitted

3. Hashmi, J.A, Khan, S, Gollub, R.L, Kong, J.(2015). Intrinsic functional connectivity predicts task evoked responses and pain modulation in an experimental model of placebo analgesia. Society for Neuroscience Abstract

First Listed Author

Published

4. Hashmi, J.A\*, Khan S\*, Gollub, R.L, Kong, J, Hamalainen, M.S, Stufflebeam S, Kenet T.(2014). Spectral signatures of network development in resting state MEG.Annual Meeting for the Organization of Human Brain Mapping

Abstract

First Listed Author

Published

5. Hashmi, J.A, Kong J, Spaeth R, Kaptchuk T, Gollub RL.(2013). Small World Brain Metrics Predict Placebo Analgesia in Osteoarthritis Patients. Organization for Human Brain Mapping,

Abstract

First Listed Author

Published

6. Hashmi, J.A, Baliki MN, Huang L, Torbey S, Herman K, Schnitzer TJ, Apkarian AV.(2012). Functional brain networks that predict transition from sub acute to chronic pain. Organization for Human Brain Mapping meeting

Abstract

First Listed Author

Published