

JAIDEEP S. BAINS PH.D.

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Professor

HOTCHKISS BRAIN INSTITUTE

Department of Physiology and Pharmacology
Cumming School of Medicine, University of Calgary

ACADEMIC RECORD

Ph.D., 1997

Department of Physiology
Queen's University, Kingston, Ontario

M.Sc., 1993

Department of Physiology
Queen's University, Kingston, Ontario

B.Sc. (Hons), 1991

Queen's University, Kingston, Ontario

RESEARCH TRAINING

University of Colorado Health Sciences Center
Postdoctoral Research Associate, Departments of Neurology and Pediatrics, 1997-2001
Supervisor: Dr. K.J. Staley

AWARDS & DISTINCTIONS

- 2013 *'Smith' Distinguished Achievement Award for Senior Faculty, Fac. Of Medicine, UCalgary*
- 2011 *Dean's Publication and Mentorship Prize, Faculty of Medicine, University of Calgary*
- 2009 *'Watanabe' Award for Overall Research Excellence, Fac. of Medicine, UCalgary*
- 2007 *Stevenson Visiting Lectureship, Canadian Physiological Society*
- 2006-11 *Senior Medical Scholar, AHFMR*
- 2006 *'Cochrane' Research Achievement Award, Fac. of Medicine, UCalgary*
- 2006 *Warren Veale Award, Department of Physiology and Biophysics,*
- 2005 *Visiting Scientist Award, Égide Foundation, France*
- 2001-06 *New Investigator Award, Canadian Institutes of Health Research*
- 2001-06 *Medical Scholar Award, AHFMR*
- 2000-01 *Eric Lothman Fellow in Epilepsy, American Epilepsy Society*
- 1998-00 *Long-Term Fellowship, Human Frontiers Science Program Organization*
- 1997-98 *Research Fellowship, Heart & Stroke Foundation of Canada*
- 1997 *Abraham's Prize in Physiology, Queen's University*
- 1994-97 *Research Traineeship, Heart & Stroke Foundation of Canada*

ACADEMIC APPOINTMENTS

2011-present	Professor, Physiology and Pharmacology, University of Calgary
2006-11	Associate Professor, Physiology and Biophysics, University of Calgary
2001-2006	Assistant Professor, Physiology and Biophysics, University of Calgary

EDUCATIONAL ACTIVITIES

i. UNDERGRADUATE

MDSC 502	2002-2004
NEUR 511 Current topics in Neuroscience	2012-2015
MDSC 528 Independent Research Study	2018-2019

ii. GRADUATE

MDSC 619.01 Cellular and Molecular Neuroscience	2001-present
MDSC 751.09 Ion Channels and Diseases	2006-present
MDSC 619.02 Systems Neuroscience	2007-present

iii. POSTGRADUATE

Psychoneuroendocrinology for Psychiatry Residents	2008-2012
Psychiatry CME – Synaptic Plasticity	2008

Current Students

SPENCER LOEWEN Ph.D. Candidate[§] – Degree expected: July 2022
KATHRYN SIMONE, Ph.D. Candidate (co-supervised) – Degree expected: January 2022
PAULA GOMEZ SOTRES, Ph.D. Candidate (co-supervised) – Degree expected: August 2024
GOVIND PERINGOD, Ph.D. Candidate[§] (co-supervised) – Degree expected: July 2027
MIJAIL ROJAS CARVAJAL, Ph.D. Candidate – Degree expected: July 2027

Graduated Students

Ph.D.

NEILEN RASIAH Ph.D. June, 2019; [Chancellor's Medal](#); Medical Student, University of Calgary
PHILLIP COLMERS Ph.D. October, 2017*; Postdoctoral Fellow, Tufts University, Boston
JACLYN WAMSTEEKER Ph.D. December, 2013*; [Chancellor's Medal](#), [EMBO Fellow](#); Scientist, F Hoffmann-La Roche, Copenhagen, DK
KAREN CROSBY Ph.D. December 2012* (co-supervised); AIHS Studentship; Associate Professor, Mount Allison University
KARL IREMONGER Ph.D. October 16, 2009*; [Governor General's Gold Medal](#); [NZ Prime Minister's Award recipient](#); Associate Professor, University of Otago, NZ
SARAH HEWITT Ph.D. August 13, 2008; currently Associate Professor, Mount Royal University
GRANT GORDON Ph.D. December 7, 2006*^{@#}; [Governor General's Gold Medal](#); [CIHR Postdoctoral Fellow](#); currently Associate Professor, University of Calgary
ROBERT ROSE Ph.D. May 2005 (co-supervised); currently Professor, University of Calgary

* AHFMR/AIHS Ph.D. Scholarship

@ NSERC Ph.D. Scholarship

§ CIHR Ph.D. Scholarship

CIHR BRAINSTAR

M.Sc.

AARON LANZ M.Sc. August 2019[§]; **nominated for Governor General's and Chancellor's Medal**; currently PhD candidate, New York University.

LAURA SENST M.Sc. February 2014; currently Anaesthesiology Residency, University of Toronto

[§] CIHR M.Sc. Scholarship

Current Postdoctoral Fellows

REA MITELMAN PH.D. (Hebrew University, Israel), CONP Fellow	2018-
TONY LEE STERLEY PH.D. (University of Cape Town, RSA), AIHS Fellow*	2015-
NURIA DAVIU PH.D. (University of Barcelona), Eyes High and AIHS Fellow	2015-
SHAGHAYEGH SAJARI Ph.D. (University of Toronto), NSERC CREATE Fellow	2020-
IBUKUN IKINRINADE PH.D. (UNIVERSITY OF LISBON)	2020-
SARAH COOK PH.D. (UNIVERSITY OF COLORADO)	2021-

* SFARI Bridge to Independence Award

Former Postdoctoral Fellows

CIARAN MURPHY-ROYAL*	2015-2020; Assistant Professor, Université de Montréal
DERYA SARGIN	2017-2019; Assistant Professor, University of Calgary
AGNES ZUREK* [§]	2015-2018; Medical Student, University of Calgary
TAMÁS FÜZESI*	2010-2017; Staff Scientist, CSM, Calgary
WATARU INOUE*	2009-2014; Associate Professor, Western University
CAROLINA GUTIERREZ-HERRERA	2009-2011; Junior Scientist, University of Bern
BRENT KUZMISKI#	2008-2012; Senior Principal Scientist, Pfizer, Boston MA
VINCENT MARTY	2008-2011; Research Assistant Professor, UCLA
ADRIENNE BENEDIKTSSON	2008-2009; Associate Professor, Mount Royal University

% NARSAD Young Investigator Award

* AHFMR/AIHS Ph.D. Fellowship

[§] CIHR Banting Scholar

CIHR BRAINSTAR

Thesis Supervisory Committees (current students only)

Sofia Neira, University of North Carolina

Rachel Chudoba, Rosalind Franklin University of Medicine and Science

Eugenia Vivi, University of Regensburg

Robert Aukema, Department of Neuroscience, UCalgary

Britanny Ambrose, Department of Neuroscience, UCalgary

Gavin Petrey, Department of Neuroscience, UCalgary

Nathan Godfrey, Department of Neuroscience, Ucalgary

Catherine Tucker, Department of Neuroscience, UCalgary

External Ph.D. Examiner

Gina Kemp, McGill University, March 2021

Jimena Perez Sanchez, Université Laval, November 2018

Kristina Valentinova, IFM - Institut du Fer à Moulin, Paris, September 2015

Alesya Evstratova, Université Laval, March 2014
Katrina Choe, McGill University, July 2013
Steven Connor, University of Alberta, August 2011
Tevye Stachniak, McGill University, February 2011
Eric Trudel, McGill University, February 2010
Alexandre Serrano, Université de Montreal, February 2009

ADMINISTRATIVE RESPONSIBILITIES

i. DEPARTMENTAL/INSTITUTIONAL

2016-17 Cumming School of Medicine Leader, Optogenetics Research Facility
2015-18 Hotchkiss Brain Institute (HBI) Leader, Stress Team
2013-15 HBI Co-Leader Neural Systems and Behaviour Theme
2009- HBI Strategic Research Innovation Committee
2009-11 HBI Co-Leader Synaptic Transmission/Neural Circuits/Mental Health Group
2008-11 National BrainBee – Local Organizing Committee
2005-11 HBI Education committee
2005-06 Department of Neuroscience Candidacy Review Committee
2004-13 HBI Seminar Series organizer
2004 Calgary Brain Institute Day, Organizing committee
2003 Neuroscience Research Group Research Day, Organizing committee
2003 Neuroscience Research Group Seminar series organizer
2002-04 Neuroscience Research Group executive
2002 Brain Awareness Day, Organizer and presenter

ii. FACULTY

2003 Department of Physiology and Biophysics, Head Search Committee
2002 Bachelor of Health Science Program Steering Committee

iii. UNIVERSITY

2021- **Research Director**, Hotchkiss Brain Institute, University of Calgary
2019- **Deputy Director**, University of Calgary Brain and Mental Health Strategy
2013-14 Department of Psychology, Search and Selection Committee
2005-06 **Chair** - University Research Grants Committee, University of Calgary
2004 University Research Grants Committee, University of Calgary
2004-05 URGC - Killam Visiting Scholars sub-committee
2004 FGS Open Scholarship Workshop, Presenter
2004 Coordinator, Autonomic Neuroscience Retreat, Kananaskis
2002-04 Graduate Student Scholarship Committee, University of Calgary
2002-04 Killam Award Committee, University of Calgary

iv. COMMUNITY

2015- **Founder** of 'ThinkBigYYC' a community project between HBI & the Calgary Public Library

v. NATIONAL

2019- **Member**, Society for Neuroscience Government and Public Advocacy Committee
2019 **Chair**, CIHR/CAN Brain Star Award review panel

2019-20 **Chair**, Nominations Committee, Canadian Association for Neuroscience
 2019-20 CIHR Peer Review Assessment Committee
 2018-19 **President**, Canadian Association for Neuroscience
 2018-19 **Executive Committee**, Canadian Brain Research Strategy
 2018-19 CIHR Priorities and Capacity Building Sub-committee
 2017- CIHR INMHA Institute Advisory Board
 2017-18 **Vice President**, Canadian Association for Neuroscience
 2017 **Program Chair**, Canadian Neuroscience Annual Meeting
 2016 **Program Co-Chair**, Canadian Neuroscience Annual Meeting
 2008-14 CIHR INMHA Institute Advisory Board
 2008-13 **Secretary**, Canadian Association for Neuroscience
 2007-14 Canadian Association for Neuroscience, Annual Meeting Programming Committee
 2005-08 Board of Directors, Canadian Association for Neuroscience

VI. INTERNATIONAL

2019-present Society for Neuroscience Government and Public Advocacy Committee
 2017-18 Neurasmus Advisory Board for Curriculum Development
 2017-18 Co-Chair, International Stress Neurobiology Meeting
 2015-18 **Senior Editor**, The Journal of Physiology
 2014 External Site Reviewer for NIH NIAAA
 2014- Editorial Board member, The American Journal of Physiology
 2012-15 Reviewing Editor, The Journal of Physiology
 2012- Editorial Board member, Journal of Neuroendocrinology
 2006- Editorial Board member, Journal of Neurophysiology

LEADERSHIP ROLES

2021- **Research Director**, Hotchkiss Brain Institute, University of Calgary
 2019- **Deputy Director**, University of Calgary Brain and Mental Health Strategy
 2015- **Founder** of 'ThinkBigYYC' a community project between HBI & the Calgary Public Library
 2019- **Chair**, CIHR/CAN Brain Star Award review panel
 2019-20 **Chair**, Nominations Committee, Canadian Association for Neuroscience
 2018-19 **President**, Canadian Association for Neuroscience
 2018-19 **Executive Committee**, Canadian Brain Research Strategy
 2017-18 **Vice President**, Canadian Association for Neuroscience

PROFESSIONAL SERVICE

i. MEMBERSHIP IN PROFESSIONAL SOCIETIES

Society for Neuroscience
 Canadian Association for Neuroscience
 American Physiological Society

ii. PROFESSIONAL SERVICE

Grant Panels

2018 CIHR Neuroscience B (NSB) - **Chair**

2017 CIHR Neuroscience D (NSD) - **Chair**
2016 CIHR Foundation Grant Program - **Chair**
2013-15 CIHR Neuroscience A (NSA) – **Scientific Officer**
2013 CIHR Neuroscience B (NSB) - member
2010-13 AIHS Postdoctoral Fellowship Committee
2009 CIHR Canada-China Grant Panel - **Scientific Officer**
2008-11 CIHR Neuroscience B (NSB) - member
2006-08 CIHR New Investigator (C) - member
2005 American Epilepsy Society - invitee
2004 CIHR Neuroscience B (NSB) - invitee

***Ad hoc* Grant Review**

CIHR
NSERC
Heart and Stroke Foundation of Canada
Michael Smith Research Foundation
Wellcome Trust (United Kingdom)
Swiss National Foundation
France 'Blue Sky' Proposals
Scottish Rite Charitable Foundation
New Zealand Lottery Foundation

Journal reviews

Nature, Cell, Nature Neuroscience, Neuron, Cell Metabolism, Nature Communications, PLoS Biology, PNAS, Journal of Clinical Investigation, Journal of Neuroscience, Molecular Psychiatry, Biological Psychiatry, Cell Reports, Current Biology, Neuropharmacology, Journal of Physiology, Journal of Neurophysiology, Channels, American Journal of Physiology, Neuropsychopharmacology, Neuroscience, Journal of Neuroendocrinology

RESEARCH SUPPORT

Current

2019-2024: Discovery Grant, \$235,000 (PI)

National Sciences and Engineering Research Council

Title: Hypothalamic CRH neurons and the control of innate behaviour

2016-2023: Foundation Grant, \$2,558,224 (PI)

Canadian Institutes of Health Research

Title: Synapses, Circuits and Stress

2016-2021: Project Grant, \$986,205 (declined) (PI)

Canadian Institutes of Health Research

Title: Stress hyper-reactivity and GABA plasticity

2017-2020: Project Grant, \$499,666 (co-PI)

National Health Medical Research Council, Australia

Title: Hypothalamic Control of Motivated Behaviour

Completed (since 2010 only)

2015-2018: Platform Support Grant, \$3, 660, 000 (co-PI)

Brain Canada

Title: The Canadian Neurophotonics Platform

2014-2017: Multi-Investigator Research Initiative, \$1, 500, 000 (PI)

Brain Canada

Title: Understanding stress to improve mental health

2013-2018: Operating Grant, \$834,815 (PI)

Canadian Institutes of Health Research

Title: GABA, metaplasticity and stress

2011-2016: Operating Grant, \$791,545 (PI)

Canadian Institutes of Health Research

Title: Scaling, plasticity and the tripartite synapse

2008 - 2013: Operating Grant, \$766,605 (PI)

Canadian Institutes of Health Research

Title: Stress induced plasticity of synaptic inhibition

2008 - 2011: Operating Grant, \$171,000 (PI)

Heart and Stroke Foundation of Alberta, NWT & Nunavut

Title: Presynaptic release dynamics at glutamate synapses: Implications for controlling the excitability of vasopressin neurons

INVITED ADDRESSES (2016-2020)

Invited Zoom talks (10) since 2020 not noted here

2020

CRH^{PVN} neurons control innate defensive behavior

Winter Conference for Brain Research

Big Sky, MT

January 27, 2020

Controlling and Transmitting Stress

Rosalind Franklin University

Chicago, IL

January 16, 2020

2019

Encoding and transmitting affective states

Canadian Centre for Behavioural Neuroscience

University of Lethbridge
Lethbridge, AB
November 22, 2019

Decoding threat for one and all
Keynote Speaker
St. Louis University
St. Louis, MO
November 1, 2019

Giving and Receiving: Stress, Social Transmission and the Synapse
Bordeaux Reward Conference
Bordeaux, FR
October 4, 2019

Bioenergetic control of synaptic plasticity by astrocytes during acute stress
Euroglia Symposium
Porto, Portugal
July 11, 2019

Inhibitory Control of Hypothalamic Stress Circuits
GRC on Inhibition in the CNS
Newry, ME
July 8, 2019

Giving and Receiving Stress
Marquette University
Milwaukee, WI
May 7, 2019

Giving and receiving: Stress, social transmission and the synapse
Festival of Neuroscience
British Neuroscience Association
Dublin, Ireland
April 15, 2019

Transmitting Stress to others
NovoNordisk Foundation
Beating Science Burnout symposium
Copenhagen, Denmark
March 22, 2019

Neurobiology of Emotional Contagion
Lundbeck Pharmaceutical
Copenhagen, Denmark
March 21, 2019

Social Transmission and Buffering of Stress

Department of Neuroscience
University of Copenhagen,
Copenhagen, Denmark
March 21, 2019

Decoding Threat: Consequences for One and All
Department of Neuroscience
University of North Carolina,
Chapel Hill, NC
February 21, 2019

Understanding others: Social Transmission of Stress
Winter Conference for Brain Research
Snowmass, CO
February 1, 2019

2018

Decoding threat: Consequences for the individual and others
University of British Columbia
Vancouver, BC
Nov 30, 2018

Social Transmission and Buffering of Stress
CERVO, Laval University
Quebec, P.Q.
November 20, 2018

Social Transmission and Buffering of Stress
Harvard University, Neuroendocrinology Colloquium
Boston MA
September 13, 2018

Social Transmission of Stress
MIT, Simons Center for Autism
Boston, MA
September 12, 2018

Social transmission and buffering of synaptic transmission
Gordon Research Conference on Synaptic Transmission
Waterville Valley, ME
August 17, 2018

Social Transmission of Stress
Neuroplasticity Symposium
SickKids, University of Toronto
Toronto, ON
August 6, 2018

PVN CRH neurons control the social transmission of stress
International Congress for Neuroendocrinology
Toronto, ON
July 18, 2018

Social transmission and buffering of stress
Tulane Brain Institute
Tulane University
March 23, 2018

Social transmission and buffering of stress
Pennington Institute
Louisiana State University
March 22, 2018

Social transmission and buffering of stress
Department of Behavioral and Molecular Neurobiology
University of Regensburg, Germany
February 2, 2018

Synaptic scaling and network adaptations to chronic stress
Symposium, Winter Conference on Brain Research
Whistler, BC
January 17, 2018

2017

Social transmission of stress
Symposium, ACNP
Dec 3, 2017
Palm Springs, CA

Stress induced sexually dimorphic plasticity in the Paraventricular nucleus of the hypothalamus
Symposium, Experimental Biology
April 26, 2017
Chicago, USA

Hypothalamic CRH neurons and the control of spontaneous behaviour
1st Munich Winter Conference on Stress
March 19, 2017
Garmisch, Germany

PVN CRH neurons cue social behaviors and generate synaptic empathy
Max Planck Institute of Psychiatry,
Munich, Germany
March 17, 2017

Stress-induced structural and functional plasticity in astrocytes
Gordon Research Conference on Glial Biology: Functional interactions among glia and neurons

Ventura, CA
March 6, 2017

A social perspective on stress and the synapse
Université de Bordeaux,
Bordeaux, France
January 20, 2017

2016

Synaptic and Cellular Signatures of Stress
Department of Physiology,
McGill University
October 29, 2016

Choice is an illusion: The subconscious control of behaviour
Institut du Fer a Moulin
UMR-S 839 INSERM/UPMC
Paris, France
September 15, 2016

Choice is an illusion: The subconscious control of behaviour
FENS Neurasmus Symposium
Budapest, Hungary
July 16, 2016

Stress, novelty and endocannabinoid signaling
Stress Workshop
Newport Beach, Ca
April 4, 2016

Stress and endocannabinoids – why salience matter
WCBR, 2016
Breckenridge, CO
January 25, 2016

State-dependent plasticity in stress circuits
WCBR, 2016
Breckenridge, CO
January 27, 2016

MEDIA HIGHLIGHTS (2016-2020)

Your stress is now my stress: research study explains how
UToday | February 13, 2018 Page views: 2,220

Local

Stress can spread

CTV Calgary | February 6, 2018

Global Calgary | February 6, 2018

Metro Calgary | February 6, 2018

Your stress is now my stress

Explore UCalgary | February 13, 2018

Your stress can actually change your partner's brain, study suggests

Calgary Herald | February 7, 2018

National

Votre stress est contagieux

CBC Radio-Canada | February 6, 2018

Your stress can actually change your partner's brain, study suggests

National Post | February 7, 2018

Post story picked up by:

Your stress can actually change your partner's brain, study suggests
Edmonton Journal | February 7, 2018

Your stress can actually change your partner's brain, study suggests
Regina Leader Post | February 7, 2018

Your stress can actually change your partner's brain, study suggests
Saskatoon StarPhoenix | February 7, 2018

Your stress can actually change your partner's brain, study suggests
Vancouver Sun | February 7, 2018

Your stress can actually change your partner's brain, study suggests
Ottawa Citizen | February 7, 2018

Your stress can actually change your partner's brain, study suggests
Montreal Gazette | February 7, 2018

Your stress can actually change your partner's brain, study suggests
Windsor Star | February 7, 2018

Your stress can actually change your partner's brain, study suggests
The Province | February 7, 2018

Your stress can actually change your partner's brain, study suggests

CBC Radio-Canada International | February 8, 2018

Le stress des autres est contagieux et contamine votre cerveau

CJAD 800 AM (Montreal) | February 9, 2018

Your stress could be contagious

International

Mother Nature Network | February 16, 2018

Your partner's stress could be changing your brain, too

Gulf News | February 19, 2018

The Full Count (Podcast) | February 19, 2018

Is your stress now my stress?
University of Cape Town | February 21, 2018

Stres en trauma kan tussen mense oorgedra word - studie
Beeld (South Africa) | February 22, 2018

Stress may not only affect the brains of the stressed, suggests new study
Forbes | February 26, 2018

Study finds stress might be contagious, but women unwind better than men do
Well and Good | February 26, 2018

Ander se stres het 'n impak op jou (Others' stress has an impact on you)
Monitor on Radio Sonder Grense (RSG) | February 26, 2018

Lo stress è contagioso come il raffreddore (Stress is contagious like a cold)
Repubblica.it (Italy) | March 2, 2018

Stress can be contagious (study)
Business Standard (Press Trust of India) | March 9, 2018

Is stress contagious? A study reveals that other people's stress may affect your brain similarly to your own
Bustle | March 9, 2018

Stress really is contagious: study
New York Post | March 9, 2018

Your stress is my stress? Study shows how stress could be contagious
Medwise | March 9, 2018

Study discovers that stress literally alters your brain
Australia – The Big Smoke | March 12, 2018

Is stress contagious? 'Remarkable' study reveals that feeling under pressure from life events can rub off onto your loved ones
The Daily Mail | March 12, 2018

Stress alters brain and is contagious, says study
Deccan Chronicle (India) | March 13, 2018

Is stress contagious? New research says it just might be, but here's how to control it
Elite Daily | March 13, 2018

Weird science: Can secondhand stress change our brains?
New Zealand Herald | March 17, 2018

Stress is catching – and it changes your brain
City Press (South Africa) | March 18, 2018

Your stress likely changes the brain of those around you
Big Think | March 19, 2018

Pesquisadores canadenses dizem que stress pode ser contagioso
Globo Brazil | March 20, 2018

Science says stress is contagious
Vogue Australia | March 22, 2018

Stress found to alter the brains of others, similar to one's own
Coherent News | March 23, 2018

This is the state of stress in 2018
Global News National | April 16, 2018

This is the state of stress in 2018
Country 105 | April 16, 2018

The real mental dangers of letting your stress go unchecked
CBC | May 9, 2018

Here's why anxiety contagion is inescapable
The Cut (New York Magazine) | May 23, 2018

Is Stress Contagious? Studies Say Yes—And Here's How to Deal With It
Vogue | Jan 21, 2021
<https://www.vogue.com/article/is-stress-contagious-studies-say-yes-how-to-deal-with-it>

Science Publications

Is your stress changing my brain?
Canadian Association for Neuroscience | February 2018

Your partner's stress may change your brain
Medical News Today | February 15, 2018

Is your stress changing my brain?
Science Daily | March 8, 2018

Is stress contagious?
IFL Science | March 9, 2018

Being around stress individuals changes your brain, mouse study finds
ALN Magazine | March 20, 2018
Your stress, my brain: Communicating stress to others

PUBLICATIONS (TRAINEES UNDERLINED * CO-SENIOR AUTHOR)

- 1) Obesity-induced astrocyte dysfunction impairs heterosynaptic plasticity in the orbitofrontal cortex. Lau BK, Murphy-Royal C, Kaur M, Qiao M, **Bains JS**, Gordon GR, Borgland SL. *Cell Rep.* 2021 Aug 17;36(7):109563. doi: 10.1016/j.celrep.2021.109563
- 2) Should I stay or should I go – CRH^{PVN} neurons gate state transitions in stress behaviors, N. Daviu and **J.S. Bains**, *Endocrinology*, Jun 1;162(6):bqab061. doi: 10.1210/endocr/bqab061.
- 3) Subcellular specificity of behavioral control, E. Soria-Gomez, A. C. Pagano Zottola, Y. Mariani, T. Desprez, Massimo Barresi, I. Bonilla-del Río, C. Muguruza, M. Le Bon-Jego, F. Julio-Kalajzić, R. Flynn, G. Terral, I. Fernández-Moncada, L. M. Robin, J. F. Olivera da Cruz, S. Corinti, Y. Ould Amer, J.Goncalves, M. Varilh, A. Cannich, B. Redon, Z. Zhao, T. Lesté-Lasserre, P.Vincent, T. Tolentino-Cortes, A. Busquets-García, N. Puente, **J. S. Bains**, E. Hebert-Chatelain, G. Barreda-Gómez, F. Chaouloff, A.W. Lohman, Luis F. Callado, P. Grandes, J. Baufreton, G. Marsicano, L. Bellocchio, *Neuron* 2021 May 5;109(9):1513-1526.e11. doi: 10.1016/j.neuron.2021.03.007. Epub 2021 Mar 25
- 4) Social communication of affective states, T-L Sterley and **J.S. Bains**, *Curr Opin Neurobiol.* 2021 Jan 9; 68:44-51. doi: 10.1016/j.conb.2020.12.007.
- 5) Visual-looming shadow task with in-vivo calcium activity monitoring to assess defensive behaviors in mice, N. Daviu, T. Fuzesi, D.G. Rosenegger, G. Peringod, K. Simone and **J.S. Bains**, *Bio-Protocol*, 2020 Nov 20; 10(22), DOI: 10.21769/BioProtoc.3826
- 6) Sex specific vasopressin signaling buffers stress-dependent synaptic changes in female mice, S. P. Loewen, D.V. Baimoukhametova and **J.S. Bains**, *Journal of Neuroscience*, 2020 Nov 11;40(46):8842-8852. doi: 10.1523/JNEUROSCI.1026-20.2020.
- 7) Stress gates an astrocytic energy reservoir to impair synaptic plasticity, C. Murphy-Royal, A. D. Johnston, A. K. Boyce, B. Diaz-Castro, A. Institoris, G. Peringod, O. Zhang, R. F. Stout, R. J. Thompson, D. C. Spray, B. S. Khakh, **J. S. Bains***, and G. R. Gordon, *Nature Communications*, 2020 Apr 24;11(1):2014. doi: 10.1038/s41467-020-15778-9.
- 8) CRH^{PVN} neurons encode stress controllability and regulate defensive behavior selection, N. Daviu Abant, T. Fuzesi, D. Rosenegger, N. Rasiah, T-L. Sterley, G. Peringod and **J. S. Bains**, *Nature Neuroscience*, 2020 DOI: 10.1038/s41593-020-0591-0.
- 9) SOM cells are better at detecting emotion, T-L Sterley and **J.S. Bains**, *Nature Neuroscience*, 2020 23 (1), 3-4.
- 10) Stress-induced structural and functional modifications of astrocytes-Further implicating glia in the central response to stress, C. Murphy-Royal, G.R. Gordon, **J.S. Bains**, *Glia*,2019 Mar 19; doi: 10.1002/glia.23610.

- 11) A neuroethics backbone for the evolving Canadian Brain Research Strategy, J. Illes, S. Weiss, J. Bains, J.A. Chandler, P. Conrod, Y De Koninck, L.K. Fellows, D. Groetzinger, E. Racine, J.M. Robillard and M.B. Sokolowski, *Neuron*, 2019 Feb 6;101(3):370-374.
- 12) Presynaptic mGluRs control the duration of endocannabinoid-mediated DSI, P.L.W. Colmers and **J.S. Bains**, *Journal of Neuroscience*, 2018 Dec 5;38(49):10444-10453.
- 13) Cholecystokinin Switches the Plasticity of GABA Synapses in the Dorsomedial Hypothalamus via Astrocytic ATP Release, K.M. Crosby, C. Murphy-Royal, S.A. Wilson, G.R. Gordon, **J.S. Bains**, Q.J. Pittman, *Journal of Neuroscience*, 2018 Oct 3;38(40):8515-8525.
- 14) Activation of lateral hypothalamic group III metabotropic glutamate receptors suppresses cocaine-seeking following abstinence and normalizes drug-associated increases in excitatory drive to orexin/hypocretin cells, J.W. Yeoh, M.H. James, C.D. Adams, **J.S. Bains**, T. Sakurai, G. Aston-Jones, B.A. Graham, C.V. Dayas, *Neuropharmacology*, 2018 Sep 22; doi: 10.1016/j.neuropharm.2018.09.033.
- 15) An Open-Source, Cost-Effective System for Low Light In-Vivo Fiber Photometry, K. Simone, T. Füzési, D. Rosenegger, **J.S. Bains** and K. Murari, *Neurophotonics*, 2018 Apr;5(2):025006.
- 16) Optogenetic Activation of A11 Region Increases Motor Activity, K. Koblinger, C. Jean-Xavier, S. Sharma, T. Füzési, L. Young, S.A. Eaton, C.H.T. Kwok, **J.S. Bains**, P.J. Whelan, *Front Neural Circuits*, 2018;12:86. doi: 10.3389/fncir.2018.00086.
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