Ian G. Davison

Assistant Professor
Department of Biology
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Citizenship

Canada
U.S. Lawful Permanent Resident

Education and Training

Postdoctoral Research Associate 2004-2011
Dept. of Neurobiology, Duke University Medical Ctr., Durham NC
Advisors, Dr. Larry Katz (2003-2005); Drs. Michael Ehlers and Richard Mooney

Grass Fellowship in Neuroscience, Marine Biological Laboratory, Woods Hole MA 2003

Ph. D. in Neurobiology 1995-2003
Dept. of Biological Sciences, Simon Fraser University, Vancouver, Canada

B.Sc., Joint Hons. in Biology and Physics 1990-1994
St. Francis Xavier University, Antigonish, Canada (1990-1994)

Professional experience

Assistant Professor, Boston University Dept. of Biology 2011-

Teaching experience

Boston University:
Sensory Neurobiology (BI520/NE520 4 credit hrs/wk) 2012-

Guest lecturer, Frontiers in Neuroscience (GRS NE500) 2011-
Guest lecturer, Topics in the Mathematical Structure of Biological Systems (BI502) 2011-
Guest lecturer, Cellular and Systems Neuroscience (BI755/GMS AN810) 2012-
Guest lecturer, Food and the Senses (MET ML715) 2012

Duke University
Guest lecturer, Concepts in Neuroscience, Dept. Neurobiology, Duke Medical Center 2010-11

Other:
Demonstrator, International 3D Microscopy Course, University of British Columbia 2002
Teaching assistant, Imaging Structure & Function in the CNS, CSH Laboratories 2001

Trainees

Postdoctoral:	
Dr. Yuan Gao, Ph.D.	2012-
Graduate:	
Ellen Witkowski, Ph.D. candidate	2012-
Undergraduate:	
Cory Dubois	2012
Anya Golkowski	2012-
Jacob Gruber	2012

Graduate committees

Brett DiBenedictis, B.U. Biology
Franne Kamhi, B.U. Biology / Graduate Program in Neuroscience
Greg Dillon, B.U. Biology
Elizabeth McCarthy, B.U. Biology
Jeff Markowitz, B.U. Biology / Graduate Program in Neuroscience

Scholarships, Fellowships, and Awards

Grass Fellowship in Neuroscience	Marine Biological Lab, Woods Hole	2003
NSERC Postgraduate Scholarships A & B	Simon Fraser University	1996-1999
Frank A. Linville Scholarship in Olfaction	SFU	2000, 2002
Graduate Fellowship	SFU	1996, 2000
Canada Scholarship	St. Francis Xavier University.	1990-1994
Dr. J.J. Carrol Memorial Scholarship	St. F. X.	1990-1994
NSERC Undergraduate Research Scholarship	St. F. X.	1993
University Council for Research Award	St. F. X.	1992

Invited lectures

Wellesley College NeuroNite Series, Wellesly MA	Nov 2012
Canadian Association for Neuroscience, Symposium on Neural Coding, Vancouver	May 2012
Dept. of Neuroscience, Baylor College of Medicine	May 2011
Dept. of Neurobiology and Behavior, Cornell University	Mar 2011
Dept. of Biology, Boston University	Feb 2011
Dept. of Cell and Molecular Physiology, UNC Chapel Hill	Nov 2010
Dept. of Neurobiology, UT San Antonio	Feb 2008
Bowdoin College, Brunswick ME	Oct 2006
UT Austin, Dept. of Neurobiology	Apr 2006
Cosyne workshop on olfactory coding, Salt Lake City UT	Mar 2005
Dept. of Biology, St. Francis Xavier University, Antigonish Canada	Oct 2004

Professional Activity

Member, Society for Neuroscience
Member, Association for Chemoreception Sciences
Member, Canadian Association for Neuroscience

ad hoc referee, Journal of Neurophysiology, Neuroscience Letters, PLoS One
ad hoc reviewer, National Science Foundation

University Service

Biology / Neuroscience Senior Hire Search Committee	2011-12
Biology / Neuroscience Senior Hire Search Committee	2012-13
Symposium co-organizer, New Directions in Systems and Behavioral Neuroscience	2012

Publications

Davison IG and Ehlers MD (2011). Neural circuit mechanisms for pattern detection and feature combination in olfactory cortex. Neuron **70**: 82-94 (previewed in Neuron **70**: 1-2)

Kennedy MJ, **Davison IG**, Robinson CG, and Ehlers MD (2010). Syntaxin-4 defines a domain for activity-dependent exocytosis in dendritic spines. Cell **141**: 524-535

Wang Z, Edwards JG, Riley N, Provance DW Jr, Karcher R, Li XD, **Davison IG**, Ikebe M, Mercer JA, Kauer JA, and Ehlers MD (2008). Myosin Vb mobilizes recycling endosomes and AMPA receptors for postsynaptic plasticity. Cell **135**: 535-48

Arenkiel BR, Klein ME, **Davison IG**, Katz LC, and Ehlers MD (2008). Genetic control of neuronal activity in mice conditionally expressing TRPV1. Nature Methods **5**(4): 299-302.

Arenkiel BR, Peca J, **Davison IG**, Feliciano C, Deisseroth K, Augustine GJ, Ehlers MD, and Feng G (2007). In vivo light-induced activation of neuroal circuitry in transgenic mice expressing channelrhodopsin-2. Neuron **54**: 205-18.

Davison IG and Katz LC (2007). Sparse and selective odor coding by mitral/tufted neurons in the main olfactory bulb. J. Neurosci. **24** (3): 8057-8067.

Davison IG, Boyd JD, and Delaney KR (2004). Dopamine inhibits mitral/tufted to granule cell synapses in the frog olfactory bulb. J. Neurosci. **24** (3): 8057-8067.

Delaney KR, **Davison IG**, and Denk W (2001). Odour-evoked [Ca^{2+}] transients in mitral cell dendrites of frog olfactory glomeruli. Eur. J. Neurosci. **13** (9): 658-72.

Mulligan SJ, **Davison IG**, and Delaney KR (2001). Mitral cell presynaptic Ca(2+) influx and synaptic transmission in frog amygdala. Neuroscience **104** (1):137-51.

Cheng J-Y, **Davison IG**, and DeMont ME (1996). Dynamics and energetics of scallop locomotion. J. Exp. Biol. **199**: 1931-19461

Davison IG, Wright GM, and DeMont ME (1995). The structure and mechanical properties of invertebrate and primitive vertebrate arteries. J. Exp. Biol. **198**: 2185-2196

Joshi YN, Tauheed A, and **Davison IG** (1992). The analysis of the $5s^25p^2$, $5s5p^3$, $5s^25p5d$, and $5s^25p6s$ configurations of Te III. Can. J. Phys. **70**: 740-744