Neuroscience Grad position in Victoria B.C.

A fully funded position is available immediately (Jan. 2014) for a graduate (MSc or PhD) trainee to study dendritic morphology and spinogenesis in a mouse model of Rett Syndrome. (http://www.uvic.ca/delaneylab). We are looking for energetic, self-motivated individual with a background in physiology, neuroscience or developmental biology and an interest in basic neuroscience questions.

Our research program combines electrophysiology with fluorescence imaging to study nervous system in vivo or in blocks/slices of tissue maintained in vitro. Overall we aim to understand how cell and synaptic physiology affect the performance of neural networks with an emphasis on the role of short-term activity dependent plasticity or neuromodulators in network functions.

A student is needed to undertake an in vivo imaging project to compare the dynamics of spine growth and stability in female mice expressing a mutant form of MeCP2 in approximately half their neurons (MeCP2 is X-linked). Repeated two-photon imaging of spines and dendrites of cortical neurons will be conducted to follow the spine dynamics in neurons expressing either the mutant allele or the wild-type allele in the same animal.

Excellent facilities are available including custom 2-photon imaging and electrophysiology systems for studies in vivo (rat/mouse/frog) and in vitro (brain slices or en bloc preparations). Opportunities are available for collaborations or co-supervision with our expanding group of neuroscience faculty at Univ. of Victoria. See http://web.uvic.ca/~bobchow/uvic_cellneur_ebroch.pdf and http://www.uvic.ca/medsci/neuroscience/ for more details.

Contact Dr. Kerry Delaney, kdelaney@uvic.ca, with a brief resume and a summary of research interests including your ideas for how you might tackle the problem of studying postnatal development of synapses in a Rett mouse brain if you had access to a two photon microscope.