Dear All,

I hope everyone is staying healthy and gearing up for the fall challenges!

Since the previous newsletter, we have had several new students join the program: Brandon Cho (PhD; Ramalho-Santos); Zaleena Akheralie (MSc; Pearson); Ana Maria Verissimo Do Carmo (PhD; Fernandez-Gonzalez); Wendy Choi (PhD; Li); Anastasia Minenkova (PhD; Hurd and Li); and Afrin Bhattacharya (PhD; Muffat and Li). Welcome to the program!

We have also had 2 students graduate: David Pompili (MSc; Ciruna) and David ter Stall (PhD; Tepass). Congrats to both and good luck on your next endeavors!

Not much is currently planned for the fall semester, but we will have the other half of our 2020 program retreat in early 2021. Cindy will be gathering the information about which PhD students need to take the program course this coming winter. Please let us know if you need to take the course now or can wait until 2023.

Best,

Bret

PS – Follow us on Twitter @DevBio_UofT and as we revamp the website: devbio.utoronto.ca

Newsletter background image courtesy of the Claycomb lab!
NEWS: New Faculty profile

Dr. Xi Huang

As part of an ongoing series to highlight exciting research in the developmental biology community here in Toronto, we would like to feature Dr. Xi Huang (Assistant Professor, Department of Molecular Genetics, University of Toronto; Scientist, Developmental and Stem Cell Biology, The Hospital for Sick Children).

Dr. Huang received his Ph.D. in developmental biology studying brain development and patterning in Dr. Chin Chiang’s lab at Vanderbilt University. He then went on to complete a postdoctoral fellowship in the lab of Dr. Lily Jan at the University of California, San Francisco, where he studied potassium channel function in brain tumors. Throughout his career, Dr. Huang has published many notable papers in the fields of developmental neurobiology and cancer, including the description of EAG2 voltage-gated potassium channels as regulators of medulloblastoma growth (Genes and Development, 2012). He moved to Toronto in 2015 to set up his lab in the Peter Gilgan Centre for Research and Learning at the Hospital for Sick Children, and is a member of the Arthur and Sonia Labatt Brain Tumour Research Centre.

Recently, Dr. Huang’s research found itself at the intersection of physics and biology. “Force is everywhere,” said Dr. Huang, and how cells sense and respond to mechanical force in the tumor environment is a fascinating and largely under-explored area, particularly in the field of medulloblastoma. The Huang lab is interested in defining how brain tumors perceive force to initiate, grow, metastasize, and resist therapy. In their words, they are working to reveal the mechanisms by which brain cancer can “touch and feel pain” in its life, knowing that these insights are essential in the fight against brain cancer. A recent publication from the group in this area highlights the role of a mechanosensitive ion channel PIEZO1 and tissue mechanics in driving glioma (Neuron, 2018).

In discussing the strengths of the research community here in Toronto, Dr. Huang said, “there are so many strengths that can be elaborated in a full paper.” He wholeheartedly believes a unique advantage of the research community here is the combination of the: breadth of research, spirit for collaboration, and ability of our scientists to recognize “hidden gems” that can be discovered at a multi-disciplinary interface. For example, as developmental biology, cancer biology, bioinformatics and mechanical engineering have joined forces in the Huang lab, discoveries have been unstoppable.

Dr. Huang summarized the past year of lab work as “lionhearted.” In undertaking research to answer long-standing questions, or develop and address questions that no one has ever proposed before, the bravery of his lab members to venture into the truly unknown territories is indeed lionhearted.

Written by Jonathan Palozzi
Selected Publications


