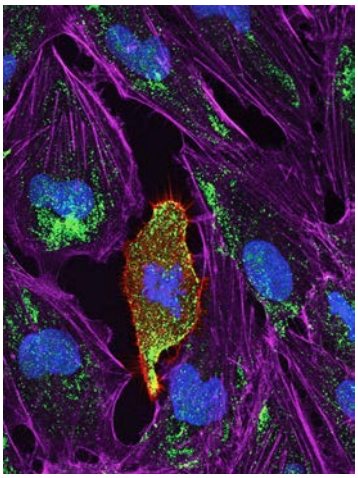
GUEST SPEAKER SEMINAR

Molecular Genetics
UNIVERSITY OF TORONTO

Targeting ion channels in brain cancer



Over 20% of the drugs for treating human diseases target ion channels, however, no cancer drug approved by the U.S. FDA is intended to target an ion channel. We demonstrate the evolutionarily conserved function of a potassium channel in promoting brain tumor growth and metastasis, delineate downstream pathways and uncover a co-option mechanism for different ion channels to regulate mitotic cell volume and tumor progression. By candidate drug screening we identify an FDA-approved antipsychotic drug as a novel channel blocker that reduces brain tumor growth and metastasis. We also present a case report of repurposing this drug for treating a human patient. Our findings illustrate the potential of targeting ion channels in cancer treatment, and reveal mechanisms that likely have broad implications to not only brain cancer but also other forms of cancers

Dr. Xi Huang
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Candidate for Faculty Appointment

Host: Dr. Howard Lipshitz

Date: Monday May 11th, 2015
Time: 4PM
Place: 1 King's College Circle, Medical Sciences Building, Room 4279