

Dear Faculty, IGERT Fellows, IGERT Associates and Students,

You are cordially invited to attend a Seminar presented by Vincent On. Please plan to attend.

Vincent On

IGERT Fellow

Date: Friday, December 4th, 2015

Location: Chung 218 (VISLAB)

Time: 11:00am

In Vivo Time-Lapse Imaging of Cell Divisions during Neurogenesis in the Developing Zebrafish Retina

Abstract:

Two-photon excitation microscopy was used to reconstruct cell divisions in living zebrafish embryonic retinas. Contrary to proposed models for vertebrate asymmetric divisions, no apico-basal cell divisions take place in the zebrafish retina during the generation of postmitotic neurons. However, a surprising shift in the orientation of cell division from central-peripheral to circumferential occurs within the plane of the ventricular surface. In the sonic you (syu) and lakritz (lak) mutants, the shift from central-peripheral to circumferential divisions is absent or delayed, correlating with the delay in neuronal differentiation and neurogenesis in these mutants. The reconstructions here show that mitotic cells always remain in contact with the opposite basal surface by means of a thin basal process that can be inherited asymmetrically.

