

Speaker: Douglas Campbell

<University of Utah Medical Center>

Title:

"Regulation of arborisation and synaptogenesis during the development of the zebrafish retinotectal projection by Slit-Robo signaling."

Date: Wednesday, January 5
Time: 16:00 - 17:00

Place: 7F Conference Room of Building A,CDB

Summary:

During the development of the retinotectal projection in lower vertebrates such as the zebrafish, growth cones at the tips of retinal ganglion cells (RGCs) navigate through a highly stereotypical pathway from the retina to the optic tectum in the midbrain. Once they reach the tectum they form arbors and synapses which are poorly characterised processes in the CNS.

We are labeling single RGCs with GFP and GFP fusion proteins to visualise arborisation in the tectum. Since slits and roundabout homologues are expressed in the retina and tectum, we are currently testing the hypothesis that they may be involved in these processes. We have found that Robo2 and Slit1a are inhibitors of arborisation in vivo in contrast to the previously described effects of slits on promoting arborisation and that Robo2 is an inhibitor of synaptogenesis.

Host: Shinichi Nakagawa < Cell Adhesion/Tissue Patterning, CDB >

E-mail: nakagawa@cdb.riken.jp Tel: 078-306-3119 (ext:1323)