



CDB SEMINAR

Speaker:

Yasuko Honjo

< Institute of Neuroscience, University of Oregon >

Title:

“ Migration patterning and lineage segregation of zebrafish trunk neural crest cells ”

Date:	Thursday, February 3
Time:	16:00 - 17:00
Place:	7F Conference Room of Building A, CDB

Summary:

To learn how somites regulate crest migration on the medial pathway, we characterized crest migration in a variety of zebrafish mutants. Hedgehog signaling mutants form normal somite boundaries but have defects in slow muscle cells and sclerotome. Two aspects of neural crest migration are aberrant in these mutants: initial patterning into segmental streams and migration ventral of the horizontal myoseptum (HM) that separates dorsal and ventral muscle. Loss of sclerotome has no effect on the initial pattern of crest migration but prevents crest from migrating ventrally of the HM. In contrast, loss of slow muscle disrupts the segmental pattern of crest migration but does not prevent crest from migrating. Our results suggest that slow muscle cells regulate the segmental pattern of trunk crest migration on the medial pathway and that sclerotome regulates migration ventral of the horizontal myoseptum. Proper migration of crest cells is important for formation of normal derivatives. We show that dorsal root ganglia form abnormally when crest cells migrate in an aberrant pattern. We are currently addressing how migration pattern affects other derivatives, including pigment cells, glia and sympathetic ganglia.

Host: Masatoshi Takeichi <Cell Adhesion/Tissue Patterning, CDB >

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