CDB SEMINAR

Speaker: Carole J. Burns

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Title: "Frizzled 5 function during nervous system development in the mouse"

Date:	**Friday, August 13**
Time:	**12:30 -13:30**
Place:	**7th floor Conference Room of Building A**

Summary:

During development, the growing embryo maintains a balance between proliferation and differentiation. This balance is necessary to produce the characteristic size, shape and complement of cell types within the mature structures of the organism. What are the signaling pathways that control the choice between progenitor cell proliferation and cellular differentiation? We investigated this question of developmental biology by focusing on a component of the Wnt/Frizzled signaling pathway, Frizzled 5, during early eye and neuroendocrine development in the mouse embryo. We find that Frizzled 5 is expressed within the developing neural retina and pituitary gland and that Frizzled 5 expression becomes downregulated in the differentiating regions of these tissues. In collaboration with Dr. M. M. Taketo (Kyoto University), we addressed whether Frizzled 5 activity regulated the cell cycle in the retinal progenitor pool. Using mouse embryos mutant for Frizzled 5, we assayed for changes in gene expression patterns and proliferation in this cell population. Our data support Frizzled 5 signaling as one mechanism that regulates proliferation of retinal progenitor cells and our preliminary data suggests that Frizzled 5 may act similarly in the developing pituitary gland.

Host **Raj Ladher<sensory Development ,CDB>**
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