CDB SEMINAR

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Friday, October 5, 2007

16:00~17:30 C1F CDB Auditorium

The Development of Sympathetic Neurons and Satellite Glia

Summary

Neural crest cells that form the sympathetic ganglia differentiate into both neurons and glia. Neural crest cells that become neurons ultimately innervate a range of target tissues and differentiate to have a wide range of neurochemistries, each specifically matched to a particular target tissue. I will start by describing experiments that implicate signals derived from target tissues as the means by which the chemical identity of a sympathetic neuron is set. I will also describe recently commenced studies on the development of sympathetic glial cells. Glial precursors first appear at the surface of sympathetic ganglia and express the GDNF-binding molecule, GFRalpha1, from the first time that they can be identified. They never express Ret. However, no deficits in the glia were detected in sympathetic ganglia from mice lacking GDNF.

(Dr. Colin Anderson)

Control of neural crest cell migration in the developing gut

Summary

The neural crest cells that colonize the gut probably migrate further than any other neural crest cells. We have used a variety of methods including time-lapse imaging and cultured explants of embryonic gut to identify some of the mechanisms that control neural crest cell migration into and along the gut. I will describe experiments that demonstrate roles for GDNF and Sema3A (which are expressed by the gut mesenchyme), molecules that affect cell-cell adhesion (L1), neural crest cell number and interactions with axons on neural crest cell migration along the gut.

(Dr. Heather Young)

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