



CDB SEMINAR

Robert O. Heuckeroth

Washington University School of Medicine

Wednesday, September 1, 2010

16:00~17:00 C1F CDB Auditorium

Pattern formation in enteric nervous system development: Building a complex nervous system and human disease mechanisms

Summary

Normal intestinal function requires an integrated network of neurons and glia that controls most aspects of intestinal function. This network called the enteric nervous system (ENS) contains more neurons than the spinal cord and every transmitter found in the central nervous system. These cells are neural crest derivatives and the majority begin in the vagal region of the neural tube before migrating in a proximal to distal direction all the way down the bowel. ENS precursors have a very long migratory route and must extensively proliferate to populate the bowel before differentiating. Many mechanisms are shared in common between the developing central and enteric nervous system, but some unique mechanisms are required to generate the ENS. I will discuss the molecular genetics, cell biology and developmental biology underlying ENS development and how these mechanisms influence human disease.

Host:

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