



CDB SEMINAR

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Tuesday, January 25, 2011

16:00~17:00 A7F Seminar Room

Building the vertebrate body: molecular mechanisms of progenitor cell maintenance and lineage specification

Summary

Stem cells hold vast potential for treating human disease. Understanding the in vivo behavior and signaling requirements of stem cells is an essential step towards the successful delivery of targeted stem cell therapy. I am using the formation of the zebrafish body as a model to understand in vivo stem cell biology. All vertebrates undergo a period of posterior growth following gastrulation, during which the majority of the body forms from a posteriorly localized population of stem cells within a region called the tailbud. During this period of growth, numerous proliferative, morphogenetic, and fate specification decisions are made that culminate in the proper patterning of mesodermal and neuronal tissue types. I am interested in determining the factors that influence these decisions during development. I will present recent data that I have obtained using single cell analysis in the zebrafish that demonstrates specific signaling requirements needed for the specification and maintenance of the mesodermal lineage of tailbud stem cells.

Host:

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