



CDB SEMINAR

Speaker:

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Title: “ Churchill, a Zinc Finger Transcriptional Activator,
Regulates the Transition between Gastrulation and
Neurulation“

Date: Tuesday, January 6

Time: 14:00 P.M. ~ 15:00 P.M.

Place: 7th floor Conference Room of Building A, CDB

Summary

Gastrulation generates mesoderm and endoderm from embryonic epiblast, while the remaining epiblast cells are subdivided into neural ectoderm and epidermis. FGF molecules are required for both processes. We have isolated a novel zinc finger protein, Churchill, which functions as a switch between different roles of FGF. Churchill is conserved across vertebrate species and its neural specific expression is induced slowly by FGF signal from the organizer at the time when cells stop migrating through the primitive streak. Churchill acts via Smad-interacting-protein-1 (Sip1) to block induction of mesodermal markers, stop cell ingression and promote further neural development. We provide a simple model for how the embryo can separate, in time and space, two different functions of FGF during the division of the epiblast into neural and ingressing mesendoderm domains.