



CDB SEMINAR

Bruno Reversade

Howard Hughes Medical Institute, UCLA

Wednesday, March 8

16:30~17:30 C1F CDB Auditorium

Turning a Half into a Whole

Summary

When an embryo is cut in two, each half can self-regulate and give rise to a well-patterned embryo. How is such a phenomenon possible? Since its discovery in 1893 by Hans Driesch, self-regulative properties of Morphogenetic Fields have remained an enigma. In the *Xenopus* embryo, we have discovered that quadruple knockdown of BMP2/4/7 and ADMP eliminates self-regulation, causing ubiquitous neural differentiation in the ectoderm. We propose a model for how BMPs and their modulators secreted by the dorsal and ventral centers of the gastrula embryo can generate a self-regulating gradient, and provide a molecular mechanism for embryonic self-regulation.

Speaker profile

Dr Bruno Reversade is currently working with Prof. Eddy De Robertis at UCLA. They have just published an excellent paper regarding the D-V patterning by an unexpected mechanism of the action of multiple BMPs.

Ref. Reversade B, and De Robertis EM. (2005) Regulation of ADMP and BMP2/4/7 at opposite embryonic poles generates a self-regulating morphogenetic field. **Cell** 123:1147-60

Host:

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