

Lecture sources for 'Organizing eggs'

(Developmental Cell Biology 497a Fall 2002)

Part 1. Deposition of mRNA's in *Drosophila* oogenesis:

- **Use of fusion proteins to reveal microtubule polarity and its rearrangement:**

I. E. Clark et al. 1997. Reciprocal localization of Nod and kinesin fusion proteins indicates microtubule polarity in the *Drosophila* oocyte, epithelium, neuron and muscle. *Development* 124;461-470.

- **Role of dynein and spindle attachment to fusome during cyst mitoses:**

M. McGrail and T. S. Hays. 1997. The microtubule motor cytoplasmic dynein is required for spindle orientation during germline cell divisions and oocyte differentiation in *Drosophila*. *Development* 124;2049-2419.

- **An indepth description of fusome growth and behaviour:**

M. deCuevas and A. C. Spradling. 1998. Morphogenesis of the *Drosophila* fusome and its implications for oocyte specifications. *Development* 125;2781-2789.

- **Experiments looking at Exuperantia particle transport:**

W. E. Theurkauf and T. I. Hazelrigg. 1998. *In vivo* analyses of cytoplasmic transport and cytoskeletal organization during *Drosophila* oogenesis; characterization of a multi-step anterior localization pathway. *Development* 125; 3655-3666.

- **Description of the interaction between microtubules and the fusome using GFP-tubulin reporter:**

N. C. Greider et al. 2000. The fusome organizes the microtubule network during oocyte differentiaion in *Drosophila*. *Development* 127;4253-4264.

Part 2. Cortical rotation initiating *Xenopus* development:

- **Description of microtubule dependent movement of vesicles during cortical rotation and localization of β -catenin to future dorsal side:**

B. A. Rowning et al. 1997. Microtubule-mediated transport of organelles and localization of β -catenin to the future dorsal side of *Xenopus* eggs. *Proc. Natl. Acad. Sci. USA* 94;1224-1229.

- **Dishevelled containing vesicle transport to future dorsal side:**

J. R. Miller et al. 1999. Establishment of the dorsal-ventral axis in *Xenopus* embryos coincides with the dorsal enrichment of dishevelled that is dependent on cortical rotation. *J. Cell. Biol.* 146;427-437

- **Reviews of patterning consequences of wnt activation:**

R. T. Moon and D. Kimelman 1998. From cortical rotation to organizer gene expression: toward a molecular explanation of axis specification in *Xenopus*. *BioEssays* 20;536-545

C. Niehrs 1999. Head in the WNT: the molecular nature of Spemann's head organizer. *Trends in Genetics* 15;314-319.

- **For the enthusiastic - a recent paper on the mechanisms of cortical flow:**

H. A. Benink et. al. 2000. Analysis of cortical flow models in vivo. *Mol. Biol. Cell* 11;2553-2563.