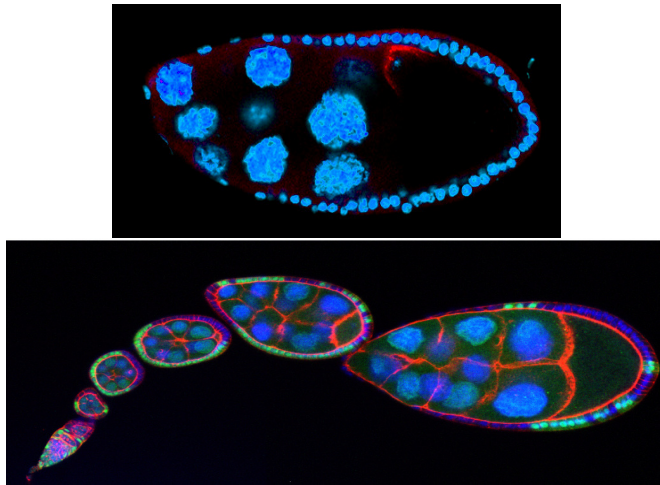




Follicle cell patterning and differentiation in *Drosophila* oogenesis



In *Drosophila*, the axes of the egg and embryo are laid down during oogenesis. We have found that signaling between oocyte and follicle cells plays an important role in this process, and shown that restricted EGF receptor activation sets up both axes of the egg. In recent years we have been analyzing the response of the follicle cells to EGFr activation. We found that the interaction of the Notch signaling pathway with the EGFr pathway is crucial in generating a population of posterior follicle cells that will produce a polarizing posterior signal, required to establish the anterior-posterior axis of the *Drosophila* egg.

In addition, our screens have uncovered new pathways important for epithelial cell differentiation. We identified the product of the gene *crag*, as an important regulator of the polarized secretion of basement membrane (BM) components in *Drosophila*. The basement membrane serves as an important regulator of epithelial cell polarity. However, little is known about how BM proteins themselves achieve a polarized distribution. We have identified additional genes that act in the same process as *crag* and help to ensure that BM deposition is exclusively targetted to the basal side of the epithelium.

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Host: Dr. Howard Lipshitz

Date: Monday November 18, 2013

Time: 4:00 p.m.

Place: FitzGerald Building
150 College Street
Room 103