



The egg chamber's follicular epithelium sculpts the developing *Drosophila* egg. In this simple organ, an oocyte (pink) and nutritive cells are enclosed by somatic follicle cells. During oogenesis, the follicle cells undertake a directed migration that causes the entire egg chamber to rotate (Haigo & Bilder. 2011, *Science*. 331: 1071). Egg chambers at different developmental stages are shown (lower left) with the axis of follicle cell migration indicated. The migrating cells polarize actin structures at their basal surfaces in the direction of migration. These include aligned actin fibers that span the basal surface of each cell and filopodial protrusions that extend from each cell's leading edge (Cetera et al. 2014, *Nat Commun*. 5: 5511). Epithelial migration is required for polarization of the basement membrane extracellular matrix that envelops the egg chamber. The main image shows the polarized basement membrane (blue) cut away to reveal polarized actin structures (white). Together, the polarized actin fibers and basement membrane are thought to act as a "molecular corset" that constrains the oocyte's growth, causing it to elongate along the axis perpendicular to follicle cell migration (Gutzeit & Eberhardt. 1991, *J Cell Sci*. 100: 781). When migration is disrupted, basement membrane polarization fails and the resulting egg is round (compare in the text inset). Round eggs often cannot pass through the oviduct and are retained within the female.



M&C&D