

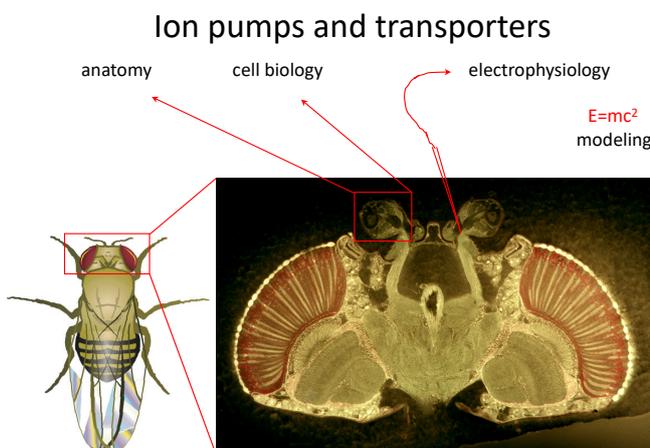


“Positioning ions for efficient operation of ion channels in mechanosensation”

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Mechanosensory ion channels, which transduce the sensory stimuli from mechanical stimuli such as sound, are often open for only very short times. For example, for each cycle of the orchestral A440, there are 440 pulls on the channel every second. To ensure that ions flow efficiently through the channel pore in such brief openings, a strong electrochemical gradient across the membrane is required. In many mechanosensory systems, a specialized extracellular cavity with fluid enriched in K^+ ions provides this gradient. We are using several approaches combined with the genetic tools of *Drosophila* to study the ion pumps and transporters that generate and maintain the receptor fluid in the scolopale space, the extracellular cavity of mechanosensory chordotonal organs in the auditory system in the antenna.



Nov 4th (Fri)

15:00-16:30

Room E131

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