



Contribution ID: 331

Type: Talk

【703】 In-vivo force measurements of MyosinII waves at the yolk cell surface during Drosophila dorsal closure

Tuesday, August 31, 2021 2:15 PM (15 minutes)

The mechanical forces involved during tissue morphogenesis have been the focus of much research in recent years. Absolute values of forces during tissue closure events have not yet been measured. This is also true for a common force producing mechanism involving MyosinII waves resulting in pulsed cell contractions. A magnetic tweezer, combined with confocal microscopy provides a powerful tool to quantitatively measure forces during tissue morphogenesis. Here, we quantify the in vivo force production of MyosinII waves observed at the dorsal surface of the yolk cell in Drosophila embryos. In addition to providing quantitative values on the force, we elucidated the dynamics of the MyosinII waves by measuring their periodicity.

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Session Classification: Biophysics, Medical Physics and Soft Matter

Track Classification: Biophysics, Medical Physics and Soft Matter