Farewell

The 494th IMEG Seminar

Regulation of morphogenesis:

The interplay of local, systemic, and environmental factors

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【Date】 March 22 (Fri), 2024 15:00-16:00

【Venue】 1F Conference Room, IMEG

【Absract】

Morphogenesis, the process that shapes embryos, organs, and tissues during development, is driven by gene expression and cell movements. Developmental biology has long focused on these genetic and cellular mechanisms to understand the regulations of morphogenesis. However, we now know that environmental factors also play a crucial role in morphogenesis, influencing cell behaviors through unknown mechanisms. In our research, we use Xenopus laevis embryos and larvae as a model to explore these unidentified regulators of morphogenesis, specifically examining how nutrients or mechanical forces impact cell movements in vivo. In this seminar, I will introduce our recent studies: how environmental nutrients affect thyroid morphogenesis, and how embryonic tissues adapt their morphogenesis to counteract mechanical force distortions. I will also discuss the future research perspectives aimed at elucidating the regulatory mechanisms across multiple levels, from molecules to the environment.

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