

Internal Webinar

Pseudostratification: How to store cells in limited space?

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The intricate orchestration of cellular dynamics during development holds the key to understanding the formation of complex biological structures. Among the myriad architectural wonders of tissue organisation, the Pseudostratified Epithelium (PSE) stands out for its unique architecture and crucial role in organogenesis across a spectrum of organisms. In this talk, I will discuss my proposal to unravel the functional significance of the PSE architecture as a storage and packaging mechanism in developing and proliferative tissues.

By using mouse retinal organoids as a model system and employing state-of-the-art imaging techniques and molecular tools, I aim to dissect the dynamics of nuclear positioning and its role in the establishment of pseudostratified architecture. Furthermore, my investigation will delve into the effects of manipulating nuclear packing through molecular and mechanical perturbations on PSE architecture. These research directions could provide crucial insights into nuclear packing as a fundamental feature in governing PSE tissue morphogenesis, PSE tissue height regulation and organ development.

Thursday, Apr 18th 2024

14:30 Hrs

