

UE « CELLULAR ASPECTS OF THE DEVELOPMENT »

CONTACTS:

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Lectures will take place at the campus Université de Paris Cité

Monday : Presentation of the different models

General introduction zebrafish	Antoine Guichet and Christine Rampon Marie Bréau (LBD)	09h30 – 10h00 10h00 – 12h00
Nematodes Drosophila	Griselda Velez Aguilera (IJM) Antoine Guichet (IJM)	13h30 – 15h30 15h40 – 17h40

Tuesday : Tissue Morphogenesis and Drosophila 1

Cellular competition and mechanical aspects of cell death	Romain Levayer (Institut Pasteur)	09h30 – 11h30
Germ line stem cells and stem cell niches	Jean Antoine Lepasant (Institut Jacques Monod)	14h00 – 16h00

Wednesday : Tissue Morphogenesis and Drosophila 2

Generation of neuron diversity	Nikos Konstantinides (Institut Jacques Monod)	09h30 – 11h30
Formation of the respiratory organ: Morphogenesis and collective cell migration	Véronique Brodu (Institut Jacques Monod)	14h00 – 16h00
Presentation and discussion of articles		16h10-18h30 Mechanical Feedback through E-Cadherin Promotes Direction Sensing during Collective Cell Migration: Group 1 Mechanical Function of the Nucleus in Force Generation during Epithelial Morphogenesis : Group 2

Thursday : Cytoskeleton and Polarity Nematodes

Actomyosin dynamics during cell morphogenesis, from molecule to tissue: a <i>C. elegans</i> perspective	François Robin (IBPS)	09h30 –11h30
Presentation and discussion of articles		11h10-12h30 Endocytosis of Hedgehog through Dispatched Regulates Long-Range Signaling: Group 3
Severing enzymes and microtubule dynamics	Nicolas Joly (Institut Jacques Monod)	14h00 – 16h00
Presentation and discussion of articles		16h10 – 18h30 Coupled oscillators coordinate collective germline growth: Group 4 Microtubule Dynamics Scale with Cell Size to Set Spindle Length and Assembly Timing: Group 5

Friday : Tissue Morphogenesis and Zebrafish

Presentation and discussion of articles		9h30 – 10h30 Optogenetic dissection of mitotic spindle positioning in vivo: Group 6
An experimental model to study nervous system development and human disease	Marcel Tawk (Hôpital Kremlin Bicêtre)	10h30-12h
Presentation and discussion of articles		12h00 – 13h00 Dynactin binding to tyrosinated microtubules promotes centrosome centration in <i>C. elegans</i> by enhancing dynein-mediated organelle transport: Group 7
Presentation and discussion of articles		14h30-18h00 Cell competition corrects noisy Wnt morphogen gradients to achieve robust patterning in the zebrafish embryo: Group 8 Specified Neural Progenitors Sort to Form Sharp Domains after Noisy Shh Signaling: Group 9 Smad4 controls signaling robustness and morphogenesis by differentially contributing to the Nodal and BMP pathways : Group 10