

MU5BM211	BIOLOGIE DU DEVELOPPEMENT
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Modalités	Semestre	ECTS	Présentiel / Distanciel	Effectif maximal
	S3	12	Présentiel	18
Volume horaire (H)	Cours	TD	TP	Site
	30	45	45	Campus Pierre et Marie Curie/Institut Curie
Langue d'enseignement	Cours	TD	TP	Supports de cours
Français/Anglais	Anglais	Anglais	Anglais	Anglais
Evaluations	Consulter le document « Dates et barèmes » et /ou le responsable d'UE			
UE de spécialisation non proposée en UE d'ouverture				
Prérequis	Basic background in Developmental Biology			

Présentation pédagogique de l'UE

**Selon l'évolution des conditions sanitaires au cours de l'année
une partie des enseignements de cette UE pourra être assurée en distanciel.**

Objectifs	This international workshop, entitled « From stem cells to morphogenesis » aims to address the different aspects of embryonic development in relation with stem cells, particularly focusing on the diversity of possible approaches brought by these two research domains. The course duration is 4.5 weeks, with 3 weeks of practical workshop organized by Sorbonne Université, and 10 days of seminars organized by the Institut Curie. The practical workshop allows the participants to become familiar to the main embryonic models (Caenorabditis Elegans, zebrafish, xenopus, chick, drosophila, mouse...) and to acquire the more recent technical approaches developed in these models (gain and loss of function approaches, imaging...). The seminars bring together the best international specialists in the field. The objective is to expose the students to the recent concepts developed in Developmental biology by highlighting their important contribution to the stem cell field and clinical sciences. Various domains of the Developmental biology field are addressed in relation to stem cells, not only across the variety of embryonic models but also across the diversity of approaches (large-scale and translational approaches, mathematical modelling, biophysical approaches....).
Thèmes abordés	Germ cell and sex determination, gastrulation, growth regulation, development of the nervous system, cell mechanics during development, synthetic developmental

	biology, stem cell and organogenesis, stem cells and their niches, regeneration, cancer stem cells, Evo-Devo
Compétences acquises à l'issue de l'UE (concepts, méthodologie et outils)	• Experimental knowledge of embryonic models • Theoretical basis of modern approaches used in Developmental Biology (Big data analysis, biophysics, modelling) • Strong background in Developmental biology necessary for the understanding of stem cell field, congenital diseases and cancer.

Equipe pédagogique

- Animateur de l'équipe : Claire Fournier-Thibault.
- Enseignants : équipe constituée d'enseignants-chercheurs et de chercheurs, français et étrangers.