

Congenital Pathologies: Integrative Insights from Organoids, Mice, and Zebrafish

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Effectives: 16

Language: English

Prerequisites: curiosity

Where?

Campus PRG

Evaluation:

Due to the very interactive nature of this class, evaluation will be based on participation

Questions:

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Number ECTS: 3ECTS

Total numbers of hours:
30h

Teaching format:

conferences and discussion with researchers

Teaching objectives

We will explore how congenital diseases can be modeled using a variety of systems, such as mouse, zebrafish, chicken, and Drosophila, along with newer technologies like organoids and tumoroids. The goal of this class is to bridge fundamental research with applied research that has therapeutic potential, highlighting the importance of both. We'll also emphasize the value of studying early developmental processes, which are key to understanding many disease mechanisms. By combining disease-relevant models with innovative research strategies, we aim to enlighten dynamic and forward-thinking approaches that support both clinical insights and scientific discovery.

Teaching outline

This class will primarily feature seminars from various researchers who utilize different model systems to investigate various congenital pathologies. Two guest researchers will be highlighted in more depth, with students working in pairs to analyze articles related to their research. They will use prepared questions to facilitate discussions with these researchers. Additionally, the researchers will deliver lectures outlining their scientific approaches. The week will conclude with a visit to an IPS/brain organoid facility and an experimental demonstration of electroporation in chick embryos.