



**BME PARIS**  
BioMedical Engineering  
MASTER'S PROGRAM

## DRUG SCREENING PROCESSES

Open Your Mind Seminar

**Friday, Nov 5 2021**  
**1.30 pm – 3 pm**

Arts et Métiers  
155 Boulevard de l'Hôpital  
75013 Paris  
Béziers Amphitheater

### Organ on Chip for biological and Biophysical Studies

The development of a new generation of in vitro models is of interest in different fields such as basic research in life science to decipher physiological and patho-physiological mechanisms or in pharma companies to drastically improve drug screening process. In the last decade, basic research showed how our understanding of the behavior of physiological and patho-physiological systems can be greatly increased thanks to a rational simplification of the human body in artificial microsystems. Among these different models, organ on chips are considered today as key technologies.

In this talk, we will demonstrate how microfluidics and microfabrication can be used to develop new relevant in vitro models in particular a gut on chip model that allows to the study for the first time the interplay between, stromal and epithelial cells. As a critical problem in the development and deployment of effective anti-cancer treatments remains the lack of adequate in-vitro model systems, in a second part, I will focus on tumor on chip development recapitulating in vitro the complexity of the tumor-microenvironment.

**Stéphanie DESCROIX**

Institut Curie UMR 168  
Institut Pierre Gilles de Gennes

