



## Session IV : Organoids and Precision Medicine

**Clémentine Le Magnen** (University Hospital Basel, Switzerland)

### **‘Patient-derived organoids to investigate drug response and drug resistance mechanisms in prostate cancer’**

Progress in cancer research has long been hampered by a lack of in vitro models that adequately reflect the molecular, cellular, and architectural complexity characterizing solid tumors. Recent technical advances have enabled the establishment of more physiologically relevant three-dimensional in vitro models derived from patient material and referred to as patient-derived organoids (PDOs). While PDOs represent promising experimental and preclinical models in certain tumor types such as gastrointestinal malignancies, their establishment has proven to be challenging in the context of prostate cancer. Here, I will present an overview of our efforts to develop prostate cancer PDOs and the opportunities for basic and translational studies; this will include their application to investigate treatment resistance mechanisms and to assess drug response in patients with advanced prostate cancer.

**Himisha Beltran** (Dana-Farber Cancer Institute, Boston, MA, USA))

### **‘Lineage plasticity as an emerging mechanism of resistance in prostate cancer’**