

ASHBi / CiRA JOINT SEMINAR

Methods to disentangle epistemic and ethical uncertainty in the regulation of organoid research

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Date **Wednesday, 7 January 2026**

Time **13:00 – 14:00 [JST]**

Venue **Seminar Room/ Zoom online**
1F, Faculty of Medicine Bldg B.

Registration



As advanced stem cell constructs and innovations in biotechnology, organoids are entities of uncertain nature. They are uncertain in the sense that their properties are still to be developed and fully understood (ontological/epistemic uncertainty) and in the sense that their moral and legal status is unclear (they may fall under different sets of rules depending on context and interpretation). In many cases, these two kinds of uncertainty are intertwined: we do not know which ethical and regulatory status is appropriate for a given entity because we do not know enough about its nature. For instance, the difficulty to qualify stem cell based embryo models and assess their developmental potential is a source of the controversy on their moral and legal status. The lack of consensus on the properties of human brain organoids and the lack of methodologies to monitor and assess these properties is a hurdle to the elaboration of an ethical framework. The development of organoid models for precision and regenerative medicine or for the replacement of animal models in preclinical research is full of promises but the validity and efficacy of these strategies is still in question. In all these cases, one cannot wait for the resolution of epistemic uncertainty to deal with ethical and regulatory uncertainty. In this talk, I will discuss different approaches proposed to address ethical and regulatory uncertainty while mitigating epistemic uncertainty, such as vision assessment, ethics-by-design, and embedded ethics.

Hosted by Institute for the Advanced Study of Human Biology (WPI-ASHBi)

Co-organized by Center for iPS Cell Research and Application

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