

# **Organoids in action**

# An interdisciplinary approach in social sciences (ORGANACT)



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rganact takes an interdisciplinary approach, combining sociology, anthropology and law, to human organoids and the issues they raise in their production, circulation and use. These little-known entities blur the usual categories and qualifications, but remain little studied in SHS outside of ethical aspects. Organact aims to shed light on how these entities are regulated. It aims to provide an account of the many activities involved in scheduling organoid-based practices, and to assess their impact on the healthcare system.



as an alternative to the use of laboratory animals



- to explore biomedical practices (care and research) that rely on organoids - to understand the impact of organoids on these practices, and how they are changing

them.





To shed light on the regulatory work of these entities: how are they appointed? What powers are vested in them? In what arrangements are they employed? What regulations do they give rise to?

## Methodology

The ethnographic fieldwork involves the empirical study of complementary case studies in France (through situated observations, interviews and documentation), covering a continuum of practices from basic research to clinical application.



Cortical organoid (2 months)

#### **Hypothesis**

H1: The specificities and uncertainties of organoids challenge existing frameworks in biomedical research and the healthcare system: some of the practices that mobilize them are well-defined, while others go beyond them. H2: Organoids elicit distributed regulatory activities

which our project aims to shed light on.

# **Socio-anthropological approach to cerebroid**

The **ethnographic study** focuses on the various stages from the manufacture of cerebroids to their disposal.

These manufacturing and conservation activities are meticulously studied, as are the **uses** to which they give rise (from "fundamental" research to more "applied" activities).

The "controversial" or contentious aspects of cerebroids are also examined: questions of sentience/consciousness, moral values, legal status, chimerism, organoid intelligence, etc.

Analysis of the heterogeneous arrangements in which the organoids take part and the reconfigurations they generate: negotiation issues (technical, etc.), relationship with cerebroids (care practices, etc.), qualifications ("wild" cerebroids, neuronal organoids, etc.), public/private links and stakes.

Anthropological and sociological analysis: aiming to take into account the diversity of organoid conditions (origins and stages of development) and their trajectories within the research practices or where they are manufactured and "cultivated".

The legal analysis will include these cases and will be complemented by an approach based on an exegesis of European and French legal texts.

## **Empirical inquiry**

Study 4 types of organoids in laboratory and hospital settings: describe the interweaving of conceptions of life, ethics and legal standards or normative frameworks with day-to-day practices:

- . Cerebroid for modeling neurodegenerative diseases
- . Gastruloids for studying morphogenesis of the cardiovascular system
- . Hepatic organoids in preclinical research and health monitoring . Intestinal organoids for cystic fibrosis research

## **Cross-cutting analysis / comparative analysis**

# Legal approach to cerebroid

Legal definitions: tissues and cells? Organs? Advanced Therapies Medicinal Products? "New approach methodologies"?

No specific legal regime for brain organoids in French law : basic research falls under the regime of stem cell research (articles L2151-1 to L2151–11 of the Public Health Code). **Respecting donors' rights** : anonymity, bodily integrity, consent, free donation. Various soft law guidance : International Society for Stem Cell Research, US National Academies, INSERM ethics committee, National ethics committee (CCNE).



ORGNOID STATUS may vary according to several factors: types of organoids; stem cells used in their manufacture and the purposes for which they are used. Variations analyzed in the case studies identified above and in legal texts.

> INDUSTRIALIZATION AND THE MARKET: from manufacturing to conservation: organization, actors, distribution, flows

PROMISES AND RESISTANCE /ORGANOIDS: Testing future scenarios, controversy study

Symposium on cortical and spinal organoid. Institut Jacques Monod, Paris, France, Jan 29, 2024

