

Press release

Paris, November 13, 2025

The Strategic Committee for Health Industries and Technologies (CSF ITS) publishes the 2025 White Paper on organoids and organs-on-chip: a roadmap for structuring a strategic French industry.

The Strategic Committee for Health Industries and Technologies (CSF ITS) announces the publication of the 2025 White Paper of the French Organoids and Organs on Chips Sector (F3OCI), a reference document that provides the first overview of the French sector and proposes a national strategy to position France among the world leaders in these disruptive technologies.

A shared vision for a sector with a bright future.

At the crossroads of regenerative medicine and personalized medicine, organoids and organs-on-chips (O&OoCs) are ushering in a new era for medical research, toxicology, cosmetics, and animal health. These three-dimensional models reproduce the complexity of human tissues, enabling more accurate predictions of treatment efficacy and toxicity while reducing the need for animal testing.

This white paper, developed as part of a joint project led by BioValley France and NETRI in collaboration with the CNRS, CEA, CEVA, ICARE, and INSERM, sets out ambitious recommendations for structuring and industrializing the French organoid and organ-on-a-chip sector.

The main points of the White Paper.

The result of a national consultation process conducted between 2024 and 2025, the document is structured around nine strategic priorities for developing a sovereign, competitive, and sustainable sector:

- 1. Promote the adoption of organoids and organs-on-chips through concrete use cases.**
- 2. Transfer and industrialize technologies developed in laboratories.**
- 3. Secure cell resources through industrial biobanks and a national catalog.**
- 4. Create a clear French and European regulatory framework for new alternative methodologies (NAMs).**
- 5. Deploy quality and standards, based on the GIVIMP (OECD) reference framework.**
- 6. Strengthen public-private partnerships, particularly for access to patient cells.**
- 7. Structure and finance the sector sustainably, with the creation of a National Center for Alternative Methods.**
- 8. Train talent through a Qualiopi-certified national initial and continuing training program.**
- 9. Establish French governance and its international influence through active participation in the work of the OECD, EMA, and ISO.**

A unique collaborative effort.

The White Paper is the result of a collaborative effort involving more than 40 national experts from academia, industry, and institutions.

Contributors include:

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The review was carried out by experts from the CEA (IRIG & LETI), the PEPR MED-OOC pilots, and the APRS.

A webinar presenting the main points of the white paper and the next steps will be organized by the end of 2025 by the F3OCI sector.

A rapidly developing sector.

The White Paper highlights:

- **133 French projects identified in organoids and organs-on-chips, led by 66 public and private institutions.**
- **Major hubs in Paris, Lyon, Grenoble, Strasbourg, and Bordeaux.**
- **A sector with strong economic potential: the global market for organs-on-chips is estimated at \$2.1 billion by 2034.**

A national and European ambition.

This white paper is part of Project 14 of the ITS CSF, "Boosting and structuring preclinical research," and the France 2030 strategy with the MED-OOC PEPR. It aims to strengthen French and European sovereignty, both industrial and health-related, and to position France as a key player in alternative methods for human, animal, and environmental health, in line with the One Health concept.

The French government, in consultation with the relevant stakeholders, is considering implementing an initiative aimed at objectively assessing the contribution of organoids and organs-on-chips in the preclinical phase and in precision medicine.

Download.

The 2025 White Paper on organoids and organs-on-chips is available in full on the F3OCI sector website: <https://f3oci.fr/initiatives>.

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