

#05 Organoid-based functional assays for efficacy and toxicity assessment in relevant human disease models



EXPECTED DELIVERABLE

Indicative duration: 6 – 9 months

Development of human tumor organoid models to evaluate:

Pharmacological efficacy of Ipsen compounds on biological pathways of interest (e.g., proliferation, apoptosis, differentiation, network activity, secretion).

Structural and functional toxicity, using 3D morphometry, viability, imaging, and functional readouts.

The project may include (to be adapted by the partner based on expertise):

- Establishment or optimization of organoid generation protocols
- Development of a robust analytical pipeline:
- 3D morphological features: size, density, lumen formation, polarity
- Functional biomarkers: calcium imaging, metabolic activity, electrophysiology, secretion assays
- High-content or high-throughput 3D imaging
- Exploratory testing of Ipsen reference and test molecules to assess model sensitivity and translational relevance.



LONG-TERM COLLABORATION POTENTIAL

Subject to scientific and strategic alignment

Human organoid models represent a strategic opportunity for Ipsen in several key therapeutic areas:

Oncology: patient-derived tumoroids for evaluating efficacy, resistance mechanisms, and molecular stratification.






If the model demonstrates robustness and translational value, Ipsen would be highly interested in developing a long-term collaboration, including:

- expanding internal organoid biobanks,
- creating scalable efficacy/toxicity testing platforms,
- co-developing disease-specific organoid models with strong predictive value.




CANDIDATE SELECTION

Initial eligibility check by MPR. Final selection by the challenge provider.

	Completion of EDUCATE	Core Module
	Company status	SME under EU criteria
	Maximum number of supported companies	1 – 3
	Minimum required TRL	5–6 minimum (functional models established with preliminary validation data)
	Confidentiality NDA/ CDA required	Yes

Selection by the challenge provider based on fit, relevance, readiness, innovation potential and demonstrated expertise in human organoid culture, functional analyses, 3D imaging and long-term organoid culture capacity.

Additional selection criteria

	Geographic area	SME from across EU are welcome. SMEs from Interreg NEW are prioritized, particularly partner regions
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APPLICATION

Application directly via the STEP4NAMs Moodle platform



<https://step4nams.moodlecloud.com/>



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