INDUSTRY LIAISON EVENT

Monday, 22 June 2026 **12:00 - 18:00** **Rome, Italy**

What is PRIM-TECH3R?

PRIM-TECH3R is a European initiative developing and advancing both mouse and human-derived **complex *in vitro* models (CIVMs)** for **preclinical research**, bringing together leading European Research Infrastructures, research institutes and industry partners. The project focuses on making advanced *in vitro* approaches more relevant, accessible, and usable for preclinical investigations.

About the event

This first Industry Liaison Meeting is designed as an **introductory exchange forum** between the project partners and commercial stakeholders. It will **introduce PRIM-TECH3R capabilities** and demonstrator use cases, exploring industry needs, constraints, and priorities. The meeting will also **establish an interactive platform for bilateral dialogue between research infrastructures and industry,** gathering early input to shape future engagement, including the planned Open Calls for industry applicants.

What to expect

- Short, practical overviews of PRIM-TECH3R demonstrator models and applications
- Clear insights into current *in vitro* models, including strengths and gaps
- Key barriers to adoption, such as scalability, validation, regulation, and workflows
- Future priorities for CIVM development and access
- Guided roundtable discussions with vital industry input and concrete actional output

Who should attend

- Industry end-users and potential users of *in vitro* models (SMEs, biotech, pharma)
- Industry multipliers (life science clusters, networks, associations)
- Innovation and collaboration leads seeking future-ready preclinical *in vitro* solutions

Practical information

The event will take the form of a **half-day meeting followed by a networking dinner** and is **free to attend**, as it is funded by the European Commission. It will be held **back-to-back with the INFRAFRONTIER Conference 2026** (23-24 June 2026), offering participants the opportunity to attend both events, with a **limited number of free exhibition and visibility opportunities available**. Travel and accommodation are generally self-funded, with limited support potentially available for invited speakers.

Registration

Please register for the event through the **following form**:

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101188158.

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PRIM-TECH3R CIVMs

Lung bud microarrays

Organotypic mice and human lung bud microarrays are a cell culture technology platform used to grow genetically identical lung buds. These are the embryonic structures that give rise to respiratory organs from wildtype mESCs, iPSCs and human embryonic stem cells (hESCs) including genetically edited cells cultured on micropatterned substrates. When placed on a microarray and dosed with a custom cocktail of signalling molecules, these cells rapidly organise themselves into 'micro-lungs' with full tissue complexity. Their characterisation and molecular signature is possible by high-throughput imaging with associated AI image analysis, and single cell approaches.

3D bioprinted muscle fibres in tumour-on-chip

This model consists of myobundles formed by depositing cell-loaded biocompatible matrices in pillar-engineered devices that improve appropriate tissue maturation and allow the analysis of tissue contractile force by tracking pillar displacement. Muscle fibre histoarchitecture is improved by bioprinting murine muscle cells along the fibre deposition direction. Microchannels from lateral compartments containing colon cancer organoids will propagate tumour derived factors to myobundles to study the effect of tumour activity on muscle tissue.

3D co-culture GBM model

This model consists of astrocytes and neurons differentiated from mESCs derived from specific mouse mutants grown on a special cellular scaffold to create a 3D culture capable of allowing migration and thus allowing the study of invasion and metastasis of a spheroidal glioma cell line seeded on top of the scaffold. The 3D co-culture model can be used to perform cell-cell adhesion immunofluorescence assays; secretome analysis (by mass spectrometry); live/dead staining fluorescent assays; 3D proliferation assays (e.g. AlamarBlue); 3D invasion assays (by multiphoton confocal microscopy) and more.

3D bioprinted mouse CRC tissue

The cells from a spontaneous inducible murine cancer model will be used to generate an in vitro 3D bioprinted model. This model arranges different types of cells in a tissue dish similar to an actual tissue. 3D printers join cells to form a complex 3D structure with the help of biocompatible materials, such as collagen, alginate, or gelatin, and with Matrigel as extracellular matrix (ECM). The 3D bioprints are intended for use in the evaluation of novel therapeutic compounds in oncology. In addition, these constructs may serve as valuable platforms in basic research to enable a more detailed investigation of molecular and cellular processes underlying tumour biology.

Air-Liquid Interface (ALI) lung organoids

ALI lung organoids are advanced 3D in vitro models with the basal surface in contact with liquid culture medium, while the apical surface is exposed to air. Preclinical applications include assessment of therapeutics or mutations on the cellular and molecular profile of the organoids, for e.g., testing anti-fibrotic therapies on fibrotic ALI lung organoids.

GLUT1 Deficiency Syndrome BBB CIVM

The BBB model is built on a 96 plate platform, containing 24 separate functional micro fluidic BBB units. In each unit, the culture chamber is composed of mESCs differentiated cells with the same genetic background. The chamber is divided horizontally into two parts by a thin membrane for endothelial barrier separating the lower culture chamber and open-top chamber for astrocyte/neuronal culture. Two collection reservoirs, allow the sampling of culture media after passage throughout the barrier, mimicking in vivo CSF. The BBB permeability of a plethora of compounds can be easily evaluated in a scalable manner by measuring reservoir samples with a microplate reader.

Human 3D organotypic epidermis models

3D epidermis organoids will be generated from iPSCs with patient mutations that cause Epidermolysis Bulbosa (EB) (edited by CRISPR/Cas9). These organoids will serve as in vitro models for testing gene therapy vectors and evaluating the efficacy of small molecules in correcting genetic defects or ameliorating disease phenotypes.

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