

MIMETAS OrganoPlate®

Where 3D Tumour Biology Meets High-Throughput Assays



Bringing Patient Biology into Drug Discovery & Development

While standard cell culture models are useful, they cannot capture the full complexity of living tissues. MIMETAS' OrganoPlate® platform is a precision microfluidic system that recreates this dynamic environment, incorporating 3D tissue organization, perfusion, vasculature, stromal components, and immune cells. This allows researchers and drug developers to run compound screens and efficacy studies in physiologically relevant 3D tissue models at throughput, and from an early stage of development.

OrganoPlate® Technology

The OrganoPlate® platform supports advanced 3D culture in a microplate format, with continuous perfusion that doesn't require pumps, tubing, or artificial membranes. Culture of up to 96 independent 3D tissue models on a single plate enables dose-response studies and multi-compound screens at throughput. Since cells migrate, remodel, and self-organize as in native tissue, it is possible to study cell migration, outgrowth, cell-cell interactions, and vascularization. Cancer drug developers can use pre-grown OrganoReady models (e.g. colon organoids, kidney tubuloids), or start with empty OrganoPlates® and co-develop novel models - including complex co-culture models that incorporate tumour cells, CAFs, endothelial cells, and immune cells.

Access Through a Demonstrator Project

Through Oncode Accelerator's partnership with MIMETAS, OrganoPlate® technology can be accessed via Demonstrator Projects.

Within Demonstrator Projects, and in collaboration with the experts at MIMETAS, you can:

- Develop complex models that incorporate immune cells, blood vessels, and other essential cell types, using patient-derived material from our Organoids and Patient Cohorts Platforms
- Perform high-throughput dose-response studies and multi-compound screens (toxicity, efficacy) in physiologically relevant 3D models
- Access expert support for experimental design, model setup, and compound screening

Get Started

Get started with your application today by contacting our Business Development team at: <https://www.oncodeaccelerator.nl/get-started>

Demonstrator Projects

Demonstrator Projects are collaborative, co-funded preclinical development projects that use our integrated infrastructure. We focus on four therapeutic modalities represented by our Workstreams:

- small molecules,
- biologics,
- cell & gene therapies, and
- therapeutic vaccines.

These preclinical drug development pipelines combine our state-of-the-art drug development pipelines with innovations from our Platforms:

- artificial intelligence (AI),
- organoid models and organ-on-a-chip technology, and
- well-defined data and materials from our patient cohorts.