# High-throughput combinatorial miniaturized 3D organoid culture for personalized medicine

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## Organisation

**Name of the organisation** Katholieke Universiteit Leuven (KUL)
**Department** MeBioS - Biomimetics
**Specific Research Group or Service** Biomimetics
**Country** Belgium
**Geographical Area** Flemish Region

## SCOPE OF THE METHOD

| | |
|---|---|
| **The Method relates to** | Human health |
| **The Method is situated in** | Basic Research, Translational - Applied Research |
| **Type of method** | In vitro - Ex vivo |

## DESCRIPTION

### Method keywords

Organoid screens
High-throughput
Microfabrication
Combinatorial
Personalized medicine
Microfluidic device

### Scientific area keywords

Lab-on-a-chip
Droplet-based microfluidics
Droplet sorting
Combinatorial droplet library
Personalized medicine

### Method description

Design and fabrication of a method to enhance the cost-effectiveness of organoid culturing and drug screening assays by miniaturizing the cultures and reduce the required reagent volumes to the sub-nanoliter range through microfluidic techniques. By growing single or multiple organoids per microbead in a microfluidic platform, we can increase the spatiotemporal control of the organoid environment and maximize the number of assays that can be performed from a single PDRO culture.

### Method status

Still in development

# REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

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*Financed by*