

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

Created on: 02-12-2024 - Last modified on: 02-12-2024

## 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

<b>The Method relates to</b>	Human health
<b>The Method is situated in</b>	Basic Research, Translational - Applied Research
<b>Type of method</b>	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

*Coordinated by*



*Financed by*



**Vlaanderen**  
verbeelding werkt

