

Bioprinted, Vascularized Neuroblastoma-on-Chip

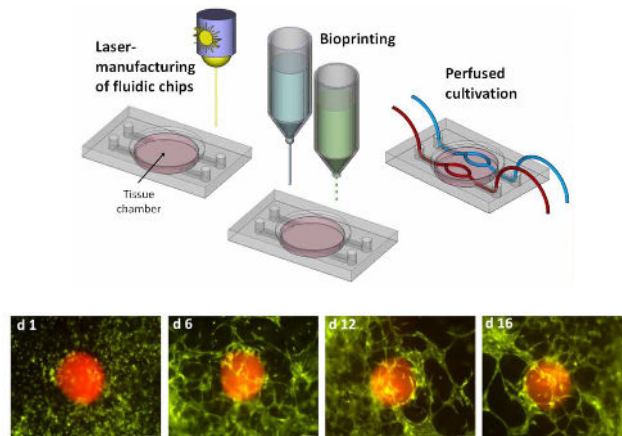


Nothdurfter D, Ploner C, Coraça-Huber DC, Wilflingseder D, Müller T, Hermann M, Hagenbuchner J, Ausserlechner MJ. 3D Bioprinted, Vascularized Neuroblastoma Tumor Environment in Fluidic Chip Devices for Precision Medicine Drug Testing. *Biofabrication* (2022), 14(3), 035002.

Overview

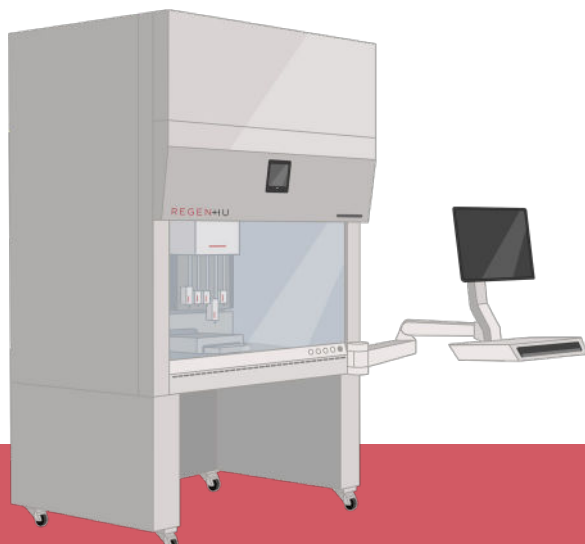
Modeling the environment of tumors offers the possibility to better understand their development and resistance to therapeutic drugs or immune therapy. To recreate an individual tumor microenvironment, in vitro cancer models can be personalized with patient-derived cells.

In this study, a complex vascularized neuroblastoma-on-a-chip model was developed with the combination of 3D bioprinting and fluidic chip technology.



Results

- ✓ iPSC-derived MSCs promoted enhanced micro-vessel formation
- ✓ Personalized in vitro model mimicking tumor angiogenesis and metastatic phenotype



REGENHU's bioprinting technology enables:

In-chip printing

Bioink (PDD) and sacrificial channels (PSD) for perfusion

Automated approach

12 chips in a single process, 3min per in-chip tissue

Interested to know more ?

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