



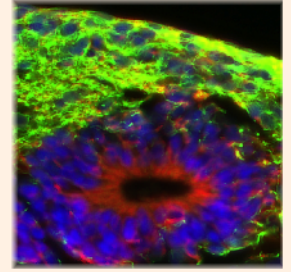
# Personalized service

## Human organoid models

Short & Long term compound testing

Highly physiological human  
3-dimension tissues

High throughput &  
lead compound validation

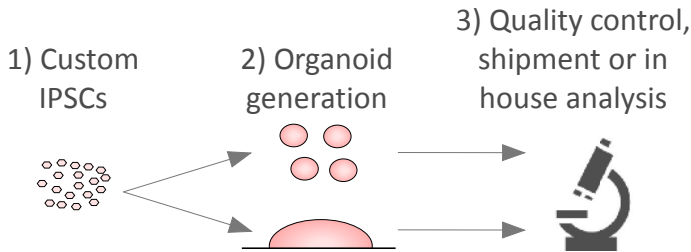


Neurix offers customized services for organoid applications and drug discovery. Our experienced scientists are happy to work with you in order to understand your needs and meet your objectives.

The services below are examples that have been executed for specific needs.

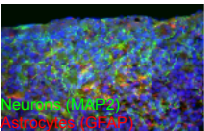
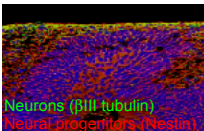
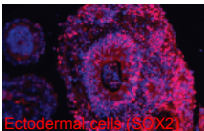
### Organoid generation with custom iPSCs

We generate from your favorite IPS cell line organoids compatible both with high/low throughput for drug screening, or for compound validation with extended readouts.



### Custom organoid manufacture

We adapt to your needs and generate following neural tissues from human stem cells depending on your research interests.

<p><b>Mature</b> Similar to adult brain</p> 	<p><b>Early</b> Similar to fetal brain</p> 	<p><b>Embryoid</b> Models embryo development</p> 
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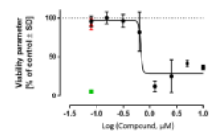
Additionally, **Dopaminergic neurons** (TH positive) as well as **motor neurons** (Foxp1 positive) can be generated.

### Multiple readouts on organoids

High number of readouts can be applied for neuroscience research, and may be adapted to higher throughput for drug discovery.

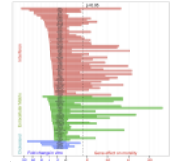
#### - Fluorescent / luminescent reporter.

As example, the fluorescent synapsin reporter for monitoring of neurotoxicity



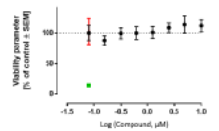
#### - Proteomic / genomic analysis

We performed genomic analysis in our glioblastoma invasion model



#### - Cyto- & neuro-toxicity testing

We perform in routine cytotoxicity assays



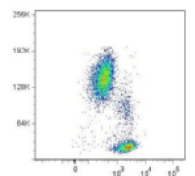
#### - Histological analyses

Performed for deeper neuroscience investigation projects, as example for glioblastoma invasion.



#### - Cell sorting

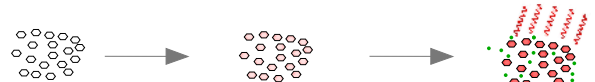
We do cell sorting to quantify neural cell populations, or purify newly generated cell lines



### Design and generation of cell-based assays

We currently design cell-based assay to assess the quality of a bio-active molecule in a cheap and accurate manner.

- 1) Choosing adapted cell type
- 2) Design and integration of specific reporter
- 3) Standardization & target molecule detection



## Personalized Service - Human Organoid Model - Service specifications

Cell types	<ul style="list-style-type: none"><li>- <b>Mature tissue:</b> Composed of neurons, astrocytes and oligodendrocytes</li><li>- <b>Early tissue:</b> Composed of Neurons, astrocytes, oligodendrocytes progenitors and neural progenitors. The latter cells keep generating newborn neurons in a dynamic process.</li><li>- <b>Embryoid tissue:</b> composed of endodermal, mesodermal and ectodermal cells</li></ul>
Production technology	Neurix's Minibrain™ & Neurosphere technology with minimum batch to batch variability guaranteed by extensive quality control of identity (rt-qPCR)
Field of application	Lead compound validation, high throughput screening & neuroscience research
Assay window	Short term (7 days) to long term (1.5 month)

### Our publications

Krug, A. K. et al. Human embryonic stem cell-derived test systems for developmental neurotoxicity: a transcriptomics approach. Arch. Toxicol. 87, 123–143 (2013).

Preynat-Seauve, O. et al. Development of human nervous tissue upon differentiation of embryonic stem cells in three-dimensional culture. Stem Cells Dayt. Ohio 27, 509–520 (2009).

### Validated assay and protocols

Personalized service is integrated into a variety of validated assay that can be implemented in drug development for efficacy evaluation of novel compounds:

- Cell viability assays
- Histological analysis (IHC & IF)
- Cell sorting and cell population analysis (FACS)
- Genomic analysis
- Proteomic analysis

### Get in contact with us

Neurix offers customized services for neural applications. These include gene / cell / polymer therapy testing, brain tumor drug testing, neurodegenerative diseases modeling and neurotoxicity assays. Our experienced scientists are happy to work with you in order to understand your needs and meet your objectives.

#### Contact us

Please do not hesitate to get in touch:

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**NEURIX**  
Next generation neuro-engineering