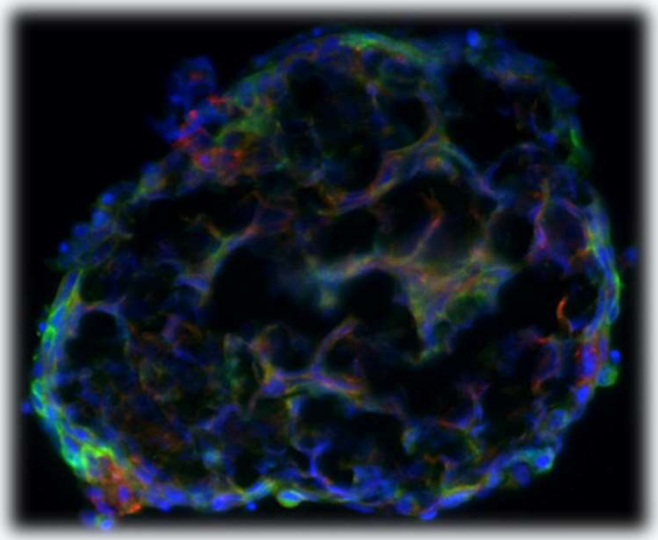
# TiBioC
# Tissue Biofabrication and Characterization



## PRESENTATION

We offer several services to public and private laboratories / biotechs / bigpharmas, in particular on small and large scale 2D and 3D cell models (more than> 3 mm in diameter) with dedicated technologies and tailor-made services. Our technological platform is followed by the Satt Conectus, https://www.conectus.fr, federated within the National SATT Network (https://www.satt.fr/en) for the establishment of the contracts and we are currently in the process to be part of the Cortecs network of the Strasbourg University, https://cortecs.unistra.fr.

Our **customized** services include (but are not restricted to… Please refer to the Services Section):

- Cytotoxicity testing (including cell metabolism, proliferation, viability, and death analysis)
- Development of 2D and 3D models from normal and tumoral tissues, from cell lines (primary or clonal) and from patients' tumors (kidney, bladder, prostate, lung, glioblastoma and virtually from all types of tumors) – small size and big size 3D structures > 3mm with a program that will allow to vascularize them
- Development of 3D structures also available in coculture, 2 or more cell types
- Tissue regeneration using various experimental approaches
- Measurement of molecules therapeutic efficiencies…
- When applicable, study of the mechanism of action of therapeutic molecules, old or new or in repositioning

## CORE TECHNOLOGY/PRESTATIONS

- **Strategy Consulting**

**Study plan, coordination, planification, gestion, data analyses and reports**

- **Cell Handling (thawing, freezing, culture maintenance)**

- Clonal cells
- Primary cells

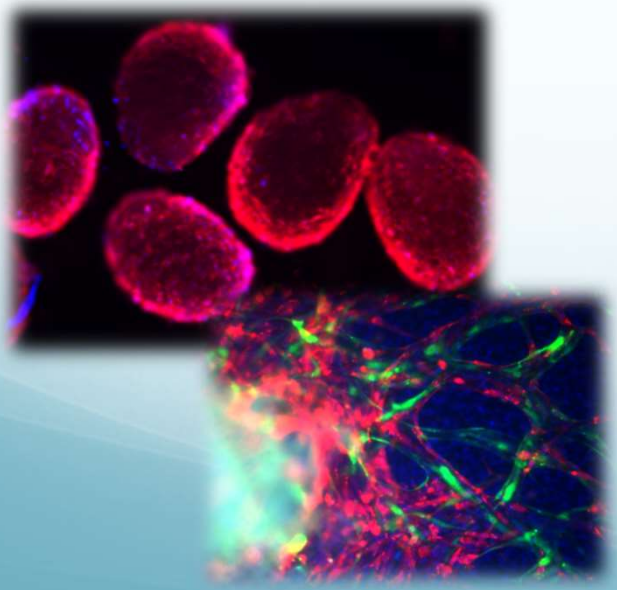
- **Cytotoxicty studies**

- Cell shape (counting)
- Cell proliferation
    - Alamar Blue assay
    - Ki67/Caspase assay
- Cell death
    - Live/Dead assay
    - TUNEL assay
- Senescence
    - ß-Galactosisdase assay

- **Histology studies**

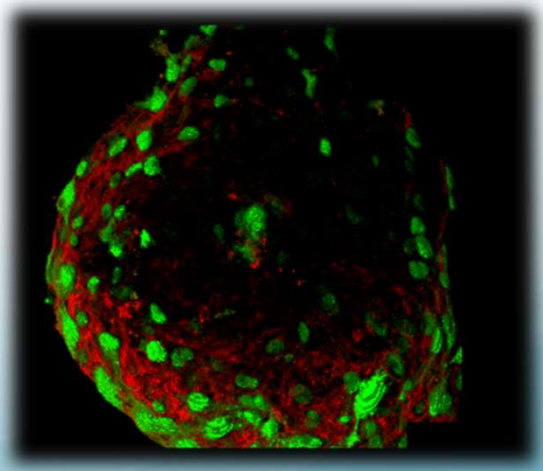
- Histochemistry
- Immunofluorescence

- **Sterilization and decontamination in H2O2vapor/UV light**
- **Biomaterial functionalization**
- **Characterization of the functionalization**
- **Characterization of the biocompatibility of the biomaterial**
    - ACIPA (Ki67/Caspase-3 + Live/Dead) assay
    - Alamar Blue assay
- **Formation and characterization of the spheroids/organoids**
- **Formation and characterization of the neotissues (S-PIKE - CYFUSE technology)**



## LIST OF EQUIPMENTS

· PSM Herasafe 2030i (ThermoFischer)
· S-PIKE (Cyfuse Biomedical KK)
· Centrifuge Heraeus Megafuge 8R (ThermoFischer)
· Incubator Heracell 150i (ThermoFischer)
· Decontaminating incubator MCO-50M-PE 50L (PHCBi)
· Microscope EVOS XL CORE (ThermoFischer)
· Microscope Revolve R4K (Echo)
· Freezer -80°C MDF-C8V1 84L (PHCBi)
· Deep Freezer -150°C MDF-1156 128L (PHCBi)
· Cryostat CM305S (Leica)
· Microtome RM2165 (Leica)



## ▪ WHO WE ARE

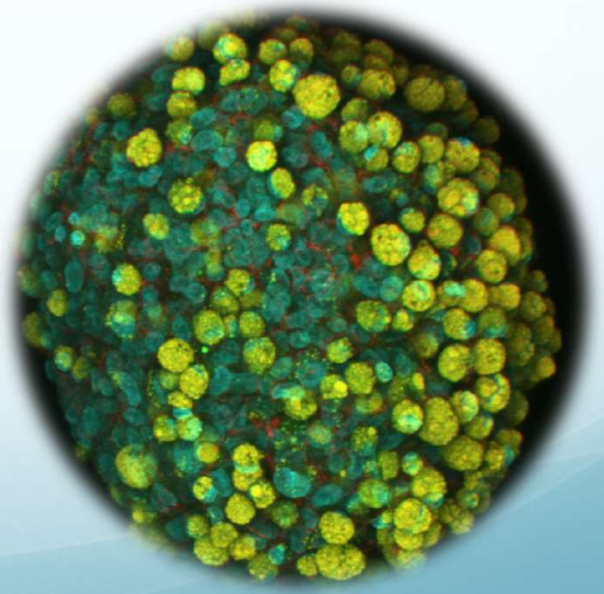
| | | |
|---|---|---|
| Dr Thierry MASSFELDER<br>massfeld@unistra.fr | Research Director in INSERM<br>+33 (0)3 68 85 34 56 | Scientific Manager of the platform |
| Dr Ysia IDOUX-GILLET<br>yidouxgillet@unistra.fr | Engineer, Strasbourg University<br>+33 (0)3 68 85 38 68 | Technical Manager of the platform |
| Dr Sabine BOPP-KUCHLER<br>kuchler@unistra.fr | Researcher, INSERM | Analysis and characterization Manager |
| Hervé GEGOUT<br>Herve.gegout@unistra.fr | Technician, Strasbourg University | Technical agent |

Scientific Council constituted of expert academic and industrial members.

We provide pharmaceutical/biotechnology companies and academic laboratories which develop therapeutic compounds, with a unique experimental/technological research state-of-the-art platform. Besides, we research and develop innovative experimental 3D models including for example vascularization for 3D tumor models.

## ▪ MISSION

The mission of this cutting-edge technological platform is to enable all public or private actors in the field to obtain new tissues from desired cells and their characterization, to accelerate the proof of principle of drug candidates in these healthy human tissues or pathological, through translational research approaches, and therefore contribute to the potential therapeutic arsenal for this disease, the first step towards personalized medicine.



## ▪ CLIENTS

Pharmaceutical industries, Biotechs, Clinical departments, Research laboratories.

# ▪ STUDY PROCESS