

<b>Nom de la plateforme</b>	Tissue Biofabrication and Characterization - TiBioC
<b>Responsable</b>	Dr Thierry Massfelder, Directeur de Recherche Inserm
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<b>Etablissement d'affiliation</b>	Inserm
<b>Site internet</b>	<a href="http://www.regmed.fr/">http://www.regmed.fr/</a>
<b>Type d'activité de la plateforme</b>	R&D Customized services in cell and molecular biology, 2D and large scale 3D models
<b>Domaine d'activité</b>	Pré-clinique Biologie cellulaire Biologie moléculaire Génétique Expérimentation animale Modélisation
<b>Expertise</b>	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. Dr Thierry Massfelder was cofounder in 2010 of an innovative start-up, Urolead SAS. Urolead developed for 13 years preclinical study and research models in onco-urology (kidney cancer, bladder cancer, prostate cancer), i.e Patient-Derived tumor Xenografts (PDX) models. We have serially xenografted almos 1000 tumors and developed several dozens of PDX models, gthat were characterized at the histopathological, molecular and genetic levels and for their response to SOC. Urolead was laureate of the national competition for the creation of innovative technologies companies, in Emergence category in2008 and in Création-Développement category in 2010, and is part now since the end of 2017 of the Urosphere company based in Toulouse, for the valorization of the PDX models.
<b>Description</b>	<b>PRESENTATION</b> 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, <a href="https://www.conectus.fr">https://www.conectus.fr</a> , federated within the National SATT Network ( <a href="https://www.satt.fr/en">https://www.satt.fr/en</a> ) for the establishment of the contracts and we are currently in the process to be part of the Cortecs network of the Strasbourg University, <a href="https://cortecs.unistra.fr">https://cortecs.unistra.fr</a> . 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 <b>SERVICES</b>

	<p>Strategy Consulting Study plan, coordination, planification, gestion, data analyses and reports Cell Handling (thawing, freezing, culture maintenance) - Clonal cells - Primary cells Cytotoxicity studies - Cell shape (counting) - Cell proliferation Alamar Blue assay Ki67/Caspase assay - Cell death Live/Dead assay TUNEL assay - Senescence <math>\beta</math>-Galactosidase assay Histology studies Histochemistry Immunofluorescence Sterilization and decontamination in H<sub>2</sub>O<sub>2</sub>vapor/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) 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.</p>
<b>Mots clés</b>	Regenerative nanomedicine; Cell and molecular biology testings; Histology; 2D and 3D biofabrication; Pathologies; Oncology
<b>Secteur</b>	Public
<b>Localisation</b>	Alsace
<b>Gouvernance</b>	<p>Dr Thierry Massfelder, DR Inserm, Scientific Manager            Dr Ysia Idoux-Gillet, IR Université, Technical Manager            Dr Sabine Bopp-Kuchler, Researcher Inserm, Analysis and characterization Manager Scientific Council constituted of expert academic and industrial members</p>
<b>Outils et techniques proposées</b>	Core technology/Prestations have been presented above.
<b>Utilisations actuelles et potentielles</b>	All kind of use in the domain of activities of the technological platform
<b>Prestations</b>	Core technology/Prestations have been presented above. Cost is dependent of the demand. Regulated by the Satt Conectus.
<b>Utilisateurs</b>	Users of the Inserm U1260 Unit cited above. Possibility of student fellows.
<b>Activité cancer</b>	70 %
<b>Equipements</b>	<p>EQUIPMENTS:</p> <ul style="list-style-type: none"> <li>- PSM Herasafe 2030i (ThermoFischer)</li> <li>- S-PIKE (Cyfuse Biomedical KK)</li> <li>- Centrifuge Heraeus Megafuge 8R (ThermoFischer)</li> <li>- Incubator Heracell 150i (ThermoFischer)</li> <li>- Decontaminating incubator MCO-50M-PE 50L (PHCBI)</li> <li>- Microscope EVOS XL CORE (ThermoFischer)</li> <li>- Microscope Revolve R4K (Echo)</li> <li>- Freezer -80°C MDF-C8V1 84L (PHCBI)</li> <li>- Deep Freezer -150°C MDF-1156 128L (PHCBI)</li> <li>- Cryostat CM305S (Leica)</li> <li>- Microtome RM2165 (Leica)</li> </ul>
<b>Effectif de la plateforme</b>	Currently: 1,6 ETP, 4 persons, All qualified
<b>Labellisation</b>	On the way to be labeled by the CORTECS network of the University of Strasbourg. We are now in the Phase 3 process.
<b>Certification</b>	NA yet...
<b>Financements</b>	Through prestations.
<b>Réseaux</b>	NA yet...

<b>Partenaires et collaborations</b>	NA yet...
<b>Commentaires</b>	<p>La plateforme technologique TiBioC est issue des activités de l'UMR_S1260 Inserm/Unistra, et est en cours de développement avec des prestations déjà en cours pour des entités publiques et privées. Nos attentes sont d'obtenir une meilleure visibilité sur l'extérieur. Nous œuvrons déjà dans ce domaine, mais nous suivons toutes les pistes possibles pour la communication. La présentation de la plateforme est faite en Anglais car nous souhaitons nous ouvrir vers l'extérieur également aussi bien pour des entités publiques que privées en France et à l'étranger.</p>