

**We are looking for a post-doctoral fellow with knowledge in cell biology and bioprocess, interested in working on tissue engineering in a new type of bioreactor (FUGU).**

This FUGU (Flexible Unique Generator Unit) bioreactor is hosting 3D bioprinting tools together with fluid handling system. The goal of the fellowship is to explore tissue engineering in this bioreactor through the implementation of morphogenesis mechanisms.

The candidate will have 18 months to develop a tissue engineering and culture strategy in this novel system, targeting functional human tissue reconstruction.

**Environment:**

The environment in which the post-doctoral fellow will evolve is a dynamic academic research laboratory ([3d.FAB](#)), whose premises are hosted within the AXEL ONE Campus structure at Villeurbanne. The team is currently composed of 20 researchers (masters, PhDs, post-docs, engineers, researchers).

The platform has expertise and facilities in the following areas:

- Additive manufacturing for life science, material properties and rheology.
- Regenerative medicine through dedicated living cells and tissues printers.
- Simulation to create optimal liquid flow inside the 3D printed tissues.
- Bioprocess for the production of active molecules, connective tissue maturation and vascularization.
- 4 Level-2 biofabrication laboratories equipped with state of the art bioprinters and bioreactors.
- Multiple bioreactors for tissue engineering and bioproduction.
- More than 40 cell banks of primary and stem human cells.
- Low field MRI bench top system for tissue observation and monitoring.

The project will be positioned within the global 3d.FAB framework for the biofabrication, culture and maturation of large human tissues, for regenerative medicine.

**Activities:**

The post-doctoral fellow will:

- Explore FUGU bioreactor capacities and possibly design and prototype new concepts.
- Study the tissue bioprinting and maturation in the FUGU.
- Decipher the bioprocess critical steps and parameters leading to controlled morphogenesis.
- Animate the FUGU bioreactor topic within the team.
- Communicate at an international level the results and build collaborations.

**Expected candidate profile:** PhD with a strong knowledge in biology will be the best including bioproduction. Experience in 3D bioprinting and quality management will be an asset.

**Location:** The activities will be located in ICBMS (UMR 5246) and in the innovative 3d.FAB platform: Axel'One Campus (University Claude Bernard Lyon 1, Villeurbanne, France)

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**Degree:** PhD

**Type of contract:** Fixed-term contract

**End date of application:** According to recruitment

**Start:** September/October 2020

**Duration:** 18 months

**How to apply:** Send CV and cover letter to [christophe.marquette@univ-lyon1.fr](mailto:christophe.marquette@univ-lyon1.fr)