

Biomaterials & Microfluidics Core Facility

2020 SECOND INTERNAL CALL FOR PROPOSALS ACCESS TO EMULATE™ ORGAN-ON-CHIP TECHNOLOGY

The Biomaterials & Microfluidics core facility provides access to the Organs-on-Chip system from emulate (emulatebio.com). The offered technology aims at developing and/or using physiologically relevant cells culture systems in various biological context including infection, development and cancer biology.

AIM OF THE CALL

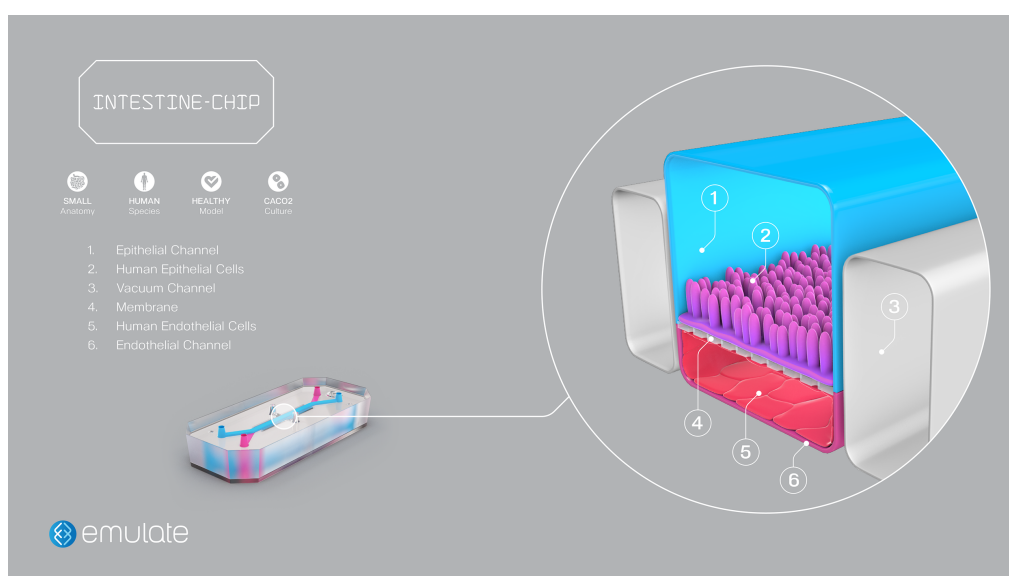
In the framework of the Institut Pasteur partnership with the company Emulate, the Biomaterials & Microfluidics Platform is announcing its 2nd call for proposals, to disseminate Organ-on-Chip technology on the campus.

This call is designed to provide support, including subsidized microfluidic chips, dedicated staff and fully equipped lab space, to the teams interested in using or testing this new tool.

EMULATE ORGAN-ON CHIPS SYSTEM

The Human Emulation System sets a new standard for recreating true-to-life human biology. The EMULATE chip's tiny channels reproduce blood and air flow; its flexibility allows the chip to breathe or undergo peristalsis; its transparency allows researchers to witness an organ's functionality, behavior and response. Each chip recreates the natural physiology and mechanical forces that cells experience within the human body (Huh D. et al., *Science* 2010, doi: 10.1126/science.1188302).

Figure example: Gut-Chip Configuration



Scientists can benefit from preestablished protocols emulating various organs including gut, lung, small airways, kidney and liver...). The development of other surrogate organ models can be investigated as well.

The call aims to select up to 5 research projects that will benefit from an easy access to the Organ-on-Chip system of Emulate, along with dedicated personnel and lab space fully geared towards running Organ on Chip experiments.

The ultimate goal is to generate proofs of concept and robust preliminary data that would support consecutive funding applications.

Scientists who had applied in the 1st previous 2019 call of proposal are eligible. More particularly, the 2019 awardees must clearly emphasize the additional Emulate chips' need to carry on their project.

Selected projects will be awarded:

- Up to 100 chips, at a special price
- Free access to the BSL2+ laboratory equipment, for the maturation of the chips
- A dedicated engineer that will perform chip seeding and maturation, quality control and quantitative assessments
- Full support from the Biomaterials & Microfluidics core facility and Emulate for the design and implementation of experiments

WHO CAN APPLY?

- Applications are open to scientists working at the Institut Pasteur Paris
- This second call is extended to the Institut Pasteur International Network (IPIN) teams, provided that project is in the framework of a collaboration between IP-Paris and IPIN: collaboration between research teams must be clearly stressed, with OOC work intended to be carried out at IP-Paris. The IPIN team must cover any other expenses pertaining to the project.
- Engineers, PhD candidates and postdocs can apply, with agreement of their Lab's head and provided that their contract lasts until April 2021.
- If other collaboration in the framework of the project, external partners need to be exclusively from academia
- Scope of the call is covering all biological research fields

APPLICATION PROCEDURE

- Applicants should complete a 2 pages' short project and send it to OOC@pasteur.fr
- Proposals must be written in English
- Project leader must comply with any regulatory requirements pertaining to cells, tissues, human derived materials and/or pathogens handling

EVALUATION CRITERIA

Application will be assessed and ranked by an internal committee, against the conditions as stated below:

- Scientific quality of the project

- Relevance, in terms of the added value of the use of the OOC technology to the project
- Feasibility of the project: the experimental part of the project, aiming to obtain a new organ & disease model, has to be completed in 12 months frame (April 2021)
- Potential to provide groundwork for future valorization and research funding

DURATION

12 months, from the starting of the project (up to June 2021)

REPORTING

A short report will be asked at the end of the project, namely June 2021

TIMELINE : **NOTICE: due to the COVID-19 lockdown, deadline and timeline have been postponed as the following**

- Open date: 28 Feb.2020
- Closing: 15 May 2020
- Results: mid-June 2020
- Start: early July 2020

Please note: this timetable may be subject to slight change, taking account the COVID-19 epidemic's outcome

CONTACT

For any question about this call, please contact the following address: OOC@pasteur.fr