



**The Ente Ospedaliero Cantonale (EOC) and
the Università della Svizzera italiana (USI)**

are seeking applications for the position of

PhD student in Biofabrication/Vascular Biology with a focus on brain organoid vascularization

The Regenerative Medicine Division is part of the Institute for Translational Research, Faculty of Biomedical Sciences, Università della Svizzera italiana (USI) and Ente Ospedaliero Cantonale (EOC), Switzerland.

Strategic research areas of the Division are: in vitro disease modeling through biofabrication (e.g. age-related diseases, cancer metastases, musculo-skeletal diseases); design of novel technologies for drug screening; personalized medicine applications using human tissue biopsies. To promote the advancement of these research areas, the Regenerative Medicine Division combines microfluidics and microphysiological systems, 3D (bio)printing and computational simulations.

We invite applications for a PhD position for conducting research in the project entitled “**Enhancing human brain organoid complexity through biofabrication of a perfusable vasculature**”.

The project

The Division has recently granted funding from the Swiss National Science Foundation through a collaboration between Prof. Simone Bersini and Prof. Arianna Baggiolini (Institute of Oncology Research). The 4 years project will deal with the biofabrication of miniaturized models of the human brain (i.e. organoids) and their integration with functional microvascular networks.

This cutting-edge technology will allow to study key mechanisms of neural progenitor cell differentiation during brain development and to recapitulate increasingly complex architectures of the human brain.

The project involves the biofabrication of 3D microvascular networks mimicking the blood brain barrier, their integration with high-throughput culture systems and the analysis of blood vessel-brain organoid interaction through multiple next-gen sequencing techniques and high-content screening.

The Institute has access to cutting-edge facilities (e.g. bulk and single-cell RNAseq; spatial transcriptomics; mass spectrometry; confocal, multi-photon and electron microscopy) which are shared with the Institute for Research in Biomedicine and the Institute of Oncology Research within a dynamic, multidisciplinary and collaborative environment.

The PhD Position

The candidate will work under the scientific supervision of Prof. Simone Bersini (<https://search.usi.ch/en/people/af37e00b27d5199e68bb294f19e50006/bersini-simone>).

The successful candidate will be offered the possibility to work in a dynamic research team and in a multidisciplinary and international scientific environment. He or she will be enrolled in the Doctoral Program in Biomedical Sciences at USI.

The candidate will collaborate in the development of the institute research agenda. He or she will have shared responsibilities in the design, conduction and analysis of research projects in the field of biofabrication and molecular cell biology. In addition, the candidate is expected to present papers at scientific conferences and produce publications in high-ranking journals.

Candidates' profile

Ideal candidates should satisfy the following requirements:

- A Master Degree in any Life Sciences or related disciplines, including Bioengineering. Priority given to Vascular Biology or Neuroscience background
- High personal interest in organ-on-a-chip, biofabrication and (bio)-printing
- Experience with (or strong commitment to quickly learn): 3D cell cultures (preferred experience

with vascular cells and/or brain organoids), imaging (confocal microscopy, preferably with 3D cultures), standard biological techniques (qPCR, western blot, elisa, immunofluorescence), microfabrication of microphysiological systems, analysis of datasets including those from omic technologies

- Excellent skills in oral and written English
- Self-motivation and exceptional commitment to experimental goals and deadlines
- Strong organizational skills and ability to work independently as well as in a team
- Critical data analysis and troubleshooting
- Effectively communicate experimental data, maintain records and write protocols

Contract terms

The successful candidate will work as a PhD student in the Regenerative Medicine Division, and will have the possibility to interact with an international network of collaborators. Continuous and dynamic interactions with the lab of Prof. Baggiolini are expected to achieve the goals of the project.

Workplace is BIOS+, located in Bellinzona, Switzerland. Availability to travel to other parts of Switzerland and abroad (for purposes of collaboration and research) is required.

Starting date is March 1, 2026. The position will be kept open until a suitable candidate has been found.

The application

Applications should contain: (1) a letter in which the applicants describe their research interests and the motivation to apply, (2) a complete CV, (3) copies of relevant diplomas and certificates, (4) a complete list of publications with details on the candidate's contributions, (5) minimum 2 references (letters not required at this stage).

Please send your application in electronic form or requests for further information to simone.bersini@eoc.ch (please use the following subject: **PhD position-Vascularized brain**)

The conditions of appointment are those provided for by the [Regulation concerning the hiring of EOC staff and doctors](#) as well as, for the academic part, by the [Statute and Regulations of USI academic staff](#).

USI and the EOC aspire to be an exemplary university and employer and aim to ensure equality in the hiring, development, retention and promotion of staff, and that no one is disadvantaged on the basis of gender, culture, disability, sexual orientation or identity. As an institution that promotes diversity and inclusion, USI encourages applications from women and all people belonging to underrepresented categories.

For further information, please contact:

Prof. Simone Bersini, Institute for Translational Research (IRT), Faculty of Biomedical Sciences, Università della Svizzera italiana (USI) and Ente Ospedaliero Cantonale (EOC), Switzerland (simone.bersini@eoc.ch – Phone +41 58 666 71 05).

Lugano, November 19, 2025

The procedure in question is not subject to any means of appeal and/or remedy in law, since the contract to be concluded with the successful bidder is based on private law