



Post-Doc position available in the Regenerative Medicine Technologies (RMT) Lab: Stem Cell Biology and Organoid Biofabrication

Research Environment

The RMT Lab is part of the Laboratories for Translational Research of Ente Ospedaliero Cantonale and Università della Svizzera italiana located in Bellinzona (Switzerland). Strategic research areas of the RMT Lab 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 RMT Lab combines microfluidics and microphysiological systems, 3D (bio)printing and computational simulations. In the framework of these strategic areas, the RMT Lab is pleased to announce an open position on:

Biofabrication of brain organoids/3D neural tissue cultures and integration with a miniaturized device for stimulation/recording of brain activity.

The project in collaboration with the start-up Manava+ and the Life Sciences Competence Center of Switzerland Innovation Park Ticino will include the following activities: generation of brain organoids/3D tissue cultures from human induced pluripotent stem cells and their characterization through imaging, molecular and functional analyses; design and microfabrication of custom cell culture systems hosting the biofabricated tissues and integration with an electrical system for stimulation and recording of brain tissue activity.

Qualifications of the candidates and how to apply

What we would like from you:

- 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 and manuscripts
- Creative thinking
- Background in Stem Cell Biology, priority given to candidates with experience with stem cells applied in the context of brain biology. Applications from other Life Sciences fields are also welcome
- Experience with human induced pluripotent stem cells and their differentiation into brain cell populations; generation and characterization of brain organoids or 3D tissue cultures of neural tissues; imaging (confocal microscopy, light sheet microscopy); standard biological techniques (e.g. qPCR, western blot, elisa, immunofluorescence, histology); omic analyses (e.g. bulk and single-cell RNAseq, ATACseq, multiplex secretome analyses)
- Candidates are encouraged to send CV, publication list, cover letter including research interests and career goals (max 1 page), 2 references (reference letters are welcome but not required at this stage)
- Contact: rmtlab@eoc.ch (please use the following subject: **Brain Organoids**)