Human Vascularised Brain Organoids-on-Chip for Stroke Neuroprotection
A Translational Platform to Improve Outcomes after Ischaemic Stroke

Project Summary

This project aims to address secondary brain injury after ischaemic stroke, an unmet target in cerebroprotective therapy. Despite advances in vessel recanalisation, post-ischaemic neurovascular damage remains a key determinant of clinical outcome and constitutes a translational bottleneck in stroke research. To overcome this gap, the project establishes a human-relevant, vascularised brain organoid-on-chip platform to model ischaemia–reperfusion injury under controlled conditions. This system enables evaluation of cerebroprotective compounds and quantitative assessment of neurovascular stability. By strengthening the connection between in vitro and in vivo stroke models and clinical translation, the project advances therapeutic pipelines for adjunctive cerebroprotection in ischaemic stroke.

Personal Details

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Education

09/2021–05/2022	Harvard T. H. Chan School of Public Health, Cambridge, USA Master of Public Health (MPH) Department of Social and Behavioral Sciences
10/2018–08/2022	University of Oxford, St John's College, United Kingdom Doctor of Philosophy (PhD) in Neuroscience, Prof. A. M. Buchan Thesis: *The Effects of mTOR Inhibition in Ischaemic Stroke*
08/2013–10/2018	Paracelsus Medical University, Salzburg, Austria Medical Doctor (MD)

Current Appointments

since 01/2024	Postdoctoral Researcher, Prof. S. Wegener, Neuroscience Centre Zurich
since 01/2023	Resident, Department of Neurology, University Hospital Zurich
since 01/2023	Visiting Scientist, Laboratory of Cerebral Ischaemia, University of Oxford