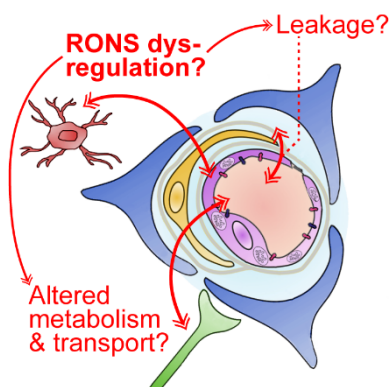


# Postdoc (scholarship) in Stem Cell-based Models of Schizophrenia



**The Project:** Neuropsychiatric disorders like schizophrenia remain, comparatively, poorly understood in terms of their biomolecular and cellular basis. Our 5-year ERC-funded project CHIPzophrenia aims to elucidate how oxidative and nitrosative stressors disrupt the complex perivascular cell interactions of the blood-brain barrier, and whether this may point the way towards better avenues of treatment. Your postdoctoral research will leverage iPSC to establish and refine suitable cellular models of healthy and diseased neurovascular cells, and to study how cellular behavior is altered under exposure to relevant stressors (and vice versa). Validation and analysis of the models will include biomolecular techniques ranging from imaging to rt-qPCR to metabolomics. While your work will initially focus on “traditional” 2D and 3D plate-based culture, working closely with other biologists, you will also collaborate with our engineering team as they develop the microfluidic culture and sensor systems.



**The Workplace:** This scholarship (1+1 year) will establish a close collaboration between the groups of **Prof. Winkler at KTH Royal Institute of Technology** and **Prof. Sellgren at Karolinska Institute**. The Winkler Lab ([lab.winkler.site](http://lab.winkler.site)) is a highly interdisciplinary, dynamic, and international team with the goal of solving life science challenges using microsystems tools. A key focus area of our Lab is so-called Organs-on-Chips, microfluidic cell culture systems that strive to better recapitulate human physiological function in vitro. The Applied Developmental Neurobiology group, meanwhile, is at the forefront of modeling the developing human brain (based on iPSC) to study mechanisms that guide neurodevelopment and that are involved in different neurodevelopmental disorders (using genetic and environmental risk models).

## Your Qualifications:

- Doctoral/Ph.D. degree (2022 or later) in neuroscience, biology, bioengineering, or similar
- Extensive expertise in, and practical experience with, iPSC culture and differentiation (ideally, neurovascular), substantiated by peer-reviewed publications
- Exceptional drive, organization, independence, and collaborative spirit
- Strong communication skills, as well as fluency in oral & written English
- Experience writing or contributing to research grant applications, as well as interest in interdisciplinary and collaborative work to combine biology with microsystems, are beneficial

Please submit expressions of interest to Assoc. Prof. Thomas E. Winkler ([winklert@kth.se](mailto:winklert@kth.se)). For this initial phase, a CV and brief letter of motivation (why you are interested in this scholarship, and why you are the right person to fill it) are sufficient.