



# Discovery

## SEMINAR SERIES

### IPSC-DERIVED CELL THERAPY FOR CNS DISORDERS

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The potential of iPSCs as a starting material for the derivation of clinically relevant cell types for regenerative medicine is enormous. Replacing dead or injured cells with healthy cells could potentially cure currently untreatable diseases. We are developing iPSC-derived cell therapy for spinal cord injury and stroke, and our therapeutic cell type is neuroepithelial stem (NES) cells. NES cells can be massively expanded in vitro and maintain their genomic integrity without losing their immature and plastic identity. I will present our efforts in developing cell therapy with a focus on i) developing defined and standardized protocols for NES cell derivation, ii) single-cell transcriptomics mapping of the therapeutic cell, and iii) signaling pathways involved in maintaining high-quality iPSCs.

*Prof. Falk did her Ph.D. on neural stem cells at Karolinska Institutet under the supervision of Prof. Johan Frisé. After a postdoc at Cambridge University in the lab of Prof. Austin Smith, Anna started her own lab at Karolinska Institutet. Four years ago, she was recruited to Lund University for a Professorship. Her lab is using iPSC to i) create cellular models to study early human brain development in health and diseases and ii) derive cell therapy for stroke and spinal cord injury. Prof. Falk is leading two consortia (IndiCell and StartCell) that consist of partners from academia, healthcare, and industry dedicated to developing iPSC-derived cell therapies for a panel of diseases. Furthermore, she is the Director of the ATMP (Cell & Gene Therapy) Center at Lund University and heads the preGMP facility.*



FRI  
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Registration

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