



LUDWIG-  
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UNIVERSITÄT  
MÜNCHEN



## Open position for the LSM call of applications

**Institute:** Department of Biology

**Subject areas/Research fields:** Cerebral Organoids, Brain Development, iPSCs.

**Keywords:** Neuroscience, Developmental Biology, Cell Biology

**Name of supervisor:** Prof. Dr David Keays

### **Funding:**

LSM-CSC

DAAD-GSSP (LSM)

**Project title:** Marsupial Cerebral Organoids.

### **Project description:**

To date our knowledge of vertebrate brain development has been driven by studies in rodent models, whereas very few have been conducted on marsupials. While access to tissue samples have limited research in this field, it is now possible to generate cerebral organoids *in vitro* from iPSCs. This project will focus on the creation of iPSCs from koala and kangaroos fibroblasts, followed by the generation of 3D cellular models. Using these tools we will explore why the Koala brain is lissencephalic (smooth), whereas the kangaroo brain is highly gyrified (folded) with a focus on the number and type of neuronal progenitors. The student will become skilled in cellular reprogramming, cell culture, CRISP-Cas9 genome editing, single cell sequencing, and histological methods. The successful candidate should be passionate, adventurous, resistant to failure, and intellectually curious.

**For further information, please contact:** David Keays, [keays@bio.lmu.de](mailto:keays@bio.lmu.de)

**Research group website:** [keayslab.org](http://keayslab.org)

**Apply:** Please send your application through the [online portal](#) of the Graduate School Life

**Science Munich (LSM)**