



## PhD student for the Collaborative Research Center 1149- Danger Response, Disturbance Factors and Regenerative Potential after Acute Trauma – Glucocorticoids influence Schwann cells and macrophage responses during peripheral nerve injury

One PhD position (65% E13 TV-L / 3 years funding secured) is available at the Institute of Neurobiochemistry under the supervision of Dr. Sofia Meyer zu Reckendorf. The preferred starting time would be as soon as possible.

### Topic:

Peripheral nerve injuries (PNIs) are diagnosed in 2-3% of patients admitted to trauma centers. Although peripheral nerves have an intrinsic regeneration potential, spontaneous regeneration is limited in humans. Even after surgical intervention, the functional ability is often not restored, which leads to a severe impairment of the patients' quality of life.

In this project, we want to explore new pharmacological ways to improve nerve regeneration. In our previously published work (Meyer zu Reckendorf et al., Nature Communications, 2020) we identified sphingosin signaling as promising candidate for the modulation of nerve regeneration *ex vivo*. Now, we will employ genetic approaches and glucocorticoid treatment to target sphingosin signaling *in vivo* using the sciatic nerve injury model in mice with a focus on Schwann cells and macrophages.

Apart from our mouse model we have the unique opportunity to investigate human nerve samples *ex vivo* after injury. In this case, we are interested to analyze how human nerves react to drugs modulating the sphingosin signaling. Since the initial nerve injury can lay several months back until it is recognized and treated, we want to know if this latency in treatment alters the responsiveness of nerves to drug treatment.

**If you are interested in the position please send a cv and motivation letter to:**

Ms. Anke Rudolph-Kuhn (secretary)  
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**For any further information please contact:**

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