The **Institute of Cellular Neurosciences** and the **Departments of Neuropathology and Neurosurgery** at the University of Bonn Medical School, Germany, invite applications for

two PhD studentships

Two neuroscience PhD studentships in the fields of synaptic signaling and optical sensor development are available in the laboratories of Prof. Schoch, Prof. Dietrich and Prof. Henneberger. The three-year positions, funded by the German Research Foundation (DFG), are part of a larger effort to understand the signaling of glutamatergic synapses and the role of neuron-glia interactions with emphasis on learning-related mechanisms.
The specific aim is to develop new optical sensors for the NMDA receptor co-agonists D-serine and glycine and to visualize their signaling with already established and newly designed sensors. Using these tools, we will dissect to what extent and by what mechanisms neurons and astrocytes provide NMDA receptors with either co-agonist in the rodent hippocampus and how they thereby shape synaptic plasticity. This will be achieved by combining a broad spectrum of techniques ranging from molecular biology, biochemistry and cell biology to electrophysiology and two-photon excitation fluorescence microscopy. Therefore, applicants would ideally have experience in some of these techniques. Further information about the research can be found at https://henneberger-lab.com/ and https://epilepsyresearch.de/schochlab/.
The prospective PhD students will work closely with other groups within and beyond the hosting departments and enroll in the neuroscience graduate school BIGS Neuroscience (https://bigs-neuroscience.de/). The PhD students will also benefit from the substantial local expertise in studying synaptic signaling and extensive local and international collaborations (e.g. within the SFB1089 http://sfb1089.de/, the SPP1757 http://www.glia-network.de/ and the EU-GliaPhD http://www.eu-gliaphd.eu/). The dynamic neuroscience community of Bonn, which comprises more than 40 groups focusing on fundamental neuroscience research and its application in the treatment of neurological disorders, will provide further excellent opportunities for training (Bonn Center of Neuroscience, https://bonn-neuroscience.de/).
The positions are available from the 1st of January 2020 on. The contract initially runs for three years. The salary will be according to the German salary scale (65% TV-L E13). The University of Bonn is an equal opportunities employer.
Applicants should have a Master of Science or equivalent academic degree. Applicants are expected to submit a cover letter, CV, list of publications and indicate at least two referees.

Applications should be sent by email only to:

Christian Henneberger (christian.henneberger@uni-bonn.de) or
Susanne Schoch (susanne.schoch@uni-bonn.de)