**Postdoctoral position**

Full-time position, salary according to TVL-E13, for 3 years, starting May 2019. A further extension might be possible.

**Your task:**
- work on innovative scientific project (see below)
  that involves further development of experimental techniques

**Your qualifications:**
- a PhD in the natural or life sciences
- broad interests, mathematical/analytical thinking, independent problem-solving
- interest in method development/refinement
- very good skills in English (both in speaking and writing)

**We offer:**
- an exciting and demanding project
- an interdisciplinary environment within a motivated team
- international collaboration with Florey Institute/Melbourne University
- access to modern imaging methods of cellular neurophysiology
- opportunity for further career development

The project is funded by the DFG (German Research Foundation) and aims to unravel the origin of spontaneous theta oscillations in the olfactory bulb. Theta oscillations of neuronal activity occur in many vertebrate neuronal ensembles, most famously within circuits linked to hippocampal areas. In the olfactory system, theta oscillations are known to enable proper olfactory coding in rats and humans. Their origin has been tied to respiratory activity which can effect sensory input through the nose mainly via mechanosensitive and olfactory pathways. Our observation of respiration-independent theta oscillations in the olfactory bulb in a semi-intact nose-brain preparation (Perez de los Cobos Pallares, Stanic, Farmer, Dutschmann, Egger, J.Neurophysiol. 2015) indicates that such oscillations can occur spontaneously, without any sensory or centrifugal inputs. Thus our main working hypothesis is that breathing and therewith respiratory patterning of bulbar activity tap an intrinsic resonance of the olfactory bulb network; the spontaneous theta oscillations observed in the bulb of the nose-brain preparation are a correlate of this resonance and can be entrained by respiratory-like sensory input. To investigate this idea we plan to combine the nose-brain preparation with our expertise in two-photon imaging techniques to explore network function at the single neuron and ensemble level and thereby to unravel the origin of spontaneous theta and its interaction with sensory input in an intact network.

Send your CV and other application documents to Veronica.Egger@ur.de or via mail to Prof. Dr. Veronica Egger, Institute of Zoology, Universität Regensburg, D-93040 Regensburg
For further inquiries, contact Veronica.Egger@ur.de

See also university webpage for the official German version (number 19.008): https://www.uni-regensburg.de/universitaet/stellenausschreibungen/lehre-forschung-verwaltung/index.html