

### **PhD position - brain and behavior of migrating monarch butterflies (el Jundi lab)**

We are seeking for a PhD candidate in the Department of Behavioral Physiology & Sociobiology (Zoology II) at the Biocenter, University of Würzburg. Our Emmy-Noether group is interested in understanding the neural network underlying compass orientation in insects with the main focus on the compass of monarch butterflies. Our research methods vary from electrophysiological and behavioral techniques to neuroanatomical approaches.

The ideal starting date is September 2017, but a later date is negotiable. Our group aims to create an international work environment and therefore encourages international applicants to apply.

### **Project description**

The migration of monarch butterflies is one striking example of the unique navigation abilities of insects. Each fall, millions of these butterflies migrate over thousands of kilometers from North America to Central Mexico. To maintain their direction, they use a time-compensated sun compass for orientation. However, how neurons encode sun compass signals in a time of day dependent manner is still a matter of speculation. In the announced position, the PhD candidate will perform intracellular recordings from sun-compass neurons in the monarch butterfly brain and combine them with anatomical studies of the neural circuits. Using flight simulator experiments, the output of the compass network will also be analyzed behaviorally.

### **Qualifications of the applicant**

We are seeking for a highly motivated candidate with a degree (Master) in Biology, Engineering, Physics or a related subject. A solid background in neuroethology and neuroscience is mandatory. A strong interest in insect vision and navigation, an excellent track record and experience with electrophysiology and programming (Matlab) would be desirable.

### **Type of employment**

Payscale according to TV-L (65% part-time). The position is time-limited to probably three years.

The University of Würzburg aims at increasing the proportion of female employees. Disabled applicants will be preferentially considered in case of equivalent qualification.

### **Contact**

Application deadline: August 15, 2017

Please send applications as a single pdf file including a cover letter, CV, and the name of two references to Basil el Jundi.

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