

**RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITÄT BONN**  
**Fachgruppe Biologie**

**Zoologisches Forschungsmuseum Alexander Koenig**

## **Biologisches Kolloquium**

**Sommersemester 2018**

**Montag, den 18. 6. 2018, 17 Uhr c.t.**

im Hörsaal Zoologie, Poppelsdorfer Schloss

**Dr. Melanie Hähnel-Taguchi**

Institut für Biologie I, Universität Freiburg

### ***“Physiology and Modulation of lateral line sensing in larval zebrafish “***

Einladung: PD Dr. J. Mogdans (Institut für Zoologie)

*Abstract:*

We are studying the anatomy and activity patterns of central nervous dopaminergic neurons and peripheral sensory neurons of the lateral line system in larval zebrafish. The dopaminergic neurons in the diencephalon belong to a group homologous to A11 neurons in the dopaminergic system of mammals, known to be involved in Restless-Legs Syndrome, where patients experience unpleasant sensations during rest, which is treated with dopamine antagonists.

The lateral line of fishes and aquatic amphibians is a mechanosensory hair cell system distributed along the body, to detect water motion. It is already functional in free-swimming zebrafish larvae and presents an accessible and tractable model to study hair cells systems, like the vestibular and auditory system. The neurons of the A11 homologous groups extend descending projections to the hair cell organs in zebrafish. Also in mammals, it has been shown that A11 neurons contact sensory pathways of the auditory system; their function however, is not well understood. We are using imaging and electrophysiological techniques to gain insight into efferent modulatory control of hair cell systems and dopaminergic modulation of sensory processes.