DRINGEND STUDENT/IN GESUCHT!!! PROJEKTBEGINN IM SEPTEMBER 2019!!!

Looking for a motivated Master student to work in a very friendly team on the research project:

ENERGY-SAVING STRATEGIES IN JUVENILE GARDEN DORMICE BEFORE WINTER AND DURING HIBERNATION

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Project outlines:

In the context of global change and increasing frequency of unpredictable events, there is growing interest in how well physiological flexibility can buffer organisms from environmental hazard. One key metabolic constraint imposed by environmental fluctuations is food shortage. **Heterothermy** (daily torpor and hibernation) allows individuals to save energy in response to reduced food availability. Juveniles from heterothermic species must accumulate sufficient fat reserves to ensure their survival during winter. Doing so while sustaining growth constitutes a real challenge. In particular, torpor is not compatible with processes of growth, but instead promote pre-hibernation fattening. Another widespread strategy to save energy is **social thermoregulation** or '**huddling**'. We expect the combined use of huddling and torpor to permit individuals to maximize energy savings in relation to their environmental constraints (food shortage). A major advantage of social thermoregulation resides in the simultaneous benefits of minimizing energy expenditure, while maintaining relatively high body temperature, which is necessary for sufficient growth.

In this study, we therefore aim to:

- Quantify the benefit of social thermoregulation, i.e. huddling, during growth and fattening prior to winter.
- Determine and characterize the effect of huddling on the energy budget of one torpor-arousal cycle during winter hibernation.

Experimental schedule: August 2019 to April 2020

The applicant should have a good background in animal biology/physiology and the willingness to learn new techniques. Experience with animal handling is required.

If you are interested, please contact us as soon as possible by sending a CV via E-mail.