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

EFFECT OF PARENTAL TORPOR USE ON SEASONAL DYNAMICS OF TELOMERE LENGTH AND TORPOR EXPRESSION IN A HIBERNATING RODENT

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Project outlines:
The strategy of **heterothermy** (daily torpor and hibernation) allows individuals to save energy and to survive periods of energetic bottlenecks. In particular, the use of heterothermy has also been associated with the **slowing of ageing processes**, i.e., the prioritization of somatic maintenance, and the **increase of longevity**. A marker of **somatic maintenance** is the rate of change in **telomere length**. Telomeres are non-coding, repetitive sequences of DNA at the end-cap of chromosomes, which prevent the degradation of coding DNA during replication. **Telomere dynamics** have been shown to be affected by **daily torpor** and **hibernation**, i.e., long torpor episodes interspaced by periodic euthermic phases of few hours during winter. Further, telomere length **varies seasonally**, and can also **be inherited** from one generation to the other. **To date, whether the torpor use of one generation can affect the heterothermy expression and telomere dynamics of the next generation is entirely unknown.** The garden dormouse (*Eliomys quercinus*), a small hibernating rodent, shows strong seasonal changes in the use of torpor and hibernation.
In this study, we therefore aim at:
- Determining the effects of torpor pattern and telomere length from the F0 parents on the seasonal use of torpor and telomere dynamics of the subsequent generation F1.
- Determining the seasonal changes of telomere length in relation to torpor patterns in the F1 generation.

Project schedule: October 2022 to May 2023
The applicant should have a good background in animal biology/physiology and the willingness to learn new techniques, e.g., genetic methods. Previous experience with lab practices and statistics using R software are required. If you are interested, please contact us as soon as possible by sending a CV via E-mail.