

Master project on social evolution and ageing

The consequences of development and social status on ageing in naked mole-rats (*Heterocephalus glaber*)



Project description

In mole-rats, breeders live much longer than non-breeders and remarkably they can reach ages of more than 28 years. It has been suggested that attaining breeder status delays the ageing process, similar to eusocial insects. The goal of the project is to investigate: (1) whether naked mole-rats show divergent developmental trajectories (i.e. castes); (2) whether differences in early growth and behaviour predict telomere attrition and telomerase activity, and (3) whether breeding status predicts telomere attrition and telomerase activity.

The MSc student will conduct observations on the behaviour of naked mole-rat colonies at the Schönbrunn Zoo (Vienna) and will use molecular methods to measure telomere attrition and telomerase activity to estimate rates of ageing. The candidate should have a keen interest and sound background in behavioural ecology and/or evolutionary biology. Previous experience with behavioural data collection and molecular genetic (qPCR) skills are an asset. We invite students of the University of Vienna and of the Veterinary University Vienna to apply.

This is a collaborative project between the **Konrad Lorenz Institute of Ethology** (Veterinary University Vienna) and the Linnaeus University, Sweden. The project will be supervised by Dustin Penn (Dustin.Penn@vetmeduni.ac.at), Steve Smith (steve.smith@vetmeduni.ac.at) and Markus Zöttl (markus.zottl@lnu.se).

Please apply with a cover letter explaining why you would like to get involved in this project and a CV.