

3 fully-funded PhD positions at the Konrad Lorenz Institute of Ethology, Vienna

Domestication Lab - Konrad Lorenz Institute of Ethology, Department of Interdisciplinary Life Sciences, University of Veterinary Medicine Vienna, Vienna, Austria

PhD #1: Social learning strategies in free-ranging dogs

Start: March/April 2022

Learning from conspecifics can be one of the least expensive mechanisms to acquire information about the environment. But information provided by others can also be misleading, so animals employ specific strategies to decide when, what, and from whom to learn depending on the context. Free-ranging dogs live in a varied and fast-changing environment and are characterized by a complex social structure, thus providing a perfect model to investigate the environmental factors and social dynamics affecting the use of social learning. Moreover, thanks to the unique foraging style of free-ranging dogs, it is possible to explore the use of social learning across different foraging tasks.

The project aims at investigating how social dynamics (e.g. relatedness, affiliation, dominance) affect the transmission of different types of information (varying in complexity). The project involves observational and non-invasive experimental work (e.g. open diffusion experiments) with free-ranging dogs in Morocco (Agadir area).

The core team will be comprised of Dr. Giulia Cimarelli, Priv.Do. Dr. Sarah Marshall-Pescini and Associate Prof. Dr. Friederike Range (all at the University of Veterinary Medicine Vienna).

Application deadline: 31.1.2022

PhD #2: Proximate mechanisms underlying problem-solving abilities in dogs and wolves

Start: March/April 2022

Problem solving abilities are thought to be shaped by natural selection as a response to the species-specific challenges of their social-ecological environment. Dogs and wolves, diverged only relatively recently, but vary significantly in several factors of their social and ecological environments. They also show marked differences in their problem-solving abilities, with wolves often outperforming dogs. However, it is unclear whether this difference comes from their cognitive abilities (e.g. learning and inferential reasoning), motivation (e.g. persistence and neophobia) or general-purpose mechanisms (e.g. attention, working memory) and which selective pressures have shaped them.

In the framework of the PhD, the student will test wolves and dogs that have had similar experiences throughout their lifetime as well as pet (and free-ranging dogs) in a series of paradigms measuring inferential reasoning skills including reasoning by exclusion, diagnostic and predictive inferences as well as their understanding of physical laws.

The core team will be comprised of Associate Prof. Dr. Friederike Range, Priv. Doz. Dr. Sarah Marshall-Pescini and Priv. Doz. Dr. Sabine Tebbich, a senior researcher at the University of Vienna, whose expertise lies in physical cognition in various animal species.

Application deadline: 31.1.2022

PhD #3: Do human attitudes towards wolves and dogs actually reflect the human related temperament traits of the two species?

Start: September/October 2022

Our relationship with wolves and dogs extends back at least 30,000 years. While wolves are often feared, dogs have become a valued part of our lives. This perception appears to influence also our scientific discourse, where domestication hypotheses posit a shift in temperament from a more aggressive wolf to a gentler, friendlier dog. However, recent results of studies comparing similarly raised wolves and dogs suggest a more complicated picture.

As part of a larger project including studies on humans, this PhD thesis will focus on two aspects: first, if a person's attitude towards wolves and dogs affects his/her behavior towards them, eliciting specific reactions from the animals. Second, if the animals' behaviors are in line with the hypersociability, the emotional reactivity or our own 'deferential domestication hypothesis'.

To investigate how our attitudes towards wolves and dogs influence the animal's behaviours, we will observe the animal trainers and scientist as the Wolf Science Center in interactions with the animals and test the most prominent domestication hypotheses by comparing the human-directed behaviours of wolves and dogs raised and kept similarly, and pet dogs.

The core team will be comprised of Associate Prof. Dr. Friederike Range, Priv. Doz. Dr. Sarah Marshall-Pescini (both at the University of Veterinary Medicine Vienna and Prof. Claus Lamm (at the University of Vienna).

Application deadline: 30.4.2022

Eligible candidates will have a master's degree (or Diplom) in Biology, Veterinary Medicine, Psychology, or related disciplines, research experience in animal behavior, a genuine understanding of animal cognition and a strong commitment to basic science. Practical skills in empirical work with dogs are beneficial, but not a precondition. These PhD projects are part of larger projects funded by the Austrian Science Fund (FWF). Although the projects are based at the Konrad Lorenz Institute of Ethology (University of Veterinary Medicine Vienna), the research will be conducted at the Clever Dog Lab (www.cleverdoglab.at) and the CF-Wolf Science Center (www.wolfscience.at) and/or at the Domestication Lab field site in Morocco (<https://www.vetmeduni.ac.at/en/klivv/forschung/projekte/free-ranging-dogs>), where an international team of students and researchers studies the cognition and behaviour of canines.

The Domestication Lab (VetMedUni Vienna): highly interactive and stimulating environment for doctoral students, with particular strengths in animal behaviour and evolution. The successful candidate would benefit from frequent interactions with postgraduates, postdocs and PIs, including journal clubs, seminars, and discussion groups. For more information, please visit: <https://www.vetmeduni.ac.at/en/konrad-lorenz-institute-of-ethology/research/domestication-range-lab>

Application: Materials including a letter of application, CV, a summary of research experience, copies of any published or in-press papers, and two letters of recommendation should be sent to Dr. Giulia Cimorelli (Giulia.cimorelli@vetmeduni.ac.at for PhD #1) or Associate Prof. Dr. Friederike Range (friederike.range@vetmeduni.ac.at for PhDs #2 and #3) by email. The position is for three years. Salaries are according to the standards of Austrian basic science funds.

The University of Veterinary Medicine Vienna promotes the employment of women in fields of work in which they are underrepresented and therefore encourages qualified women to apply to this opening.