



MSc position on fish physiology and behaviour

Hólar University (HU), Iceland, seeks a MS student for an Icelandic Research Fund (RANNIS) project to study the “*physiological mechanisms underlying personality in the Arctic charr (Salvelinus alpinus)*”.

Context of the study:

Animal personality refers to behavioral tendencies that affect behavior in different contexts, vary across individuals in a given population, and are consistent within individuals across time. There are five personality axes commonly defined in the literature i.e., Boldness/Shyness (response to potentially risky situations), Exploration/Avoidance (response to novel situations), Activity and aggressiveness and sociability in numerous vertebrates, including teleosts. The coping style framework divides a population into proactive and reactive individuals, e.g., in fish species, boldness is usually associated with a proactive strategy, whereas shyness is associated with a reactive strategy. Arctic charr personality has not yet been extensively studied but our lab has started to investigate this topic both in the context of adaptive divergence and speciation and in the context of aquaculture. There are still gaps in our understanding of how and why differences in personality arise, their adaptive significance and the consistency of traits across development as well as the underlying mechanisms. Metabolic rate has been shown to be underlying personality traits i.e. Proactive coping style has been associated with a more costly strategy, whereas the reactive type is characterized by an energy-conserving strategy.

Student project:

This student will be involved in one part of a pluridisciplinary project aiming at investigating the development of different personality axes and underlying mechanisms in an aquaculture strain of Arctic charr. The metabolic rate will be measured twice i.e., early and later stages of development. Standard metabolic rate (SMR) will be measured using static intermittent flow respirometer chambers from Loligo® Systems. The metabolic rate will be linked to personality traits (measured by a PhD student) and growth performance.

The project is led by Dr. David Benháim (lead PI, HU). The student will have assistance in conducting the experiments and in analysing the results.

Location: The student will be based at the Dept. of Aquaculture and Fish Biology (DAFB: <https://www.holaraquatic.is>) at Hólar Univ. (North Iceland). HU is situated in the village of Hólar (Skagafjörður), with offices and research laboratories. DAFB is an active research centre and the student will become part of a dynamic international team of graduate students and faculty.

Requirements: The candidates must hold a BS degree in Physiology, Ethology, or related disciplines. The ideal candidate has a strong interest in fish biology, enjoy working in a dynamic group, and have mainly experience from laboratory experiments. The student has to be able to work independently as well as a part of a team. The position is funded for one year (~330 000 ISK per month : ~). Or this can be half salary for two years.

The working language is English. Peer-reviewed publication(s), previous experience with animal experiments (fish in particular), statistical skills (GLMM) is a plus. A valid driving license is a requirement.

Applicants should send an application letter, with a statement of research interests and relevant experience (max 2 pages), curriculum vitae with a list of publications, copies of academic qualifications and the names and e-mail addresses of two referees, as a single pdf to benhaim@holar.is **latest December 1, 2023**. Preferred starting date is **January 2024**.

For further information contact David Benháim (DAFB, HU), (benhaim@holar.is).

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