



As a University of Excellence, Universität Hamburg is one of the strongest research universities in Germany. As a flagship university in the greater Hamburg region, it nurtures innovative, cooperative contacts to partners within and outside academia. It also provides and promotes sustainable education, knowledge, and knowledge exchange locally, nationally, and internationally.

The Faculty of Mathematics, Informatics and Natural Sciences, Department of Biology, Institute of Zoology invites applications for a

## RESEARCH ASSOCIATE FOR THE PROJECT

### “CO-EVOLUTION OF PHYTOPHAGOUS INSECTS WITH TOXIC CARDIAC GLYCOSIDES IN THEIR HOST PLANTS”

- SALARY LEVEL 13 TV-L -

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The position in accordance with Section 28 subsection 3 of the Hamburg higher education act (Hamburgisches Hochschulgesetz, HmbHG) commences on October 1<sup>st</sup> 2019 .

This is a fixed-term contract in accordance with Section 2 of the academic fixed-term labor contract act (Wissenschaftszeitvertragsgesetz, WissZeitVG). The term is fixed for a period of 3 years. The position calls for 65 % of standard work hours per week\*\*.

#### RESPONSIBILITIES:

Duties include academic services in the project named above. Research associates may also pursue independent research and further academic qualifications.

#### SPECIFIC DUTIES:

The adaptation of specialised phytophagous insects to toxins in their host plants offers the intriguing possibility to investigate how evolution proceeds and enables the conquest of new ecological niches. In the present project the scientist will investigate the interplay between transport processes and resistance in a group of leaf beetles some of which are adapted and others non-adapted to cardiac glycosides. These toxins are well-known to inhibit the ubiquitous sodium pump, yet adapted insects convergently evolved resistance by amino acid exchanges in the enzyme. The adapted leaf beetles in the focal group further use cardiac glycosides to deter predators. This necessitates additional transport into their cuticular defense glands.

In a research-driven environment with state of the art technical facilities selected genes will be identified by bioinformatic searches. Their expression pattern will be determined by RT-qPCR and genes of interest expressed in cell culture. This enables functional tests by in vitro enzyme assays to elucidate the genes' importance for cardiac glycoside adaptation. Knock-down by RNAi may be used to further elucidate their functional roles.

\* Full-time positions currently comprise 39 hours per week.

## REQUIREMENTS:

A university degree in a relevant field. We expect good team work ability, high motivation and very good spoken and written English skills. The applicant should be experienced with standard molecular biology and preferably with cell culture or protein biochemistry. Basic knowledge of NGS data analyses would be a plus.

The University aims to increase the number of women in research and teaching and explicitly encourages qualified women to apply. Equally qualified female applicants will receive preference in accordance with the Hamburg act on gender equality (Hamburgisches Gleichstellungsgesetz, HmbGleiG).

Qualified disabled candidates or applicants with equivalent status receive preference in the application process.

For further information, please contact Prof. Dr. Susanne Dobler (email below) or consult our website at <https://www.biologie.uni-hamburg.de/molevol>.

Applications should include a cover letter, a tabular curriculum vitae, and copies of degree certificate(s). Please send applications by September 16<sup>th</sup> by email as single PDF to: [susanne.dobler@uni-hamburg.de](mailto:susanne.dobler@uni-hamburg.de).

Please do not submit original documents as we are **not** able to return them. Any documents submitted will be destroyed after the application process has concluded.