



At LMU Munich, Faculty of Biology, for the Chair of Quantitative Organismal Networks, we are looking for a

## Postdoctoral Bioinformatics Position

In this position, you will contribute to uncover how symbiotic associations enable organisms to adopt new ecological roles. Using the anemone model *Aiptasia*, we dissect the mechanisms, ecology and evolution underlying coral-algal endosymbiosis to learn how molecular interactions between distinct species lead to stable and complex ecosystems, which have co-evolved over millions of years. For more information on our research, visit: [www.guselab.de](http://www.guselab.de).

This fixed-term position is initially available for 9 months, with the possibility for extension. The project aim is to integrate and analyse numerous existing in-house datasets comprising RNA-seq, single cell transcriptomics and genomic resources, as well as to set up a user-friendly interface for the labs' bioinformatics resources and workflows. The position is available for early-career scientists holding a PhD-degree.

**Project:** Coral reefs are the most biodiverse marine ecosystems on this planet. They thrive in relatively harsh habitats, which are characterized by low levels of nutrients and high levels of environmental stress. To overcome these challenges, reef-building corals (class Anthozoa, phylum Cnidaria) exploit sunlight and form a stable symbiosis with photosynthetic, single-celled dinoflagellate algae of the genus *Symbiodiniaceae*. Our research approach is based on a laboratory model system comprising a sea anemones called *Aiptasia* and its unicellular alga partner *Breviolum minutum*. Over the last 5 years we generated numerous genomics datasets and resources including bulk RNA-seq and 10X genomics single cell RNA-seq. However, to date these datasets were only analysed partially and their integration is poor. We now seek to combine our genomic resources into a single, effective pipeline for in-house access and analysis based. Specifically, we aim to develop and test a bioinformatics application using, for example, R and existing R packages and expand this into a visually attractive R/Shiny (or equivalent) app with interactive plots. We encourage you to also bringing in your own ideas for innovative data processing and visualization to support the research program of the lab.

**Your Background:** The position is available for early-career bioinformatician with demonstrated experience in advanced R and R/Shiny (or equivalent). Applicants should also have bioinformatics experience with -omics data (NGS, single-cell data, multi-omics), software engineering best practices (Git, Docker, etc.) and computational pipelines. Our working language is English. We expect good communication skills, the ability to work independently as well enjoying contributing to a diverse research team.

**What we offer:** This position offers the opportunity to work in a diverse, international and motivated team, dedicated to advancing our understanding of coral symbiosis. Our research is highly topical and we seek to actively contribute to a sustainable world. Accordingly, we offer to complement your basic research activities with opportunities for further training and with participation in transfer and outreach activities including *vamos*, *symbiosisj* (<https://vamosimbiosis.org/>). The laboratory is well-funded and researchers are supported by an excellent laboratory infrastructure at the HighTechCampus Planegg-Martinsried, which is part of the largest German university. We value good communication, a pleasant working atmosphere and personal responsibility. We are also dedicated to contribute to open and reproducible science. If applicable, you will participate in coral reef field work in Okinawa (Japan) and interact with international collaboration partners.

This is a full-time position and remuneration is up to TV-L E13, depending on qualifications. LMU has signed the "Diversity Charter" and is committed to the diversity of its employees. We therefore actively promote gender equality. Severely disabled applicants will be given preference if their qualifications are otherwise essentially the same.

We look forward to receiving your application via email (one PDF, max. 5 MB) by 01/31/2023 to:

Prof. Dr. Annika Guse, Email: [annika.guse@biologie.uni-muenchen.de](mailto:annika.guse@biologie.uni-muenchen.de)

In the course of your application for an open position at Ludwig-Maximilians-Universität (LMU) München, you will be required to submit personal information. Please be sure to refer to our [LMU Privacy Policy](#). By submitting your application, you confirm that you have read and understood our data protection guidelines and privacy policy and that you agree to your data being processed in accordance with the selection process.