



The Department for Algal Development and Evolution at the Max Planck Institute for Developmental Biology in Tübingen has an opening for a

PhD thesis project in the frame of the ERC grant TETHYS

Turnovers in sex determination systems

The Department for Algal Development and Evolution at the Max Planck Institute for Developmental Biology in Tübingen has an opening for a PhD thesis in the context of the ERC grant TETHYS.

Over the last few years, the brown algae have emerged as a highly valuable group to study the evolution of sex chromosomes and reproductive systems because they exhibit a remarkable diversity of sexual traits and because there have been multiple transitions between sexual systems over a relatively short evolutionary time period (less than 200 my). The maintenance of a high level of diversity of sexual features in a single, evolutionarily young group is outstanding among the eukaryotes, and points to a complex evolutionary history of the underlying regulatory systems. Recent discoveries in our group regarding the evolution of UV sex chromosomes in the brown algae have created an unprecedented opportunity to access the basis of the turnover between sexual systems and their broad impact on the evolution of this key lineage.

We are looking for a creative, enthusiastic and ambitious PhD student interested in unravelling the molecular basis and evolutionary processes underlying the evolution of sex chromosomes in the brown algae, in particular to tackle the genetic and genomic basis of transitions between sex determination systems. The student will use already available genomes and transcriptomes of several brown algal species where transitions from sex chromosomes to hermaphroditism occurred independently, in order to understand the molecular and evolutionary causes and consequences of these turnovers.

We are an international research group, and during your stay you will interact with experienced researchers with a range of backgrounds, from bioinformatics to genetics, genomics, cell biology, ecology and physiology, who will provide supervision and ensure a productive training period. You will gain experience in cutting edge techniques and after an initial training period you will be able to work independently.

If you are interested, please send your CV and a brief outline of your goals and interests to Susana Coelho (susana.coelho@tuebingen.mpg.de). You can check our website (<https://www.eb.tuebingen.mpg.de/department-of-algal-development-and-evolution/>), and phone/email for informal discussions. More PhD projects are available in our group if you are interested in development and evolution, seaweeds, genetics, evolutionary genomics and marine biology.