

## PhD position - meiotic drive of supernumerary chromosomes

A Phd position is available for three years to study the **meiotic drive of supernumerary chromosomes** with the Max Planck research group “Environmental Genomics” headed by Prof. Dr. Eva H. Stukenbrock. The Max Planck group is affiliated with the **Max Planck Institute for Evolutionary Biology** in Plön and the **Christian-Albrechts University of Kiel** in the North of Germany. The position is compensated at 65% of TV-L 13 and candidates are expected to complete a PhD.

### Background

Selfish genetic elements are widespread in all groups of organisms. They are likely to have shaped the evolution of diverse biological systems, including genome structure, sex determination, and meiosis. To date, surprisingly little is known about the exact processes that underlie the spread of these elements. This project focuses on selfish genetic elements that cause uniparental meiotic drive of supernumerary chromosomes in a fungal pathogen.

Recently we could show that the supernumerary chromosome of the commercially important wheat pathogen *Zymoseptoria tritici* show a chromosome drive, i.e. are inherited to more progeny than expected by Mendelian segregation, and these chromosomes may therefore be considered selfish genetic elements. Interestingly this chromosome drive is restricted to chromosomes inherited from the female parent. We hypothesize that this drive is based on an additional amplification of unpaired chromosomes during meiosis. This project aims at understanding this previously unknown aspect of meiosis and its exploitation by selfish chromosomes using the model organism *Z. tritici*. It will involve the establishment of in vitro crosses and the identification of the genetic and epigenetic traits responsible for the chromosome amplification.

### Expectations and Requirements:

The candidate must have university degree (Master or equivalent) in biology or a related field. High competence in statistics, experimental design, and English writing is a must. Ideally, the candidate has comprehensive experience in molecular genetics, work with plant pathogens or performance of evolution experiments. The selected candidate will have the opportunity to collaborate in an interdisciplinary team of biologists (molecular biologists, evolutionary biologists and population geneticists) as well as to pursue unique research in the field of chromosome biology.

Kiel University aims at a higher proportion of women in research and education, and, therefore, specifically encourages qualified female scientists to apply. Female scientists will be preferentially considered in case of equivalent qualification, competence and achievements.

Kiel University specifically supports employment of severely handicapped people. Therefore, severely handicapped applicants will be preferentially considered in case of suitable qualification.

Kiel University specifically welcomes application from people with migration background.

### **Application**

Applications should include a motivation letter (max. 2 pages long), CV, publication list, names and contact details of two referees (who are familiar with the applicant's work), and copies of certificates. Deadline for applications is 02. November 2018. Applications should be sent to:

**Prof. Dr. Eva Stukenbrock, Botanisches Institut, Christian-Albrechts-Universität zu Kiel,  
Olshausenstr. 40, 24118 Kiel**

**or preferentially as a single-PDF-document by e-mail to:  
office@bot.uni-kiel.de**

We explicitly do not require application photos and therefore these shall be omitted.

Further information can be obtained from Prof. Dr. Eva Stukenbrock (estukenbrock@bot.uni-kiel.de). Please also check: <http://web.evolbio.mpg.de/envgen/>