

## PhD position in malaria research

Investigating mechanisms of chromosome segregation during the exit of male *Plasmodium* gametes.

**Are you interested in deciphering how malaria-causing *Plasmodium* parasites infect mosquitoes? Join us at Heidelberg University for a PhD position to investigate the molecular mechanisms underlying the formation of male *Plasmodium* gametes within the mosquito.**

Malaria is a devastating infectious disease that kills more than half a million people per year. It is caused by the eukaryotic, single-celled parasite *Plasmodium*, which infects mosquitoes to spread from host to host. At the Hentzschel lab, we investigate the biology of early mosquito infection, particularly the formation of male gametes. This fascinating and extremely fast process generates eight flagellated gametes from a precursor cell within only fifteen minutes (see examples of forming gametes on the right). Yet, the molecular mechanisms underlying this process, in particular how the parasite organises the rapid genome replication and segregation into individual gametes, remains elusive. We have previously identified a protein complex that mediates sorting the genomes during male gamete formation and found that nuclear actin is important for this process. We now want to understand the molecular and cellular processes underlying this phenotype, which might help to develop transmission-blocking drugs in the future.



### What we offer

During your fully funded PhD project (3 years, 65 % TV-L E13), you will use state-of-the-art molecular and cellular biology techniques, genetic engineering and imaging technologies to investigate the function of an unusual protein complex and its interaction with nuclear actin during *Plasmodium* male gamete formation. We are a young, dynamic group, providing plenty of opportunities to contribute your own ideas. You can expect a supportive environment and close supervision and mentoring with the aim to comprehensively expand your scientific and professional skills to enable you to develop into an independent researcher. Our lab is part of the Center for Infectious Diseases, located in the modern CIID building on the Neuenheimer Feld Campus in Heidelberg, where you will have access to state-of-the-art facilities and equipment. Being part of a priority program (<https://www.spp2225.rwth-aachen.de/>) will enable you to collaborate with scientists from across Germany and you will have opportunities to join national and international meetings. All PhD students at Heidelberg University are enrolled in a graduate school which offers an abundance of high-quality scientific and methodological courses in addition to career development services.

### Who we are looking for

- You have a Master's degree (or equivalent) in molecular biology or related disciplines
- You are curious and enthusiastic about unusual cell biology
- You are highly motivated and show initiative to drive the project forward
- You show great ability to work both independently as well as collaboratively in a team
- You enjoy contributing with your ideas to the success of a young lab
- You have good communication skills in English (speaking, reading, writing)
- You are willing to work with experimental mouse models
- Prior experience with molecular biology and/or *Plasmodium* is appreciated but not essential

### How to apply

If this inspired you to explore the unusual biology of *Plasmodium* and join a young lab, please send a single PDF file comprised of your motivation letter (1 page max.) including your proposed starting date, your CV, and contact information for two references to [franziska.hentzschel@med.uni-heidelberg.de](mailto:franziska.hentzschel@med.uni-heidelberg.de).

If you have any further questions, please do not hesitate to contact Dr. Franziska Hentzschel by email or check out the website (<http://tinyurl.com/hentzschel-lab-HD>). The position will be filled on a rolling basis.

**We look forward to receiving your application!**