



Curious to understand how two nuclei of the same cell can multiply asynchronously despite sharing the same cytoplasm?

If so, you may want to join us and decipher the regulation of *Plasmodium falciparum* replication. *P. falciparum* is a unicellular eukaryote and the causative agent of the most virulent form of human malaria. In the blood stage of infection, *P. falciparum* proliferates inside human red blood cells, which is responsible for all symptoms of malaria. During proliferation, the parasite's nuclei divide several times, forming a multinucleated stage that can harbor up to 30 nuclei. Typically, when two or more nuclei reside in the same cytoplasm, they usually progress synchronously through the cell cycle, as the proteins that regulate the cell cycle are distributed throughout the cell. However, *P. falciparum* nuclei divide asynchronously despite residing in the same cytoplasm (the banner shows nuclei in red, but only the ones with a cyan signal are in S-phase). In addition, many of the proteins involved in cell cycle regulation, cannot be found in the *P. falciparum* genome. This PhD project aims at understanding how the nuclear cycle is regulated and how it is fitted in the overall cell cycle of *P. falciparum*.

What we offer

We offer a funded position, starting in November 2022 until June 2026. The candidate will get trained to use cutting-edge technologies, including live-cell imaging, reverse genetics, and proximity-proteomics. Our lab is part of the Center for Infectious Diseases and located in the new CIID building on the Neuenheimer Feld Campus in Heidelberg. This PhD project is embedded in a Collaborative Research Center (www.sfb1129.de) and we will work with an interdisciplinary team of biologist, theoretical system biologists, physicists, and imaging specialists. PhD students have also access to many career development opportunities as well as a wide range of activities offered through the university.

What we are looking for

A team member who shares our enthusiasm and curiosity about unusual cell biology. Candidates should hold a Master's degree from an internationally accredited institution of higher education. A background in molecular cell biology or related disciplines is advantageous but applications from all fields of natural sciences are welcome as are candidates with a migration background.

If you have any further questions, please do not hesitate to contact Dr. Markus Ganter by phone (+49–6221–566546) or by e-mail (ganter@uni-heidelberg.de) or check out these websites:

<https://www.klinikum.uni-heidelberg.de/zentrum-fuer-infektiologie/parasitologie-unit/research/ganter-lab>

<https://ciid-heidelberg.de/research-groups/ganter-lab>

<https://www.sfb1129.de>

How to apply

If you are interested in joining our lab, please send a single PDF file comprised of a cover letter, CV, and contact information for references to: ganter@uni-heidelberg.de

We look forward to receiving your application.