



HEIDELBERG
UNIVERSITY
HOSPITAL

PHD STUDENT AND POSTDOC POSITIONS AT HEIDELBERG UNIVERSITY

The Department of Infectious Diseases, at the University Hospital Heidelberg, Germany, offers positions for PhD students and postdocs to investigate **post-entry events in retrovirus replication** in the groups of **Hans-Georg Kräusslich** and **Barbara Müller** within the collaborative research center 1129 (<https://www.sfb1129.de/>).

We offer an exciting and highly interdisciplinary research topic with biomedical relevance in an interactive and international scientific environment, including collaborations with national and international partners, at an internationally competitive level.

We study the fascinating events occurring in the early phase of retroviral replication. The role of the capsid in these steps recently underwent a major paradigm shift: the capsid is now recognized as the key organizer of post-entry events. It is instrumental for escape of HIV-1 from recognition by the innate immune system and serves as an attractive target for antiviral therapy (Müller *et al.*, *Ann Rev Virol* 2022). Our current work aims at elucidating the mechanistic details of retroviral post-entry. For this, we apply innovative labeling strategies and advanced microscopy approaches, complemented by cell biological and biochemical methods.

Applicants should have a master's or doctoral degree in a relevant discipline (molecular and cell biology, biochemistry, biophysics or molecular medicine). A good background in standard molecular biological methods is expected. Ideally, candidates have already experience in fluorescence microscopy and image analysis, together with a background in cell biology, biochemistry or biophysics.

We are looking forward to meet curious and motivated individuals who are truly excited about science, enjoy working independently, but also love to interact, discuss and collaborate with researchers from different disciplines and nations.

Müller *et al.* (2021) HIV-1 uncoating by release of viral cDNA from capsid-like structures in the nucleus of infected cells. *eLife* 10, e64776 doi: 10.7554/eLife.64776

Zila *et al.* (2021) Cone-shaped HIV-1 capsids are transported through intact nuclear pores. *Cell* 184, 1032-1046.e18 doi: 10.1016/j.cell.2021.01.025

Schiffedercker *et al.* (2022) Direct capsid labeling of infectious HIV-1 by genetic code expansion allows detection of largely complete nuclear capsids and suggests nuclear entry of HIV-1 complexes via common routes. *mBio*.13(5):e0195922.

Bejarano *et al.* (2019) HIV-1 nuclear import in macrophages is regulated by CPSF6-capsid interactions at the Nuclear Pore Complex. *Elife* 8, e41800 doi: 10.7554/eLife.41800

Müller TG, Zila V, Müller B, Kräusslich HG (2022) Nuclear Capsid Uncoating and Reverse Transcription of HIV-1. *Ann Rev Virol*. 2022 Sep 29;9(1):261-284. doi: 10.1146/annurev-virology-020922-110929.

Müller *et al.* (2019) A Spotlight on Viruses - Application of Click Chemistry to Visualize Virus-Cell Interactions. *Molecules*; 24(3), E481. doi: 10.3390/molecules24030481

Positions are open immediately. Please send your application (CV, academic transcript, motivation letter and reference letters or contact details of two referees as a **single** pdf file) to martina.nierle@med.uni-heidelberg.de.

Further details can be found here:

