

# SFB 900 SEMINAR SERIES

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## TITLE

Virology - Herpes Simplex Virus Infection of Epithelial Cells

## SPEAKER

Prof. David M. Knipe  
Head of the Department of Microbiology, Blavatnik Institute, Harvard Medical School, USA

## LOCATION

Lecture Hall Q, building J6, MHH, Carl-Neuberg-Str.1  
Hannover



18.09.  
2019

4.00 PM (s.t.)

### » Research of David M. Knipe

Latent infection with Epstein-Barr virus is associated with malignancies including post-transplant or Hodgkin's lymphoma. Cell transformation by EBV depends on its oncoprotein LMP1, which activates cellular signaling pathways by recruiting members of the cellular TNF receptor-associated factor (TRAF) protein family, leading to NF-kappaB, JNK and MAPK activation. However, although the LMP1 signaling network seems to be widely established, important questions still remain unanswered. We combine biochemical, genetic and omics technologies to characterize the LMP1 signaling complex and downstream signaling processes and their functions in cell transformation by LMP1. A focus is set on a novel and unusual role of the IKK complex in transforming signaling. Finally, we apply this knowledge to identify potential targets for inhibitory small molecules interfering with LMP1 activity. We established high throughput screening technology for the interaction of LMP1 with TRAF molecules and identified small molecule inhibitors that effectively block this interaction and kill EBV-transformed B-cells.

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