



Research Interests

Research Group Virus Interaction Proteomics

The research group "Virus Interaction Proteomics" is driven by the motivation to understand the biochemical principles underlying virus infection of host cells. Studying the invasion of viruses into susceptible cells and the genome replication of viruses inside cells is at the heart of our work. Using quantitative high resolution proteomics we investigate molecular interactions between viruses and host. In the past years we have elucidated protein interactions during infection with the chronic hepatitis C virus (HCV) and newly emerging viruses including insect-borne viruses and SARS-CoV-2. We ultimately strive to use knowledge on host factors to understand why viruses infect different hosts and tissues and to develop anti-infectives.

Virus emergence is a global health challenge driven by anthropogenic changes to ecosystems. For instance, climate change has caused the spread of virus-transmitting mosquito species to Europe. Using mosquito-borne alphaviruses such as Chikungunya virus and the recently emerged SARS-CoV-2, we apply our knowledge and proteomics technologies to analyze host protein networks hijacked during virus infection. Our work aims at highlighting similarities and differences of so called zoonotic viruses, i.e. viruses transmitted between animals and humans. This will open new avenues not only towards drug development, but also towards the understanding of host and tissue tropism and thereby towards important predictors of transmission and pathogenesis, i.e. of pandemic potential of viruses.

Sie sind hier: [Kliniken & Institute](#) > [Forschungszentrum für Infektio...](#) > [Research Groups and Management...](#) > [AG Gerold](#) > [Research Interests](#)

Dieses PDF-Dokument wurde dynamisch auf www.tiho-hannover.de erstellt.

Letzte Aktualisierung dieses Dokumentes: 24. August 2020

© Stiftung Tierärztliche Hochschule Hannover, Bünteweg 2, 30559 Hannover, Tel.: +49 511 953-60