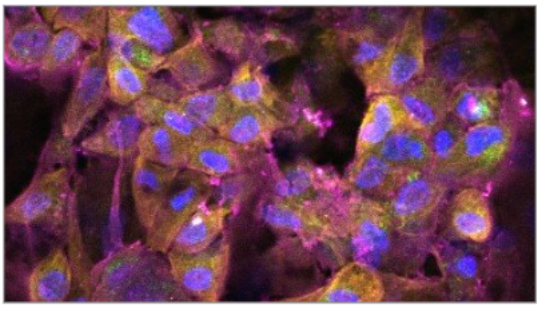
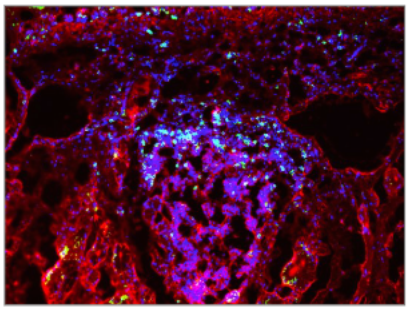
Project

Nowadays, it is impossible to imagine modern medicine without protein therapeutics. Whether in the treatment of cancer, autoimmune diseases or in substitution therapy, protein-containing drugs have long had an established place. However, a major disadvantage is their size and fragility, making it necessary to apply most proteins parenterally. In our project, we look into a not so well-established administration route for proteins: the inhalation via the respiratory tract, presenting a new therapeutic approach in the treatment of respiratory diseases and prevention of airway infections. We are especially interested in the transport mechanisms of the antibody-opsonized pathogens through the respiratory mucosa and the interaction with the local immune system with nebulized biotherapeutics.





PhD student

Rebecca Rittersberger studied pharmacy in Frankfurt (Main) and is a certified pharmacist since July 2020. Already during her studies, she took a great interest in the possibilities and challenges of protein therapeutics. She was able to deepen this interest and her knowledge in a six-month internship with Boehringer Ingelheim Pharma GmbH & Co. KG between her second and third state examination. Since September 2020 she has been a PhD student in the work group of Prof. Dr. Katharina Zimmermann, working in the project *Drug Delivery via the Airways*.