

In vivo* Pharmacology: Mouse Pneumonia Induced by Intranasal Infection with ESBL Producing *Klebsiella Pneumoniae

Species, strain, sex: mouse, C57Bl/6, male
 Number of animals per group: n=8-10
 Pharmacological control: Meropenem
 Strain: *K. pneumoniae* 1470 (ESBL producing clinical isolate)
 Treatment mode: prophylactic
 Duration of dosing: 2 days, BID

Klebsiella pneumoniae is a gram-negative opportunistic pathogen primarily infecting immunocompromised individuals. Infections caused by this pathogen such as UTI, severe sepsis or bacterial pneumonia can be hard to treat due to the presence of ESBLs or carbapenemases, enzymes which confer resistance to majority of current treatment options. The aim of this model is to mimic human disease caused by *K. pneumoniae*.

Basic study design:
 0h: i.n. infection
 1h: start of treatment
 48h: sacrificing

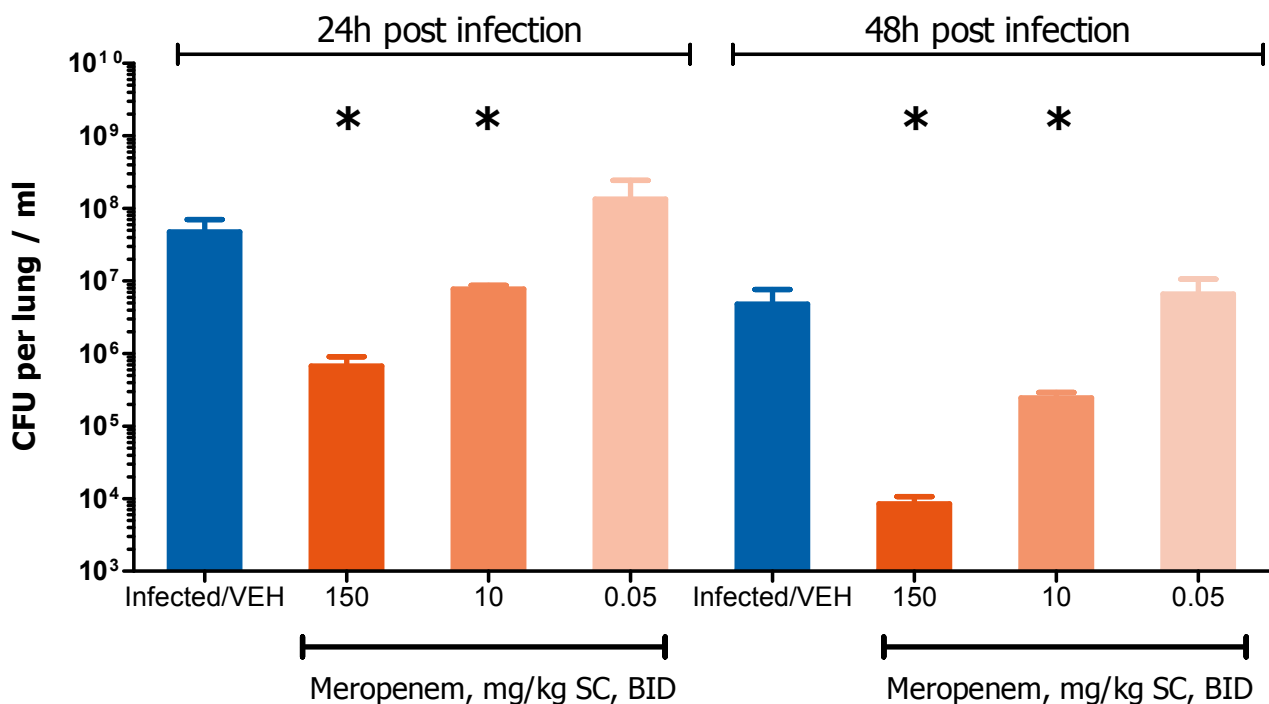
Main read-outs:

- CFUs in lung tissue

Facultative read outs:

- Haematology
- Histopathological evaluation of the lungs
- Immunohistochemistry of lung tissue

Klebsiella pneumoniae lung infection Efficacy of Meropenem following SC administration



Models of infection with other bacteria of interest can be developed on request, using bacterial isolates from our collection or provided by the Client