

In vivo Pharmacology: Mouse Pneumonia Induced by Intranasal *S. Pneumoniae* / *H. Influenzae* Infection

Species, strain, sex: mouse, C57Bl/6 or BALBc, male
 Number of animals per group: n=8-10
 Pharmacological control: azithromycin
 Strain: *S.pneumoniae* , *H. influenzae*
 Treatment mode: therapeutic/prophylactic
 Duration of dosing: upon request

S. pneumoniae and *H. influenzae* are the most common pathogens causing community-acquired pneumonia, a common disorder that is potentially life threatening.

The aim of this model is to mimic human disease caused by *S. pneumoniae* or *H. influenzae*.

Basic study design:
 0h: i.n. infection
 6h: start of treatment
 44-72h: sacrificing

Main read-outs:

- CFUs in lung tissue

Facultative read outs:

- Haematology
- Serum biomarkers and inflammatory mediators
- Histopathological evaluation of the lungs
- Immunohistochemistry of lung tissue

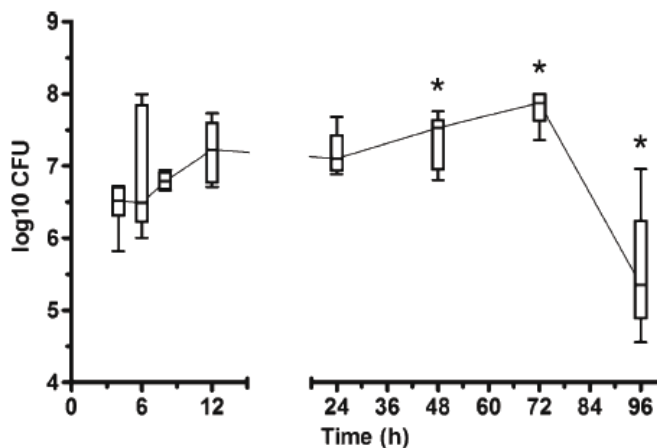
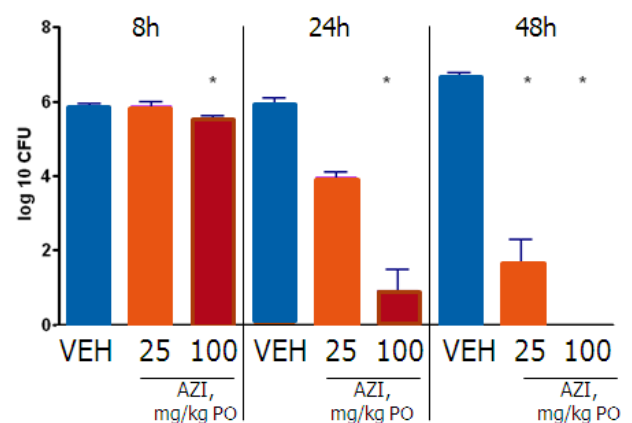


Fig. 1. Time course of bacterial growth (CFU) in lungs inoculated with live *S. pneumoniae*. $p < 0.05$ vs 4 h, one-way ANOVA with Dunnett's multiple comparison test. $n = 6$.

Efficacy of azithromycin in *S. pneumoniae* lung infection following oral dosing



M. Dominis-Kramarić, M. Bosnar, Ž. Kelnerić, I. Glojnarčić, S. Čužić, M.J. Parnham and V. Eraković Haber.

Comparison of pulmonary inflammatory and antioxidant responses to intranasal live and heat-killed *Streptococcus pneumoniae* in mice. *Inflammation* 2011, 35:471-486

References

Dominis-Kramarić M, Bosnar M, Kelnerić Ž, Glojnarčić I, Čužić S, Parnham MJ and Eraković Haber V. Comparison of pulmonary inflammatory and antioxidant responses to intranasal live and heat-killed *Streptococcus pneumoniae* in mice. *Inflammation* (2011) 34:471-486