



OXA-48 *Klebsiella pneumoniae* – Pneumonia

Procedure Summary

- CD1 mice, eight weeks old females
- *Klebsiella pneumoniae*
 - CTX-M-1 and OXA-48 clinical strains
 - CTX-M-15 and OXA-48 clinical strains
- Neutropenic status induced by 2 cyclophosphamide intraperitoneal (IP) administrations at D-4; 150mg/kg and D-1; 100mg/kg
- Intranasal challenge (50 μ L)
- Compounds: Meropenem (100 mg/kg/q2h, IP), Cefepime (100 mg/kg/q2h, SC) or Cefepime (100mg/kg/q2h, SC) + Enmetazobactam (30mg/kg/q2h, SC), 2h post-infection.

Experimental readouts

- CFU determination of *K. pneumoniae* colonies in lung and spleen
- Survival rate
- Weight loss
- Clinical score

Optional Services

- Microbiological analysis
- Cytokine and chemokine analysis
- Pharmacokinetics

Animal Welfare

- Each experimental protocol is approved by the local ethics committee for animal experimentation of Grand Campus Dijon (Burgundy, France) and performed in accordance with the current recommendations of the European Institute of Health EU Directive 86/609

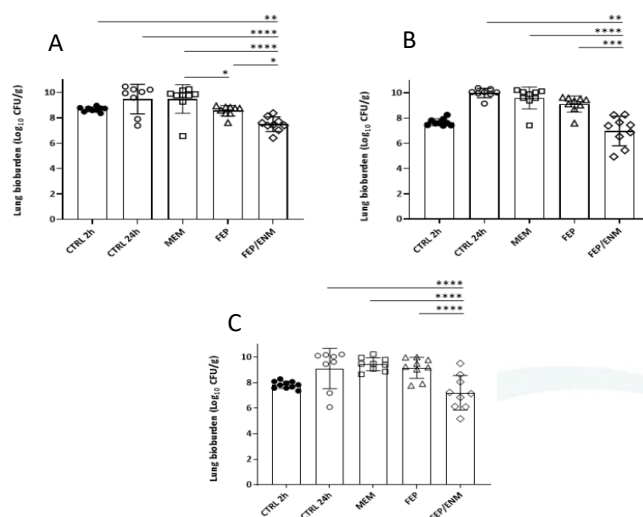
Facilities

- These assays are performed at our BSL2 laboratory / zootechnical center in Dijon, France

Reference

- *Albac et al.*, Microbiology Spectrum, 2024, *In vivo* efficacy of enmetazobactam combined with cefepime in a murine pneumonia model induced by OXA-48-producing *Klebsiella pneumoniae*.

Therapeutic effects on bacterial load in lung (expressed as mean \pm standard deviation of log₁₀ of colony-forming units per gram of lung) after intranasal infection: comparison among three different *Klebsiella pneumoniae* strains producing OXA-48 and CTX-M1 (A and B) or CTX-M15 (C).



Our scientific team will readily accommodate client-specific alterations and will provide expert advice and guidance for your efficacy studies

For more information please contact: info@vivexia.fr