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Staphylococcus epidermidis – osteitis without implant model

Procedure Summary

- Immunocompetent male Wistar rats
  - *S. epidermidis* (clinical strains) : MSSE & MRSE
- Bacterial challenge into the anterior tibial medullar
- Antibiotic treatment 7 days after infection ; for up to 14 days.
- Reference compounds : vancomycin (50mg/kg/12h), linezolid (35mg/kg/12h), daptomycin (100mg/kg/24h), ceftaroline (20mg/kg/12h), rifampin (25mg/kg/12h), & combined therapies

Experimental readouts

- Bacterial load in cryocrushed bone
- Bacterial dissemination (spleen)
- Clinical monitoring, Fever
- Histology

Optional Services

- Collection of feces (microbiote analysis)

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 to the current recommendations of the European Institute of Health EU Directive 86/609.

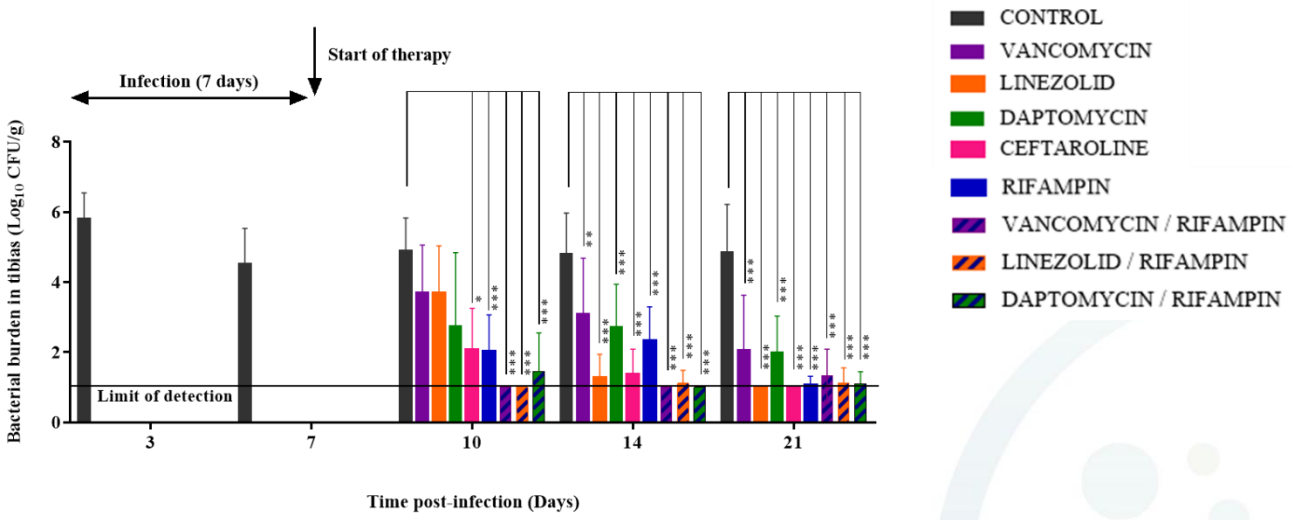
Facilities

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

Reference

- Albac *et al.*, AAC 2019 « Activity of different anti-staphylococcal therapies, alone or combined, in a rat model of methicillin-resistant *Staphylococcus epidermidis* osteitis without implant ».
- Labrousse *et al.,* ECCMID 2013, P1168 « Comparative efficacy of linezolid versus vancomycin alone or in combination with rifampicin on a coagulase-negative *Staphylococcus epidermidis* in a rat model of osteomyelitis ».

Results of quantitative bone culture of *Staphylococcus epidermidis* infected rats untreated or treated with each of the anti-staphylococcal therapies.



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

For more information please contact : **info@vivexia.fr**