



## Staphylococcus aureus – Osteitis implant

### Procedure Summary

- Immunocompetent BalbC mice, eight weeks old females
- *Staphylococcus aureus*
  - Clinical MSSA strains (Prosthetic Joint Infections)
- Parapatellar arthrotomy and insertion of a K-wire into the femoral medullary canal
- Bacterial challenge by retrograde inoculation
- Reference compound: Rifampin (IP)

### Experimental readouts

- CFU determination in bone, thigh muscle
- Quantification of biofilm on the implant
- Clinical score, weight monitoring

### Optional Services

- Cytokine and chemokine analysis
- Pharmacokinetics
- Histology

### 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

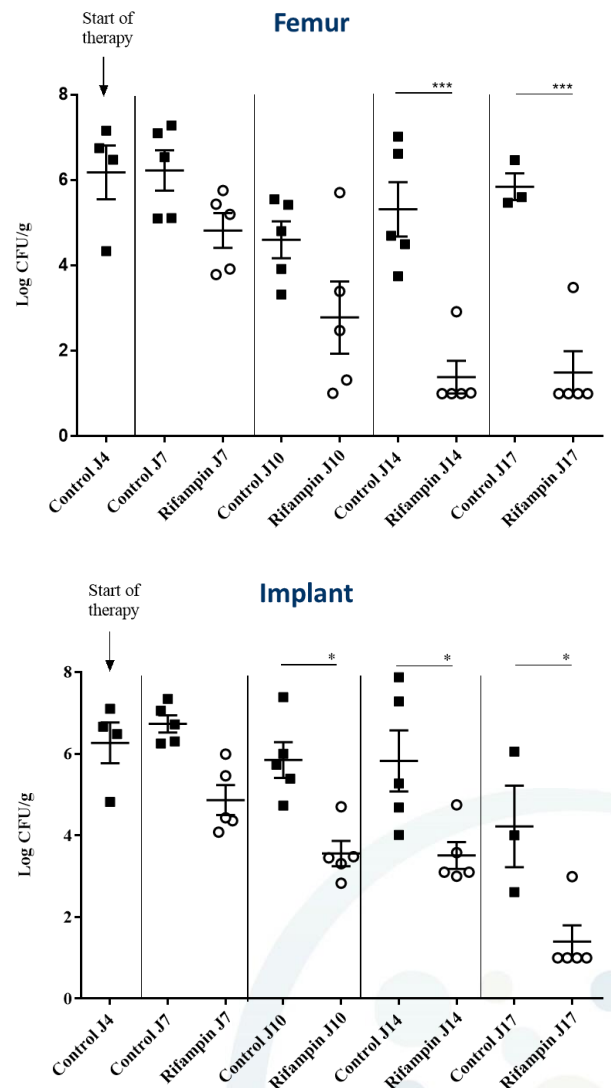
### Reference

- Internal Data
- Bernthal *et al.*, PlosOne 2010 “A mouse model of post-arthroplasty *Staphylococcus aureus* joint infection to evaluate *in vivo* the efficacy of antimicrobial implant coatings”

### Facilities

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

Efficacy of rifampin on bacterial load in a murine osteitis implant model induced by *Staphylococcus aureus* ( $p < 0.05^*$ ,  $p < 0.01^{**}$ ,  $p < 0.001^{***}$ ).



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

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