



## *Pseudomonas aeruginosa* (PAO1) Ventilator Associated Pneumonia (VAP)

### Procedure Summary

- Immunocompetent New Zealand rabbits
- *P. aeruginosa* (PAO1)
- Central Venous Catheterization
- Intubation & mechanical ventilation (coated or non-coated endotracheal tube) for 24h to 72h
- Endobuccal bacterial challenge ( $10^8$  Log CFU)

### Experimental readouts

- Bacterial load in lung tissue (each lobe), trachea (distal, medium and proximal) and endotracheal tube (distal, medium and proximal)
- Bacterial dissemination (spleen)
- Detection & Quantification of biofilm
- Fever
- Morbidity and mortality
- Gross pathology of lungs
- Lung edema (LW/BW)
- Histology

### Optional Services

- Broncho Alveolar Lavage Fluid
- Blood sampling, arterial blood gas (PaCO<sub>2</sub>, PaO<sub>2</sub> etc...)
- Cytokine and chemokine analysis
- Immune cell counts

### Reference

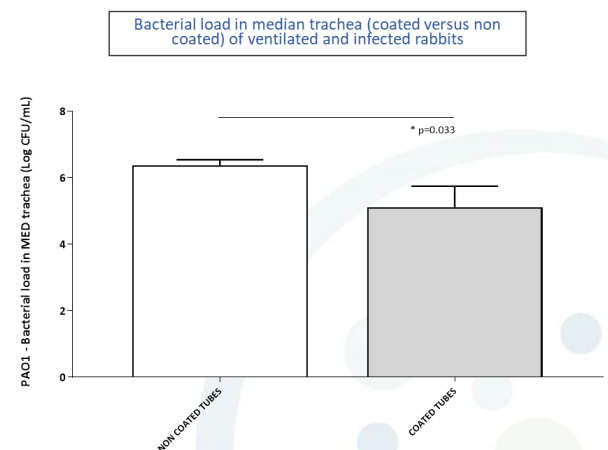
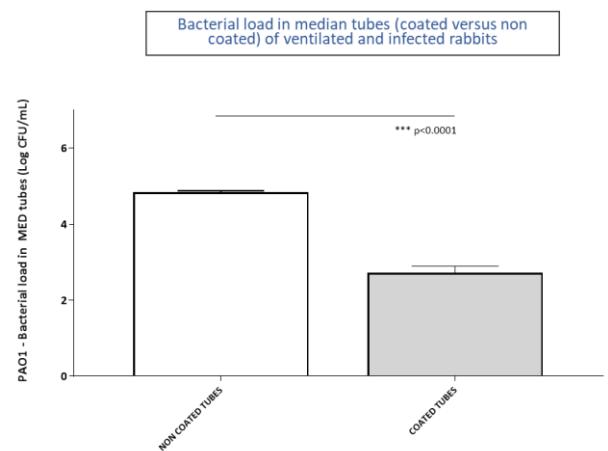
- Hashemi *et al.*, JAC 2018 « Preclinical testing of a broad-spectrum antimicrobial endotracheal tube coated with an innate immune synthetic mimic ».
- Pauchard *et al.*, PlosOne 2017 « Linezolid and atorvastatin impact on pneumonia caused by *Staphylococcus aureus* in rabbits with or without mechanical ventilation ».

### 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



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](mailto:info@vivexia.fr)