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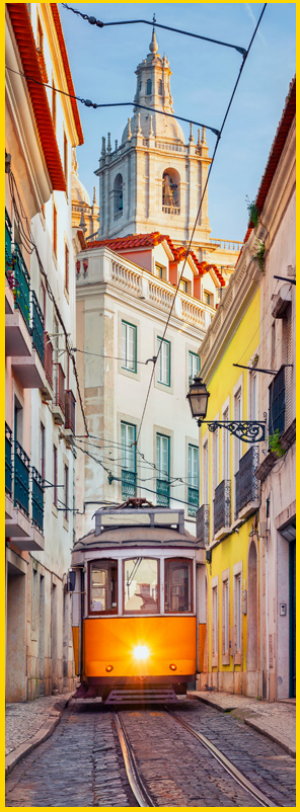

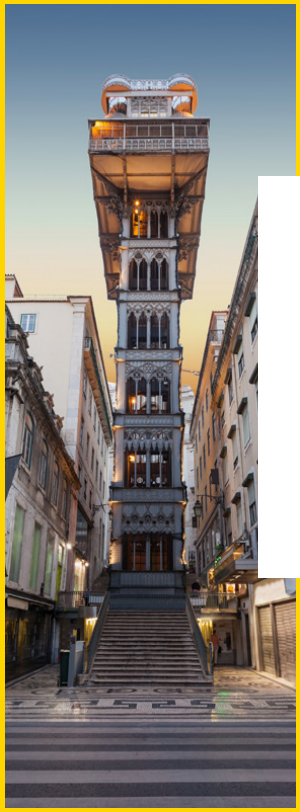

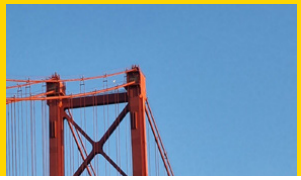

# Joint European Congress of Veterinary Pathology & Clinical Pathology

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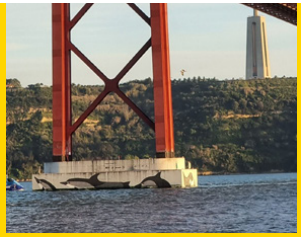

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## 26 | THE VALUE OF CYTOLOGY IN THE DIAGNOSIS OF ENDOMETRITIS IN THE MARE - CORRELATION WITH MICROBIAL CULTURE

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**Background**
Endometritis is a common cause of infertility in mares, and the presence of uterine inflammation can be determined by cytology or biopsy. Microbiological analyses and testing the sensitivity to antibiotics are important to maximise the therapy efficacy.

**Objective**
Our aim was to examine the relationship between the presence of inflammation and microbial growth, including its association to the presence of Gram-positive / Gram-negative bacteria.

**Methods**
Lusitano broodmares (n=112), aged 4-24 yo, in estrus (n=78) or diestrus (n=34), were evaluated during two breeding seasons. Uterine samples were collected aseptically by either: lavage (n=65), swab (n=13) or biopsy (n=34). For cytology, slides were Giemsa stained (inflammation >5% polymorph nuclear neutrophils). For microbiology, blood and McConkey agar were plated, followed by biochemical or molecular identification.

**Results**
Bacterial growth was found in 64.8% of the samples. Uterine biopsy was the method that detected more positive culture (76.5%), followed by lavage (60,3%). Within samples with positive culture, 63.6% showed no inflammation on cytology, followed by 18.2% presenting moderate inflammation. Absence of inflammation occurs more often with Gram-positive (66.7%) in comparison to Gram-negative bacteria (25.9%). Severe inflammation occurred more often in association with Gram-negative bacteria (66.7%). From the mares with negative culture, 36% had some degree of inflammation.

**Conclusion**
Mares with inflammation but no bacterial growth highlight the high sensibility of cytology in the diagnosis of uterine inflammation. A positive culture without inflammation nor clinical signs should not be considered pathogenic. In our mares, the presence of Gram-negative bacteria induced a stronger pro-inflammatory immune response.
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