

## **BBD-PP-15**

### **TITLE**

**ANALYSIS OF 719 STREPTOCOCCUS SPECIES STRAINS GAINED FROM DISEASED PIGS SHOWING STREPTOCOCCUS SUIIS-LIKE SYMPTOMS IN 2017**

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### **CONTENT**

#### Background & Objectives

The Streptococcus (Strep.) genus comprises several pathogens that pose a serious threat to human and animal health. Among these, Strep. suis is the most important species affecting swine worldwide. The infection can result in meningitis, pneumonia, arthritis, endocarditis, septicaemia, abscesses and sudden death. However, several other Strep. species can infect swine and cause similar severe clinical manifestations.

#### Material & Methods

A total of 719 Strep. suis-like isolates obtained from pigs with clinical signs of meningitis, arthritis, pneumonia, pleuritis, peritonitis, dermatitis, pericarditis, metritis, urinary tract infections and septicaemia were studied originating from 10 different countries. Swabs taken from affected organs were spread out on blood agar plates and incubated for 24h at 37°C. Species confirmation was performed by MALDI-TOF mass spectrometry (MS). Serotyping of Strep. suis was performed by PCR. Additionally, species differentiation of Strep. canis and Strep. dysgalactiae was performed by 16S rDNA sequencing.

#### Results

The MALDI-TOF MS analysis identified 567 isolates (79%) as Strep. suis followed by Strep. dysgalactiae (15%, n=110) and Strep. alactolyticus (2%, n=15). Moreover, the following Strep. species were detected in descending order: Strep. porcinus (n=7), Strep. hyovaginalis (n=6), Strep. gallolyticus (n=5), Strep. orisratti (n=4), Strep. hyointestinalis (n=2), Strep. thoraltensis (n=2), Strep. epidermidis (n=1). The predominant Strep. suis serotypes identified were serotypes 2 or 1/2 (30%), 9 (23%), 7 (9%), 1 or 14 (7.5%) and 4 (5%).

#### Discussion & Conclusion

This study confirms that Strep. suis is the most dominant Strep. species found in diseased pigs in 2017. Of these, serotype 2 was found to be the most prevalent, followed by serotype 9 and 7. However, other Strep. species as Strep. dysgalactiae could also frequently be isolated from diseased pigs. Hence, a broad range of Strep. species should be taken into account as possible differential diagnosis in case of S. suis-like symptoms.