

## MIS-PP-04

### TITLE

#### NO EVIDENCE OF MASTITIS IN SOWS WITH POSTPARTUM DYSGALACTIA SYNDROME

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### CONTENT

#### Background and Objectives

Mastitis is expected to be prevalent in sows with postpartum dysgalactia syndrome (PDS) - mainly due to *Escherichia coli* (*E. coli*), whose cell membrane contains lipopolysaccharides (LPS) that can induce inflammation. This study investigated LPS in the udder vein blood of PDS-affected sows (PDS+) and changes in milk constituents.

#### Material & Methods

PDS+ sows (n =38) and matched healthy sows (PDS-; n =38) underwent daily clinical examination and blood sampling from the udder vein for LPS detection from 60 hour before to 36 hours after farrowing. Milk samples were obtained for microbiological examination and detection of mastitis [N-acetyl-beta-d-glucosaminidase (NAGase), lactate dehydrogenase (LDH),  $\beta$ -glucuronidase ( $\beta$ -glu)], the mammary energy status [isocitrate (isoC), free glucose, uric acid (UA)], ketosis [ $\beta$ -hydroxybutyrate acid (BHBA)], and the protein status [urea].

#### Results

PDS+ sows had decreased concentrations of milk UA ( $P < 0.0001$ ), increased heart rates ( $P < 0.01$ ) and mammary edema ( $P < 0.05$ ), and prolonged capillary refill time ( $P < 0.01$ ) compared to PDS- sows. BHBA increased over time for a few individuals. No differences were found between the groups for bacteriological findings, LPS, LDH, NAGase, free glucose, isoC or urea. Milk  $\beta$ -glu were highest in PDS- sows, but values were below the pathological levels. Concentrations of LPS were not associated with signs of mastitis in the mammary glands. However, the glands became redder ( $P < 0.0001$ ), warmer ( $P < 0.0001$ ), and firmer ( $P < 0.05$ ) over time in all sows.

#### Discussion & Conclusion

Signs of mastitis were not consistently linked to sows with PDS, and mastitis did thus not seem to be a part of the pathogenesis of PDS. However, the cardiovascular system seemed to be compromised in PDS+ sows already before farrowing.