



Presentation: Detection of *Actinobacillus pleuropneumoniae* ApxIV toxin antibody in serum and oral fluid specimens from pigs inoculated with under experimental conditions.

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Abstract: **INTRODUCTION**

*Actinobacillus pleuropneumoniae* ApxIV toxin is unique to APP and is expressed by all 15 serotypes. For this reason, the detection of anti-ApxIV serum antibodies can be used to identify APP-infected pigs. The goal of this project was to describe ApxIV antibody kinetics in serum and oral fluids specimens from animals inoculated under experimental conditions.

#### **METHODS**

Four groups of pigs (~14-weeks-old; 6 per group) were used. Animals were individually housed in order to collect individual pig oral fluids. Two weeks post-placement, animals were inoculated with APP serovars 1 (ATCC 27088), 5 (ATCC 33377), 7 (ATCC WF83) or 12 (ATCC 9799/84). Pigs were exposed intranasally (2 ml) and by direct application (3 ml) to the tonsils. Blood samples were collected weekly and oral fluids were collected daily from DPI -14 to 56. Serum samples were tested for ApxIV antibodies using a serum antibody ELISA (ApxIV Ab, IDEXX Laboratories, Inc., Westbrook, ME) and for serovar specific antibodies using LPS ELISAs (Université de Montréal). Oral fluid samples were tested using the serum ApxIV ELISA, but the protocol was optimized for the detection of ApxIV antibody in oral fluids.

#### **RESULTS**

Antibodies were also positive in oral fluids.

#### **CONCLUSION**

ApxiV antibody was detected in both serum and oral fluids. Antibody responses were positively associated with the strength of the clinical response. Thus, the clinical observations suggest that the appearance of ApxiV antibody is dependent either upon the severity of the infection and/or tonsil colonization.