

## SWINE HEALTH

**Title:** Development of an *Actinobacillus pleuropneumoniae* (APP) oral fluid antibody ELISA based on the detection of antibodies to APP ApxIV toxin in oral fluid specimens – **NPB #13-214**

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### SCIENTIFIC ABSTRACT

15 serotypes of APP are recognized (1-12, 15 (Biotype I); 13,14 (Biotype II)) and pathogenicity/ virulence vary among serotypes. In addition to lipopolysaccharides, toxins are the primary cause of the clinical disease. There are four recognized APP toxins, but only Apx IV is expressed by all serotypes of APP. (Note: Animals vaccinated with inactivated vaccines do not generate anti-Apx IV antibodies.) This "universal Apx IV expression" by all APP serotypes justifies the use of Apx IV antibody detection in APP screening tests. Currently, there are no USDA licensed assays for the detection of Apx IV toxin, but such assays are available on the global market. Optimizing a test for the detection of antibodies against Apx IV toxin in oral fluid would be a significant contribution to the swine industry.

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