RESEARCH ABSTRACT

SWINE HEALTH

Title: Genome sequencing of *Haemophilus parasuis* for improved swine health - **NPB #07-038**

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Scientific Abstract

This respiratory pathogen *Haemophilus parasuis* is the causative agent of porcine polyserositis, or Glässers disease, and is now considered a significant swine health problem in the United States. Despite its importance, many fundamental features of *H. parasuis* remain poorly understood, including determinants of host specificity, virulence factors, and the genetic basis for the multiple serotypes characteristic of the species. Unfortunately, *H. parasuis* is challenging to study by traditional microbiological methods since it is difficult to culture directly from its natural environment and exhibits extensive strain variation. *H. parasuis* infections are also frequently associated with other bacterial pathogens, further complicating its detection and diagnosis. Our lack of knowledge and difficulty in working *H. parasuis* makes it difficult to consistently detect, prevent, and treat respiratory diseases in pigs. Genomic DNA sequencing represents a means to improve our understanding of *H. parasuis* virulence, as well as a means to identify new vaccine targets and sequences for strain detection and differentiation.