

## 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.

*These research results were submitted in fulfillment of checkoff funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer reviewed*

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