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## Efficacy of Commercial Chinese Inactivated Vaccine Against Experimental Challenge with *Haemophilus Parasuis* Serotype 4 And 5 Isolates from Central Vietnam

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*Haemophilus parasuis* is one of the bacterial pathogens of great concern as it huge economic losses to the swine industry worldwide. The serotype diversity and high prevalence of non-typable of *H. parasuis* hinders the development of effective vaccines. So far, some vaccines such as inactivated vaccine, ghost vaccine, recombinant vaccine have emerged as an effective solution to prevent this disease (Glässer's disease). A bi-valent bacterin, developed by our institute based on inactivated serotypes 4 and 5 strains of Chinese origin, has been widely used as commercial vaccine in China for several years. However, it has not been produced and used for control Glässer's disease in Vietnam. In present study, we assessed the efficacy of his commercial vaccine in protection against the challenged with *H. parasuis* serotypes 4 and 5 isolates from Vietnam using a guinea pig infection model. The significantly high levels of antibodies, IFN- $\gamma$ , and IL-4 in sera from the vaccinated animals were observed, that was associated with the high protection rate against *H. parasuis* infection compared to the non-vaccinated guinea pigs. After challenge with Vietnamese strains, a significantly decreased lesion score and lower bacterial loads in brain, lung and liver tissues of the vaccinated guinea pigs was observed when compared to the non-vaccinated animals. The typical symptoms of Glässer's disease were observed in the non-vaccinated guinea pigs. Taken together, our data suggests that the bi-valent inactivated vaccine made from Chinese strains of *H. parasuis* serotypes 4 and 5 can provide a good protection against the infection of the homologous strains from Vietnam.

### Biography

Rui Zhou got his BSc. and MSc. from Huazhong Agricultural University (HZAU) in 1993 and 1996, respectively, and DVM from the University of Munich, Germany in 2003. He is currently a full professor in the HZAU, and the director of the International Research Center for Animal Disease, Ministry of Science & Technology (MoST) of China. His research group focuses on microbial genomics, pathogenesis and vaccines of bacterial infectious diseases that threaten farm animal and human health. The majority of their work has been in *Streptococcus suis*, *Actinobacillus pleuropneumoniae*, *Haemophilus parasuis* and *Staphylococcus aureus*. He has published more than 80 papers in reputed international journals, and developed several veterinary vaccines, drugs and diagnostic kits.