20th International Pig Veterinary Society Congress

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Durban
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We are delighted that the International Pig Veterinary Society Congress 2004, decided to select South Africa as the host country for the 20th IPVS Congress. The Pig Veterinarians of South Africa will ensure that this congress lives up to the best traditions of previous congresses; incorporating an interesting and topical scientific programme, fascinating accompanying persons tours and an excellent social programme, allowing delegates the opportunity to network with their overseas colleagues.

This, the first IPVS congress on the African continent, will undoubtedly be of enormous benefit in generating solutions to the emerging pig veterinary challenges, especially those related to exotic and changing viral diseases, decreased use of antimicrobials and nutritional advances. The congress is important to further pig veterinary science in South Africa, to encourage younger veterinarians to join the pig industry, as a vehicle to generate funds for research and to improve the pig industry in Southern Africa.

South Africa is a magnificent and beautiful country, and offers tourists value for money. Thus, pre and post congress tours will be a major attraction for delegates to come to South Africa. Durban, in KwaZulu Natal, is a vibrant multi-cultural city with magnificent beaches, easily accessible game parks, theme villages and a moderate winter climate making it an ideal tourist destination. We urge our colleagues throughout the world to use this opportunity to get a glimpse of the continent’s rich and fascinating wonders and to enjoy the hospitality of their African friends.

Dr Peter Evans
Chairman: Local Organising Committee: IPVS 2008
CLONING, EXPRESSION OF THE ORF2 C-TERMINAL FRAGMENT OF SWINE HFV AND DETECTION OF ANTI-HEV IgG IN SWINE SERA FROM THE REGIONS OF CHINA

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Introduction
As an important public health disease, hepatitis E virus (HEV) is a pathogenic agent that causes fecally-orally transmitted acute hepatitis. Swine is an important animal reservoir of HEV. ORF2 of HEV encodes a 71-kDa viral capsid protein, on which most antigenic epitopes are located. At present, the recombinant antigen and synthesized peptides derived from ORF2 of HEV have been applied to clinical diagnosis for detecting anti-HEV IgG by ELISA. In this paper, a fusion protein of swine HEV ORF2 was first expressed in E. coli to explore properties of the ORF2 product of swine HEV and its immunological cross reactions with human HEV. An ELISA method based on the purified recombinant protein was established to detect anti-HEV IgG in swine sera from several districts of China.

Materials and Methods
Swine HEV isolate, swCH25, were isolated from pigs by Xun Ma. Fecal and serum samples were collected from pigs in China from 2004 to 2005. Fragments of 934 bp of ORF2 gene of swCH25 obtained by RT-nPCR. The fragment was purified and introduced into pET-32a(+) vector to yield the expression plasmid pET-32a-ORF2, which was expressed in E. coli BL21. The expression product was identified by SDS-PAGE and Western blotting. Based on the purified recombinant protein, a ELISA method was performed for antibody detection.

Results
Expression products of the partial fragment of ORF2 gene in vitro had the critical antigenic epitopes and immunological cross reaction with human HEV. The recombinant protein was found to form homodimers or higher oligomers in vitro by SDS-PAGE and Western blot. An ELISA was established, showing a coincidence rate of 83.52% compared with HEV ELISA Kit (Wantai, China). 820 swine serum samples from 3 different regions in China from 2001 to 2005 were tested by ELISA showing that anti-HEV IgG were 439 of 820 pigs (53.54%).

Discussion
We report here the first expression of ORF2 C-terminal region (367-671aa) from a Chinese strain of swine HEV using pET expression system. The fusion protein possessing most of antigenic epitopes of ORF2 as well as the neutralization epitopes, accumulated as inclusion bodies in vitro. The fusion protein could be identified by swine or human HE positive serum by western blot, indicating that it has immunological cross reaction with HEV from human origin at protein level. It is extremely necessary to strengthen sanitary measures to prevent HE in pig herds in China.