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-cultured 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
**Introduction**

Porcine Pleuropneumonia (PP), a disease caused by *Actinobacillus pleuropneumoniae* (APP), has a great economic importance for the swine industry. Two biotypes and 15 serotypes of APP have been described. They have a different virulence and not all of them are considered to be pathogenic. APP produces proteinaceous cytotoxins, ApxI, ApxII, ApxIII, and ApxIV. ApxIV is expressed by all 15 serotypes only after infection of pigs, but not in vitro conditions (Schaller et al., 1999). Other porcine Pasteurellaceae do not produce ApxIV, so it is specific to the species of APP (Frey and Kuhnert, 2002). At the institute of Veterinary Bacteriology, University of Berne, in cooperation with Bommeli Diagnostics, Liebefeld Switzerland, a recombinant ApxIV ELISA for serodiagnosis of APP was developed. A prevalidation study showed a specificity of 100% and a sensitivity of 93.8% using sera from proven infected herds and specific pathogen free (SPF) herds, that are free of APP. (Dreyfus et al. 2004).

Staeger (1993) reported in Switzerland the presence of serotypes 2, 3, 7, 9, 10 and 12. Because of its importance and the diagnostic methods mainly serotype 2 was controlled. Serotype 9 always had a very deep prevalence. The seroprevalence of the serotypes 3, 7 and 12 ranged from 19% to 26% of the tested herds, 4% of serotype 10 was found (Staeger, 1993). A serological investigation in 1999 (Schwein 99) showed the same data. Since 1995 in Switzerland PP and Enzootic Pneumonia (*M. hyopneumoniae*) are classified as “diseases to be controlled” in the Federal Ordinance of Epizootics. In 2004 a national eradication programme was successfully completed. At present clinical outbreaks of PP occur rarely in Switzerland, nevertheless serotype 7 and/or 12 seem to be emerging (Dreyfus et al., 2004).

The aim of this study is to achieve actual data concerning the seroprevalence of APP and to validate the ApxIV ELISA under field conditions, especially for the diagnosis of latent infected breeding-herds without clinical signs, and to achieve more information about the role of high-breeding herds (herd book farms) for the spread of the infectious agent.

Materials and Methods

Till now 1495 sera from pigs at different age were tested with the CHEKIT APP ApxIV (Idexx). The blood samples originate from totally 67 farms: 21 high-breeding units, 33 multiplier units and 13 fattening units; 10 or 20 samples per each unit depending on the number of animals kept. For each unit a Status APP-free or APP-infected is defined, based on data existing from these farms, such as results of bacteriological analysis of tonsils and lungs, results of serology for serotype 2 routinely performed in high-breeding farms and data concerning animal intercourse.

The status of each unit is compared with the results of the ApxIV ELISA. In two APP-infected herds sera were taken from one to six week old piglets per each week of age 10 samples, each 10 samples were taken from 2, 3 and 5 months old pigs, 10 samples from 9 to 11 months old pigs, and 10 samples from adult sows to show the correlation of antibody-titre to the age of pigs (herd profile). The same procedure was done in one SPF-herd.

**Results**

In the herd profile from the two APP-infected herds piglets showed high colostal antibody-titres, animals at an age from 2 to 11 months had antibody-titres under the cut-off, whereas the adult animals had positive titres. All samples from the SPF herd showed results under the cut-off. (Fig.1) Eight of 21 high-breeding units were positive and 13 negative. Twenty-seven of the 33 multiplier units were positive, only 6 were negative. Nine of 13 fattening units were positive and 4 were negative.

![Herd profile](image)

**Figure 1** Herd profile (two APP-infected and one SPF herd)

**Conclusions:** Using the ApxIV ELISA the seroprevalence of APP in Switzerland is about 80% in multiplier herds and about 40% in high-breeding herds which underlines their role in the spread of the infectious agent. Samples from animals at the age from 8 weeks to 11 months are not suitable for the diagnosis of latent infected herds. The results show that the ApxIV ELISA is a valuable tool for the diagnosis of latent infected herds.

**References**