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
STUDY OF INFECTION AND TRANSMISSION CAPACITY OF THE PPRS VIRUS IN EXPERIMENTALLY INFECTED ANIMALS WITH THE CHILEAN ISOLATE: PRELIMINARY RESULTS

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Introduction
Porcine Reproductive and Respiratory Syndrome (PRRS) is considered one of the most important diseases in swine production today, being responsible for important economic losses to the swine industry. The disease is widely distributed world-wide, having been first diagnosed in Chile in the early 2000, through routine governmental surveillance. At the present time, with a control and eradication program in place, it is necessary to understand some of the biological characteristics of the Chilean isolate such as, main route of and length of phase of excretion, as well as its transmissibility to susceptible animals.

Materials and Method
Thirty pigs, divide en six groups of five animals each were used. One group (G1) was infected intranasally and intramuscularly (2 and 1 mL respectively, 10^5.4 TCD50) with the Chilean isolate, and blood samples for whole blood examination, serology (ELISA, IDEXX®), RT-PCR and viral isolation were collected at 0, 3, 7, 11, 15, 19, 23, 27, 31 and 35 dpi. Other four groups (G2, G3, G4, G5) of animals of the same age, were used as a susceptible (sentinel) animal, being in contact with G1 between 3 to 7, 10 to 14, 17 to 21 and 24 to 28 dpi respectively. After this period, each group was kept for 7 days in a different isolation unit. Blood samples were collected at 0, 5 and 12 days post contact (dpc) for whole blood examination, ELISA, RT-PCR and viral isolation. The last group (G6) was used as a negative control, maintained in a different isolation unit, and blood samples were collected at the same time periods and for the same length than G1. Finally, animals from contact groups were sacrificed at 12 dpc and animals from G1 and G6 at 35 dpi, obtaining samples of nasal turbinate, tonsil, submandibular lymph node, lung and spleen for immunohistochemistry (IHC).

Results and Discussion
All pigs from G6 (negative control) were negative by ELISA, RT-PCR and viral isolation from all blood samples. The G1 pigs presented fever 3 and 4 dpi, although there were no statistical differences in hematological values between these principals and the controls. Seroconversion was observed in this group from 15 dpi, but in 3 pigs from G2, 1 pig from G3 and 2 pigs from G4 at 12 dpc. None of the pigs from G5 (in contact between 24 and 28 dpi) seroconverted. The virus was detected in blood by RT-PCR in inoculated pigs (G1) from 3 dpi, all of them were positive for PRRSV RNA between 7 to 15 dpi and negative between 19 to 27 dpi, although one animal was positive at 31 dpi. On the other hand, virus was detected by RT-PCR in 40% of the animals of G2 and G4 from 5 dpc, 40% of G3 at 12 dpc and 60% of G5 at 5 dpc.

The virus was isolated from 20% of the animals of group G1 at 3 dpi and 100% of them were positives between 7 to 19 dpi, after which period a decline in virus isolation was observed (80% positives at 23 dpi and 0% after that). On the other hand, virus isolation was possible only in animals from G2 and G3 at 5 and 12 dpc. At necropsy, the inoculated pigs (G1) presented periorcular edema, enlarged lymph node and lung lesions. All pigs of the contact groups also presented signs of enlarged lymph nodes. Histopathologically, 100% of G1 pigs presented interstitial pneumonia with septal infiltration of mononuclear cells and rhinitis with macrophages and lymphocytes infiltration. The injuries observed in inoculated pigs have been clearly coincidental with those described in the literature for pigs infected with U.S. serotype PRRS virus (1). The presence of these lesions also in contact group animals indicates that the virus was efficiently transmitted during the days of contact with G1 pigs, developing an diverse degree infection dependent of the disease phase presented by the G1 pigs at time of the contact. On the other hand, the G1 pigs had a weaker PRRSV positive staining reaction by IHC in lung and lymph organs than the contact groups. This fact would indicate that at 35 dpi, the virus has been almost completely removed from lungs, and tends to stay in lymph tissue, although in studies with another North American strain, the viral clearance did not occur until several months post inoculation (2). In the contact pigs, the greater immunoreactions in the first groups would indicate that although the viral load in inoculated pigs seemed to be low, these are able to excrete and to transmit infectious virus to susceptible pigs. Nevertheless, the infection appears not being simultaneous in all animals as showed by RT-PCR and isolation results. Additionally, the results suggest that the viremia could be shorter (23 days approximately) than the observed with some other US type PRRSV isolates, in which cases could last until 6 weeks (3).

When all the results are available and analyzed, we expect this project will also answer the question regarding to the excretion peak and the main route of excretion and transmission of the Chilean isolated both valuable informations for an epidemiological assessment of the Chilean PRRSV eradication campaign.

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References