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Development of immune response and decay of maternal immunity after vaccination with C-strain

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The most widely used vaccine towards CSFV is the C strain, modified live vaccine. The aims of the present study were to evaluate the humoral immune response after vaccination with C-strain and the impact of maternal immunity in piglets obtained from C-strain vaccinated sows.

Two experiments were conducted.

Experiment A involved 12, 5-weeks-piglets vaccinated intramuscularly. Antibodies were measured twice weekly up to 28 days post vaccination.

Experiment B followed the decay of maternal immunity in piglets obtained from four sows vaccinated intramuscularly at 86 days of gestation. The serological response in the sows was measured 14 days post vaccination, at farrowing, two and four weeks post farrowing. In the outcome piglets the antibody level was measured weekly up to 35 days of age.

Serum samples were tested by neutralization and by a routine blocking CSFV ELISA, respectively. The results obtained with the first experiment showed that all pigs seroconverted two weeks post vaccination. The antibody level increased during the first four weeks post vaccination. Also the four vaccinated sows were antibody positive two weeks post vaccination. Negative precolostral samples from the pigs showed that that transplacental transmission of antibodies had not occurred. After uptake of colostrums, however, the piglets seroconverted. The duration of maternal immunity in pigs obtained from the vaccinated sows is in progress and the results will be presented at the Symposium.

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