Effect of cyclosporine A on the response of pigs to experimental *rotavirus* and *coronavirus* T.G.E. infections

S. BERNARD *, I. LANTIER *, E. BOTTREAU *, J.M. AYNAUD *,
C. LA BONNARDIERE **, C. RICOUR ***, F. ARNAUD-BATHANDIER ***

* *I.N.R.A., Laboratoire de Pathologie Porcine, Nouzilly, 37380 Monnaie*

** *I.N.R.A., Station de Virologie et d'Immunologie, 78850 Thiverval-Grignon*

*** *Assistance Publique, Hôpital des Enfants Malades, Service de Gastroentérologie Pédiatrique et de Nutrition, 149, rue de Sèvres, 75730 Paris*

Because of its immunodepressive activity and its low toxicity, cyclosporine A is successfully used in human medicine to inhibit the rejection of organ transplants.

Immunodepressive agents often stimulate the development of viral or bacterial infections.

Prior to an intestinal grafting in human infant, 34 pigs of 25 kg were used as an experimental model to determine whether the daily oral administration of cyclosporine could modify the response of the organism to an experimental *rotavirus* and *coronavirus* T.G.E. infection. There was no significant difference between treated and untreated animals as regards their clinical response and the humoral immune reaction to these two enteropathogenic viruses.

Oral immunization of sows against transmissible gastroenteritis using the T.G.E.-*coronavirus* strain 188-SG

J.M. AYNAUD *, E. BOTTREAU *, A. BRUN **, T.D. NGUYEN ***,
S. BERNARD *, P. BERNARDET *, P. VANNIER ****, H. SALMON *

* *I.N.R.A., Laboratoire de Pathologie Porcine, Nouzilly, 37380 Monnaie*

** *Rhône Mérieux, Laboratoire I.F.F.A., 254, rue Marcel-Mérieux, 69342 Lyon Cedex 07*

*** *Institut National de Recherches Vétérinaires, Bach Mai, Hanoi (Vietnam)*

**** *Ministère de l'Agriculture, Station de Pathologie Porcine, 22440 Ploufragan*

Strain 188-SG of T.G.E.-*coronavirus* isolated in our laboratory and whose properties were previously described was used as a live virus vaccine to immunize seronegative pregnant sows. Sows were orally inoculated 6-7 weeks before farrowing according to a procedure developed in our laboratory. A booster injection was done IM 7-15 days before farrowing.

Immunity was thereafter tested using two methods :

— determination of the level of passive protection conferred to suckling piglets against a virulent challenge exposure 4-8 days after farrowing ;

— determination and titration of neutrilizing anti T.G.E. antibodies in the sow serum and milk.