

**Transmissible gastroenteritis in pigs :
selection in tissue culture (RP.TG cells) of TGE virus strains resistant
at pH 2.0 to digestive enzymes and attenuated for the new-born piglet**

J.M. AYNAUD *, E. BOTTREAU *, A. BRUN **, P. VANNIER ***

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

** Rhône-Mérieux, 254, rue Marcel-Mérieux, 69007 Lyon

*** Ministère de l'Agriculture, Direction de la Qualité,
Station de Pathologie porcine, 22440 Ploufragan
France

In order to improve oral immunization of the pregnant sow against transmissible gastroenteritis, two strains of TGE coronavirus were selected in tissue culture (RP.TG cells) by means of a large number of survivor selection cycles in stomach juice (pH 1.5-2.5) collected from adult pigs. These two strains are characterized as follows in comparison with the initial D.52 strain or with the Purdue 115 strain :

1. Stability at pH 2.0.
2. Higher resistance to digestive enzymes.
3. Small plaques only in ST cells.
4. Loss of virulence for the new-born piglet.
5. Immunogenicity (neutralizing antibody) in the new-born piglet.

Taking these properties into account, further experiments should be made to evaluate the capacity of these new virus strains to induce a lactogenic immunity against TGE in the sow, with a protective effect on the sucking piglet.

**Transmissible gastroenteritis in pigs :
use of an inactivated oil emulsion vaccine for boosting the immunity
in previously infected sows**

J.M. AYNAUD *, P. VANNIER **, L. MARTAIN ***, R. CARIOLET **

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

** Ministère de l'Agriculture, Direction de la Qualité,
Station de Pathologie porcine, 22440 Ploufragan

*** Laboratoires C.O.G.L.A., 23-25, avenue Morane-Saulnier,
92360 Meudon-la-Forêt
France

An oil emulsion vaccine against TGE was prepared using a virus suspension produced in tissue culture and inactivated by formaline. Intramuscular vaccinations of sows were performed in two herds (176 sows) which had been infected by TGE virus more than one year before.

Considering qualities of immunity following natural infection, the objective of the work was to try to give a new impetus to immunity in such herds using vaccination as a booster. After two vaccine injections the serological pattern of the herd was modified : the negative serological reaction disappeared, the proportion of highly positive serological reactions increased and a higher homogeneity was observed in the distribution of levels of neutralizing antibody reactions.