

HEALTHYPIGUT Workshop 1

Digestive physiology, microbiology and immunology basis for gut function and dysfunction in pigs

Rostock – Warnemünde, Germany, September 12th 2003

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FOREWORD

Considerable efforts have been devoted to the understanding of infectious diseases, including the biology of pathogens, host resistance and therapy in animals and humans. By contrast, very little is known of the prevention of diseases through dietary and rearing management because problems have been overcome over the last decades by adding sub-therapeutic doses of antibiotics and elevated levels of zinc and copper in feed. This prophylaxis is highly effective in newly weaned piglets that are particularly prone to enteric infection. However, a total ban on in-feed antibiotics is planned in the European Union for 2006. This raises the problem of the preventive control of gut disturbances and diarrhoea during so-called critical rearing periods such as weaning in piglets.

This concern has led INRA, France, to coordinate an EU project called HEALTHY-PIGUT on this theme (2001–2004). This project brings together nine research laboratories and a research & development institute from five countries (France, Germany, Italy, the Netherlands and UK) involved in the disciplines of gut physiology, microbiology and immunology in pigs. The main objective of the project is to indicate the physiology, microbiology and immunology basis for gut disorders favouring post-weaning disorders. These studies will contribute to defining gut health indicators relevant to a more objective evaluation of the efficacy of alternative solutions to in-feed antibiotics in preserving gut health in weaned piglets. The first HEALTHYPIGUT workshop was aimed at presenting and discussing recent progress made in the understanding of such changes in gut function and dysfunction.

At the occasion of the publication of the main reports and communications presented at this workshop, it is my pleasure to thank all the contributors, participants and local organisers of this event. I also acknowledge, on behalf of the HEALTHYPIGUT partners, the European Union for financially supporting this project (No. QLK3-CT-2000-00522).

Jean-Paul Lallès
Project coordinator

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