

# Microbial and serological effects of vaccination of sows and suckling piglets with an attenuated live *Salmonella* vaccine

Uwe Roesler<sup>1,2\*</sup>

Michael Stief<sup>1,2</sup>, Thomas Lindner<sup>3</sup>, Uwe Truyen<sup>2</sup> and Hans-Joachim Selbitz<sup>3</sup>

<sup>1</sup>Institute of Animal Hygiene and Environmental Health, Freie Universität Berlin, Berlin, Germany;

<sup>2</sup>Institute of Animal Hygiene and Veterinary Public Health, University Leipzig, Leipzig, Germany;

<sup>3</sup>IDT Biologika GmbH, Dessau-Roßlau, Germany

\*Philippsstrasse 13, 10115 Berlin, Germany

e-mail: roesler.uwe@vetmed.fu-berlin.de; fax: +49 30 2093 6324

## Abstract

The aim of the study was to investigate the use of the orally applied attenuated *Salmonella* vaccine Salmoporc® (which is already licensed for runners and fattening pigs) in three days old suckling piglets. In particular, the tolerance, colonisation kinetics, humoral immune response, protection against challenge infection with *Salmonella* Typhimurium DT104 and a possible interference of maternal antibodies on the success of vaccination have been investigated. The results of the study show that oral application of Salmoporc® to three-day-old suckling piglets in combination with the oral vaccination at the time of weaning is very well tolerated and irrespective of the immune status of the sows also suitable to induce a protective immune response. This immune response is able to prevent clinical symptoms of salmonellosis and significantly reduces the colonization of internal organs and the excretion of the *S. Typhimurium* DT104 challenge strain in faeces. The results further show, that the vaccination of three days old piglets with Salmoporc® has no effect on the results of serological tests within the frame of *Salmonella*-monitoring.