

Enterococci as causative agent of diarrhoea in newborn piglets



Piglet diarrhoea or „scour“ is still a major problem in many pig herds. It is often a multifactorial process involving several different pathogens.

In addition to rotaviruses, coronaviruses and enterotoxigenic *E. coli* (“ETEC”), an infection with enterococci can also cause diarrhoea in suckling piglets

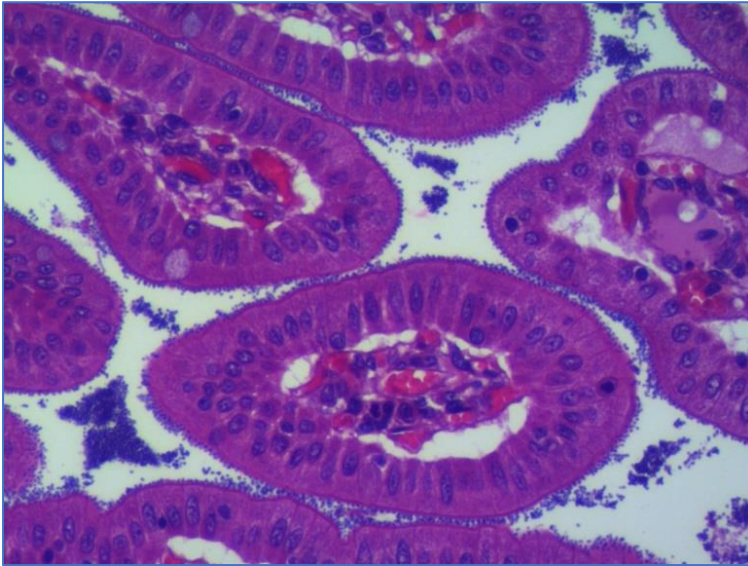
In particular, *Enterococcus (E.) hirae*, *E. durans* and *E. villorum* are described in the literature as causative agents of piglet diarrhoea. In a recent study¹ on suckling piglet diarrhoea, the presence of enterotoxigenic *E. coli* (ETEC), *Cl. perfringens* type A (CPA), *E. hirae* and rotaviruses were examined in a French veterinary practice in 106 piglets suffering from diarrhea. The most frequently detected pathogens were CPA (61.3%), followed by *E. hirae* (43.4%), rotavirus type A (38.7%), rotavirus type C (11.3%) and ETEC (3.8%). Only *E. hirae* and rotaviruses were associated with relevant histological findings in the small intestine in this study.

In order to check the relevance of enterococci in our sample submissions, we analyzed submissions at IVD GmbH for the years 2022, 2023 and the first half of the year 2024 with a medical history of diarrhoea in suckling piglets. Included in our analysis were cases in which, as part of routine bacteriological diagnostics, we looked specifically for enterococci, as well as cases in which the detection of enterococci was an “incidental finding”.

For species identification of *E. hirae* and *E. durans* PCR is used at IVD GmbH. *E. hirae* was detected in 25% of the 273 submissions analyzed. *E. durans*, however, could not be detected in the sample material examined and neither could *E. villorum*.

Due to the descriptions in the literature, we now include specific diagnostics for enterococci in our standard cultural examination for diarrhoea in suckling piglets as well as species identification of *E. hirae*, *E. durans* and *E. villorum*. This applies to the test “Examination by bacteriological culture in

general” as far as samples from suckling piglets are involved and for the diagnostic profile “Suckling piglet Diarrhoea”. The price for the cultural examination or diagnostic profile remains unchanged. Currently we are offering the PCR for the identification of colonies as *E. hirae*, *E. durans* and *E. villorum* at an introductory price of €25.00 per isolate (until March 31, 2025).



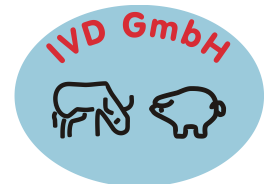
Picture: Histological evidence of *E. hirae* in the small intestine. Coccoid bacteria can be seen on the epithelial border and in the lumen

The bacteriology team will be happy to answer any questions you may have about enterococci:

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Reference:

¹Boulbria, G., Teixeira Costa, C., Amenna-Bernard, N., Labrut, S., Normand, V., Nicolazo, T., Chocteau F., Chevance C., Jeusselin J., Brissonnier M., Lebret, A. (2023). Microbiological Findings and Associated Histopathological Lesions in Neonatal Diarrhoea Cases between 2020 and 2022 in a French Veterinary Pig Practice. *Veterinary Sciences*, 10(4), 304.

Picture of piglet: pixabay: pig-ge1211fc52_1920; histological picture: IVD GmbH