



## VIRAL DISEASES

VVD-042

### FIRST DETECTION OF PORCINE PARVOVIRUS 7 IN POLAND

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#### Introduction

In the last years several novel parvoviruses (PPV) were discovered in pigs worldwide. The most recently discovered porcine parvovirus species is PPV7, which was reported in USA and China to date.

The aim of the study was to present the first evidence of PPV7 in Polish pigs.

#### Material&Methods

The serum and fecal samples were collected from 14 farms, from pigs of different age. Ten serum samples and fecal swabs were obtained from several age groups and were pooled by 5 prior to DNA extraction with QIAamp DNA Mini Kit or QIAamp cador Pathogen Mini Kit (Qiagen). The real-time PCR was performed according to Palinski et al. (2016). ORF1 (NS1) of PPV7 from several positive samples was sequenced by Sanger method.

#### Results

PPV7 DNA was detected in fecal swabs from all examined farms. The virus was detected in serum of pigs from 9 farms. Overall, PPV7 was more prevalent in fecal pools (39,0%) than in serum pools (19,6%). No positive results were obtained from 3-6-week-old pigs. In pigs of 7 weeks of age and older the virus was detected in 26,1% serum pools and 51,4% fecal pools. The nucleotide identity of partial NS1 sequences from 5 farms ranged from 92% to 96%. Polish sequences were 92%-93% identical to the sequences from USA and China.

#### Discussion&Conclusion

Our results are the first evidence of PPV7 infections in Europe. PPV7 is likely common in Polish pigs and exhibits surprisingly high genetic diversity. PCR profiles of PPV7 circulation suggest that passive immunity plays protective role. The influence of PPV7 on pigs health remains unknown and requires future investigation. In order to perform PPV7 surveillance in pig farms testing feces with real-time PCR is recommended.

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