

TITLE

**DISCOVERING THE DOOR OPENER FOR PRRS IN TWO NEGATIVE FARMS WITH BIOPORTAL:
CASE REPORT**

Iván Hernández-Caravaca¹, Sebastián Figueras-Gourgues¹, Victor Rodriguez-Vega¹, Eugenio Sánchez Tarifa¹, Gloria Abella¹

¹ *Boehringer Ingelheim Animal Health España*

CONTENT

Background and Objectives

During the last 8 years, Boehringer Ingelheim Vetmedica, Inc. in collaboration with UC Davis -and other institutions like Iowa State University- have improved the program Disease Bioportal to aligned sequences of PRRSV. The aims of this work is monitoring new isolates in company level by using Bioportal and try to identify the route that PRRS used to get into the farms.

Material & Methods

Two integrated negative farms (A and B) were become positive in early 2018 detecting PRRS virus by PCR. These two viruses were sequenced and introduced in Bioportal to be compared with the company database. The Disease BioPortal software (<http://bioportal.ucdavis.edu/>) was used to generate the phylogenetic trees and evaluated the genetic distances between the sequences. To determine that a sequence is different to other all the sequences were compared assuming the threshold of 2 %. Very restricted biosecurity rules were applied by the integrator company to avoid the cross contamination of the farms

Results

Comparing farm A sequence with the database of the company we obtained a 0,61% heterology with other isolate within this integrator's database. This isolate correspond to another positive farm owned by the same owner of the farm A in a different location but the same area.

When farm B sequence was aligned we found as in the previous case, that the isolate was related (1,8% heterology) to other farm owned by the same owner of farm B.

Discussion & Conclusion

These results suggest, a biosecurity violation was committed by the owners of these two negatives farms, becoming both positives with the same viruses of their positive farms.

Bioportal was able to analyze the strains within a farm and company level as in this study is showed, clarifying same of the questions on how the new isolates entered to the farms.