

## Research project IZS VE 21/12

**Study of genetic and phenotypic characteristics of recent APMVs-1 isolated from pigeons and doves in Italy and evaluation of the efficacy of oil-emulsion vaccines against contemporary virulent APMVs-1 circulating in the Italian Columbiformes population**

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Over the last few years the National Reference Laboratory for Avian influenza and Newcastle Disease have isolated, and pathotyped hundreds of APMVs-1 originating from wild and domestic Columbiformes. These viruses will be used in the present study for the following purposes:

- to explore the genetic characteristics, as well as the spatial, epidemiological and evolutionary dynamics, of the APMVs-1 identified in the Italian Columbiformes population since 1999;
- to identify viral genetic features that might be associated with variation in the pathogenic potential of APMVs-1 isolated from pigeons and doves in Italy;
- to evaluate the use of in vitro test for the measurement of the pathogenicity of pigeon and dove APMVs-1 isolates and eventually limiting the use of the in vivo pathogenicity (ICPI) test;
- to evaluate the efficacy of experimental homologous and heterologous monovalent oil-emulsion vaccines against two contemporary virulent APMVs-1 circulating in wild and domestic Italian Columbiformes.