

## Research program IZS VE 15/15

Study on the role of *Mycoplasma hyorhinis* in the Porcine Respiratory Disease Complex in two different production systems in North Eastern part of Italy

Project coordinator: Denis Vio

Respiratory disease in swine leads to significant economic losses; its polymicrobial and polyfactorial nature makes the diagnosis and therapeutic interventions complex. The majority of the infections involved in respiratory disease has a viral and bacterial etiology. Among bacteria, *Mycoplasma spp.* play an important role in the porcine respiratory disease complex.

*Mycoplasma hyorhinis* can be present both in normal and pneumonic lungs; recently it has emerged as an important cause of systemic disease in nursery pigs causing polyserositis and arthritis. The role of *Mycoplasma hyorhinis* as a pathogen has been neglected for long time since it has been detected both in diseased and healthy pigs; however recent reports indicate the occurrence of *Mycoplasma hyorhinis* as a pathogen is increasing. They also show a higher resistance of this bacterium to antimicrobials compared to other mycoplasmas. To date, little is known about the epidemiology of *Mycoplasma hyorhinis* infections. This project aims at investigating the prevalence of *Mycoplasma hyorhinis* in swine farms of North Eastern part of Italy, also implementing innovative diagnostic tools for its detection, and its role as a causative agent of respiratory disease taking into account other infectious agents as well. Additionally, the antimicrobial susceptibility of strains isolated in the study will be investigated to generate data on Mycoplasma infections in swine.