

## Research project IZS VE 16/11

**Evaluation of different molecular methods to characterize *Salmonella* and *Yersinia enterocolitica* from vegetables and pig-pork samples**

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Microbial subtyping represents an essential tool for a clear understanding of foodborne pathogens epidemiology and for attributing infectious diseases, including gastroenteritis. The microbial subtyping approach involves the characterization of isolates by using different phenotypic and genotypic subtyping methods. Thus, research laboratories committed to investigating foodborne epidemiology must establish comprehensive, reproducible and highly discriminative subtyping systems for most pathogens. The IZSve laboratories have been using the PFGE method as molecular subtyping tool for the characterization of foodborne pathogens (e.g. *Salmonella* and *Campylobacter*).

PFGE is recognized as the gold standard for molecular subtyping, however this method presents several drawbacks and for some specific bacteria and serotypes its discriminatory power is rather limited. Although in most cases PFGE remains highly attractive for molecular subtyping, other methods seem to have a bright future for molecular typing. The aim of the project is to set up additional subtyping methods to be used for characterization of two of the main foodborne pathogens: *Salmonella* and *Yersinia enterocolitica*.