

Uncommon Mycoplasma species in dairy herds with signs of mastitis. Results of a milk quality control program.

Isabel Castro¹, Ricardo Bexiga², Dulce Dominues¹, and Manuel Rodrigues^{1*}

¹ Biopremier S.A., Campus da Faculdade de Ciências da Univ. Lisboa, 1749-016 Lisbon, Portugal. mjgrodrigues@gmail.com

² Interdisciplinary Centre of Research in Animal Health (CIISA), Faculdade de Medicina Veterinária, Universidade de Lisboa, Lisbon, 1300-477 Lisbon, Portugal.
ricardobexiga@fmv.ulisboa.pt

Short title: A Mycoplasma mastitis survey in dairy herds

* Correspondence: Manuel Rodrigues

Biopremier, S.A.

TecLabs

Campus da Faculdade de Ciências da Universidade de Lisboa

Portugal

phone +351 969 368 695

E-mail: mjgrodrigues@gmail.com

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Summary

This Research Communication describes the results of a milk quality control program, focused on *Mycoplasma* species, in dairy herds experiencing symptoms of Mastitis. Bovine mastitis due to *Mycoplasma* spp. infection is a worldwide important problem. Although *Mycoplasma bovis* is the most important species, other species of the *Mycoplasma* genus are important causal agents, but usually under-diagnosed. Between 2014 and 2016, 9 commercial dairy herds, experiencing a high prevalence of both clinical and subclinical mastitis, were monitored as part of a milk quality program. Bulk tank and individual milk samples were analyzed for the presence of mastitis-causing *Mycoplasma*. Positive detections were obtained in 44% of the dairy herds and six *Mycoplasma* species were identified. *M. bovis* was the most detected species, but some of the other species were rarely reported or are reported for the first time in Southern Europe, such as: *M. californicum* and *M. canadense*. The detection of *M. canadense* in our study is suggestive of its prevalence in several regions in Portugal, since it has been previously detected in Northwestern Portugal in 2013, but no other evidence of this agent in Europe has been reported. Although *M. californicum* presence in Europe has been previously described, this is the first report of detection in Southern Europe. These facts should be henceforth considered in Europe, when determining *Mycoplasma* species affecting dairy cattle. In two unrelated herds, positive detections for Mycoplasmatales, revealed 16S rDNA sequences suggesting a new Mycoplasmatales genus, phylogenetically related with DNA sequences reported in 2015 in the microbiome of abomasum, in bovines from Austria. The pathogenic role of the bacteria belonging to this CTU (Candidate taxonomic unit) is yet unclear.