

## **Molecular typing of *Mycobacterium avium* subsp. *paratuberculosis* isolated of dairy goats from Zona da Mata of Minas Gerais**

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### **Abstract**

The participation of dairy goat in the Brazilian agricultural scenario has increased and has consolidated as a profitable activity. Minas Gerais is the main producer of goat's milk in the Southeast in the mesoregion Zona da Mata, composed of seven micro-regions retains approximately 20% of the herd. However, mainly the economic and health orders barriers difficult this activity. The paratuberculosis is a chronic granulomatous intestinal illness caused by *Mycobacterium avium* subsp. *paratuberculosis* (Map), which affects ruminants and is transmitted primarily by ingesting food or water contaminated. It is a disease often neglected in herds and still has an aggravating because MAP can associated with Crohn's disease, thus a public health problem too. The objective was to identify and typing isolates of MAP in dairy goats from Zona da Mata of Minas Gerais. Ten properties were selected which represent the Zona da Mata distributed in its seven micro-regions. Samples of feces and milk of 467 animals were sampled. The samples were decontaminated and placed in solution with antimicrobial and then, they were inoculated in HEYM media, with and without mycobactin J, and finally, incubated at 37°C for a minimum of 16 weeks. In addition, samples of milk and the suspected colonies were subjected to IS900-PCR and the positive results were sequenced. For the typing of isolates was performed the PCR-REA technique using the IS1311-PCR fragments. The enzymes *MseI* e *Hinf* were used to perform the enzymatic restriction analysis. Eleven animals (2.36%) were considered positive in microbiological and molecular analysis in four (40%) properties. Among these, it observed the MAP growth in two samples from feces. All samples were characterized as type C (cattle). Through this study was found that MAP is present in goat herds from Zona da Mata of Minas Gerais and the circulating strain is type C (cattle). Possibly the bovine contributes in maintaining this strain in goat herds.

**Keywords:** Paratuberculosis, ruminant, milk, molecular typing

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