

Differential Antibrucella Activity of Bovine and Murine Macrophages

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Abstract : Brucella abortus is an intracellular pathogen affecting macrophages. Macrophages release some components such as lysozymes (LZ), reactive oxygen species (ROS) and reactive nitrite intermediates (RNI) which are important tools against intracellular survival of Brucella. The antibrucella activity of bovine and murine macrophages was compared following stimulation with Brucella abortus lipopolysaccharides. Our results revealed that murine macrophages were ten times more potent to produce antibrucella components than bovine macrophages. The differential production of these components explained the differential Brucella killing ability of these species that was measured in terms of intramacrophagic survival of Brucella in murine and bovine macrophages.

Keywords : bovine macrophages, Brucella abortus, cell stimulation, cytokines, Murine macrophages

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