

## Profile of Serological Response of Equids Naturally Infected with *Burkholderia mallei*

**Authors :** Iahtasham Khan, Vania Lucia De Assis Santana, Marcilia Maria Alves De Souza, Mabel Hanna Vance Harrop, Fernando Leandro Dos Santos, Cecília Maria Souza Leão E. Silva, Pedro Paulo Silveira, Marcelo Brasil, Marcus Vinícius, Hélio Cordeiro Manso Filho, Muhammad Younus, Aman Ullah Khan

**Abstract :** Glanders ranks high on clinical lists in some regions of Brazil as a cause of respiratory and lymphatic disease in equids. Glanders is caused by *Burkholderia mallei* (*B. mallei*) Gram-negative bacterium. *B. mallei* was first biological agent used in World War I in 20th century. The complement fixation test (CFT) is a serodiagnostic tool prescribed by the World Organization for Animal Health (OIE) for the diagnosis of glanders in the international trade of equids. The aim of the present study was to monitor the serological responses in equines naturally infected with *B. mallei* using the CFT. A total of 574 equids were tested with CFT, 30 days apart in a total of 12 samplings. One hundred thirty-four sera tested negative in all samplings; 192 sera tested positive in one sampling and 125 sera tested positive in two or more samplings. Remaining 123 samples showed uncertain results. Thus, CFT results can vary over a period of time. These variations could be the consequence of the effects of the natural immune response in each animal. The findings of the present study demonstrate difficulties regarding the simultaneous implementation of CFT and test and slaughter policies to eradicate glanders. Another constraint to control this disease is the presence of carrier/transitory CFT-negative animals, which are a potential source of disease in glanders-free areas. Serodiagnostic tests of higher sensitivity and specificity like immunoblot should be implemented to achieve success in the eradication of glanders.

**Keywords :** glanders, equids, horses, immunological, mules

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