

**Title: IMMUNOBLOTTING REACTIVITY ANALYSIS OF SERUM SAMPLES FROM RATS OF ANIMAL FACILITIES IN THE STATE OF RIO DE JANEIRO**

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**Abstract:**

*Mycoplasma pulmonis* is the agent of murine respiratory mycoplasmosis and causes severe respiratory and reproductive problems, compromising the breeding of laboratory rodents and interfering with experimental results. Besides, this microorganism is an important agent of cell culture contamination, damaging experiments and the development of biological products that use this material. The Federation of European Laboratory Animal Science Associations (FELASA) recommends that laboratory animals must be monitored every four months through ELISA for the occurrence of this agent, however little is known about the antigenic profile of sera from *M. pulmonis* positive rats. For this reason, the goal of this study was to evaluate the immunoreactivity of sera from rats with positive and negative results for *M. pulmonis* in isolation and/or specific PCR. Serum samples from 78 animals obtained from eight animal facilities in the state of Rio de Janeiro were analyzed for reactivity of anti *M. pulmonis* antibodies by immunoblotting. Of the 78 sera tested, 25.64% (20/78) were reactive, with strong immunobinding for the 24, 48 and 200 kDa protein bands, and 74,36 % (58/78) showed negative reactivity. Sera from negative animals reacted with four nonspecific protein bands with molecular weight ranging between 68 and 92 kDa. We did not find significant differences in the pattern of recognition of protein bands by positive sera. Immunoreactivity in negative samples has been regarded as nonspecific, probably due to cross reactivity with other biological agents. The ability to recognize multiple protein bands may be a characteristic of *M. pulmonis*, once that it has not been found in other mycoplasma species. The use of immunoblotting did not differentiate the antigenic profile in the animals' sera, being necessary the use of other techniques in future studies.

**Key Words:** Murine Respiratory Mycoplasmosis, immunoblotting, antigen profile, *M. pulmonis*

**Agência Fomento:** FAPERJ