

EXPRESSION AND IMMUNOLOGICAL CHARACTERIZATION OF  
RECOMBINANT *MYCOPLASMA HYOPNEUMONIAE* ANTIGENS AND THEIR  
POTENTIAL APPLICATION FOR SERODIAGNOSIS AND VACCINATION

Schuck<sup>1</sup>, D.C., Dias<sup>1</sup>, A. S., Dias<sup>1</sup>, L.D., Bittencourt, B.G.F., Ferreira<sup>1</sup>, H.B.,  
Zaha<sup>1</sup>, A.

Centro de Biotecnologia, Universidade Federal do Rio Grande do Sul, Porto  
Alegre, Brazil.

*Mycoplasma hyopneumoniae* is an important pathogen of pigs, being the causative agent of enzootic pneumonia. In the present study, we describe the production of several potential recombinant antigens using a cloning approach based on recombination in *E. coli*. The full-length, N-terminal or C-terminal coding DNA sequences were cloned into pGEX-4T3 vectors. The expression was induced by addition of IPTG and purification was performed by affinity chromatography. The antigenic characteristics of the different recombinant proteins and the mapping of portions containing the possible epitopes, were evaluated by immunological assays. The potential value for serodiagnosis was analyzed by ELISA with sera from different swines. Antisera against recombinant proteins were produced and tested in experiments of *M. hyopneumoniae* growth inhibition. Our preliminary results shows three different proteins with potential for utilization in serodiagnosis tests and two recombinant proteins able to elicit antibodies which inhibit *M. hyopneumoniae* growth. Our results indicate that these proteins could be further evaluated as candidates for vaccine and immunodiagnosis tests development.

Key Words: *Mycoplasma hyopneumoniae*, antigenic proteins, enzootic pneumonia.

Financial Support: CNPq, FAPERGS, Vallée S.A.