

Stimulation of the bronchus-associated lymphoid tissue of goats and its effect on in vitro colonization by *Pasteurella haemolytica*

ABSTRACT

Twenty goats of about 7 months of age were divided into five groups. The goats in groups 1 and 2 were exposed once, using an intranasal spray to 2 ml of an inoculum containing 10^6 colony-forming units/ml of living or dead *Pasteurella haemolytica* A2, respectively. The goats in groups 3 and 4 were similarly exposed twice at a 2-week interval. Group 5 was the untreated control. The number and size of the bronchus-associated lymphoid tissue (BALT) in goats exposed twice to either living or dead organisms were significantly ($p > 0.05$) increased compared with those exposed once and with the unexposed control. In vitro colonization by living *P. haemolytica* A2 onto the lung tissue in which the BALT had been stimulated by two exposures of either living or dead organisms was significantly ($p > 0.05$) reduced. The study indicates that stimulation of the respiratory mucosal immunity may prevent *P. haemolytica* A2 infection.

Keyword: bronchus, colonization, lymph gland, goat, *Pasteurella haemolytica*