

## **Effect of intranasal attenuated *Pasteurella multocida* B:2 on haemorrhagic septicaemia in calves.**

### **ABSTRACT**

This report describes the effect of vaccination with attenuated *P. multocida* B:2 on wild-type *P. multocida* B:2 infection in calves. Calves were given 5 ml intranasal 10<sup>7</sup> CFU/mL live attenuated *gdhA* derivative of *P. multocida* B:2. Untreated calves were then mingled with the vaccinated Group. Control untreated calves were kept separate. After 6 weeks, all calves were challenged intra-tracheally with 10<sup>7</sup> CFU/mL of live wild-type *P. multocida* B:2. At Post-Mortem none of the vaccinated or mingled calves had lesions whereas controls revealed pulmonary petechial haemorrhages with acute pneumonia patches with neutrophils. Both exposed and commingled calves showed significantly ( $p < 0.05$ ) higher levels of serum IgG. *P. multocida* B:2 were successfully isolated only from the control calves of Group 3. These findings suggest that intranasal exposures to live attenuated *P. multocida* B:2 prevented infection by wild-type *P. multocida* B:2 and may have protected susceptible calves.

**Keyword:** Intranasal; Attenuated *Pasteurella multocida* B:2; Infection.