

# SAFETY OF SUBCUTANEOUS ADMINISTRATION OF A NEW IMMUNE COMPLEX BASED VACCINE AGAINST INFECTIOUS BURSAL DISEASE IN SLOW-GROWING BROILER TYPE CHICKENS

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## INTRODUCTION

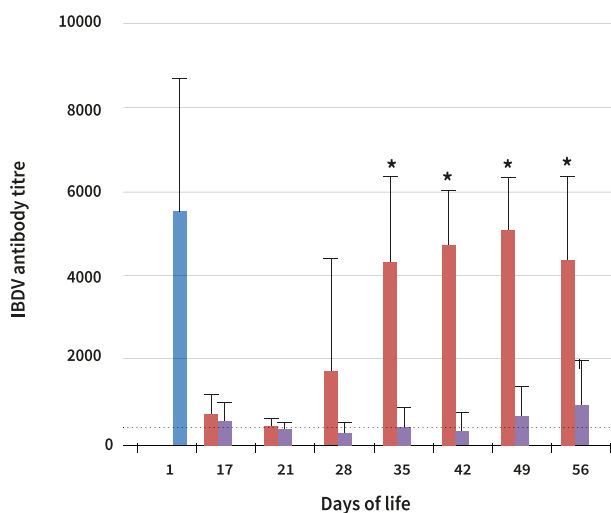
Slow-growing broiler breeds are generally considered more susceptible to adverse reactions when administered with immune complex based vaccines against IBD than conventional breeds. In particular, it is mentioned that these effects could even increase flock mortality. The objective of this study was to test experimentally the safety of a new immune complex based vaccine against IBDV when administered subcutaneously in slow-growing broilers in experimental conditions.

## MATERIALS & METHODS

Healthy day old chickens of 451 NI NG2 breed were randomly and separately allocated in two groups and vaccinated subcutaneously with either GUMBOHATCH® (n=41) at a ten-fold increased dose or PBS (n=42). Chickens were then monitored up to 56 days of life; moreover, the bursa of Fabricius was inspected weekly since 21 days.

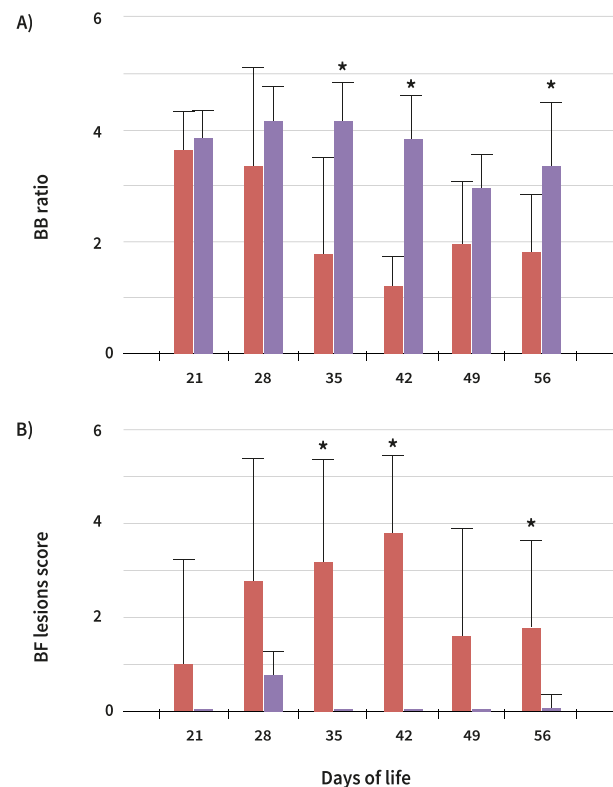
## RESULTS

Day old chickens showed IBDV specific maternal derived antibodies which were by-passed by vaccine and thus a specific active antibody response was detected from 28 days.



**Figure 1.** IBDV antibody response. Results are represented as average and standard deviation; GUMBOHATCH®: red bars; PBS: violet bars; Initial batch: blue bar. Mann-Whitney U test, \* p<0.05. The slashed line represent the cut-off value (396).

No clinical signs or mortality associated with IBD were observed. No differences in growth were observed between vaccinated and control group. Lesions normally associated with live attenuated IBDV vaccines as atrophy and lymphoid depletion were observed in the bursa of Fabricius of vaccinated group.



**Figure 2.** A) Bursa to body weight ratio. B) Lymphoid depletion score. Results are represented as average and standard deviation; GUMBOHATCH®: red bars; PBS: violet bars. Mann-Whitney U test, \* p<0.05.

## CONCLUSION

GUMBOHATCH® might be a suitable solution for slow-growing broiler breeds to prevent IBD; however, further studies are needed to confirm results in field conditions.