A COMPARATIVE STUDY OF THE EFFICACY OF DETACH® VERSUS ZINC OXIDE TO CONTROL POST-WEANING DIARRHOEA IN PIGLETS

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INTRODUCTION

Anatara Lifesciences is currently applying for re-registration of Detach® as an alternative to antibiotics and Zinc Oxide (ZnO) to aid in the control of pre- and post-weaning diarrhoea in piglets. Bromelain, the active in Detach® reduces diarrhoea through its anti-attachment and anti-secretory effect[1, 2] on the intestine, and is therefore unlikely to contribute to antimicrobial resistance. This study was designed to compare the efficacy of a single 4mL Detach® drench at weaning (18-28 days of age) to ZnO (2,500 ppm in feed) as an aid in the control of post-weaning diarrhoea in piglets.

EXPERIMENTAL DESIGN

Days 0-14:			
Group A	**Group B**	**Group C**	**Group D**
Detach®	Detach® +ZnO	ZnO	Control
Days 15-42:			
All groups: 2,500 ppm ZnO			

Individual piglets (n=72 piglets, 6 piglets per pen) were scored on Days 2-16 and Day 19, 26, 33 and 42 post-weaning for:

- Faecal consistency score (normal (0), pasty/semi-liquid (1) or liquid/watery (2)
- Clinical condition score (0=normal, 1=depressed)

Combined scores were used to categorise each piglets as morbid/sick (Score 2/3) or healthy (Score 0/1) on the day of observation.

Piglets were weighed at Days 0, 14 and 42.

Antibiotic treatments were recorded for individual piglets.

RESULTS

Table 1.
Scour, sick days, antibiotic use and weight gains in each treatment group.

	Detach® (n=72)	**Detach® + ZnO** (n=72)	**ZnO** (n=72)	**Controls*** (n=72)
Piglets with scour	31	24	21	51[1]
Sick days/pen	26.3	19.4	11.3	44.0[2]
Antibiotic doses	15	0	2	33[3]
Weight gain D0-42 (kg)	12.4	12.5	12.6	12.2

**significance compared to the treatment groups. [1]p<0.003, [2]p<0.001, [3]p<0.05.*

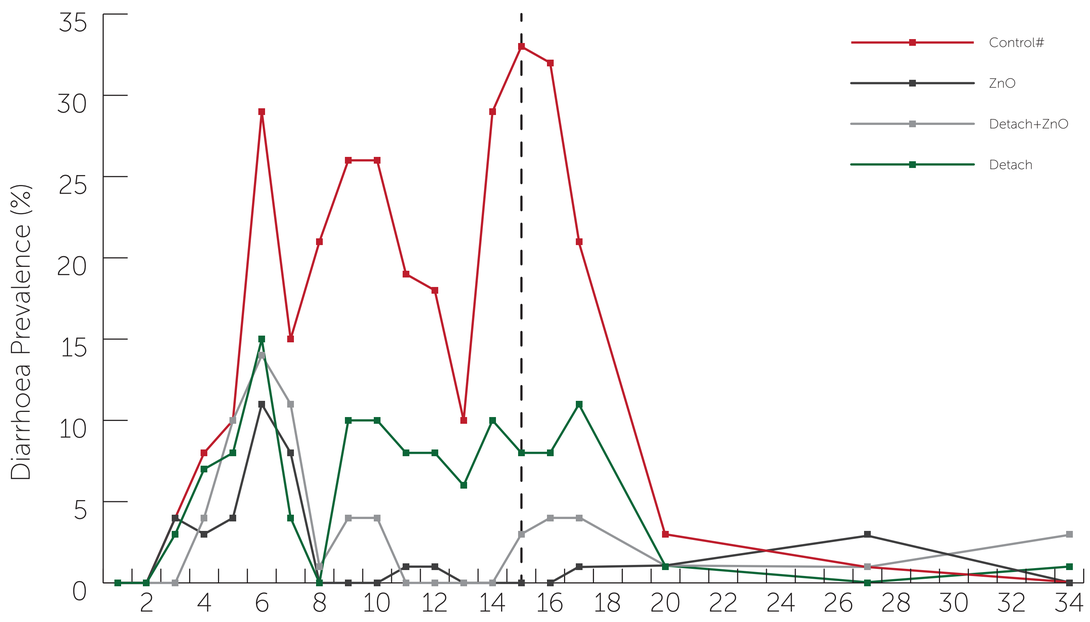

Figure 1. *Prevalence of diarrhoea in piglets treated with a single dose of Detach® at weaning, compared with ZnO added in feed for 14 days and nil treatment (control). Dashed line indicates Day 15 when ZnO was included in the feed of all groups. There was no difference between treatment groups. All groups were different to control (#p<0.05).*

CONCLUSION

A single dose of Detach® at weaning was as effective as in-feed ZnO in reducing diarrhoea and antibiotic treatments in piglets post-weaning compared to untreated piglets.

Literature Cited:
*[1]Chandler DS, Mynott TL (1998) Gut **43**, 196-202; [2]Mynott TL, Guandalini S, Raimondi F, Fasano A (1997) Gastroenterology **113**, 175-184*

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