



## **Different metaphylactic treatment schemes with Nuflor® compared to positive control (tulathromycin) and negative control in a naturally occurring outbreak of Bovine Respiratory Disease in veal calves.**

Tim Caluwaerts<sup>1</sup>, Jeroen van de Ven<sup>2</sup>, Peter Theeuwes<sup>3</sup>, William Veekens<sup>4</sup>, Geert Opsomer<sup>1</sup>

<sup>1</sup>Ghent University, Merelbeke, Belgium

<sup>2</sup> Intervet Schering-Plough AH Belgium, Brussels, Belgium

<sup>3</sup>Veterinary Practice Thewi, Tilburg, The Netherlands

<sup>4</sup>Intervet Schering-Plough AH Netherlands, Boxmeer, The Netherlands

# What to do?

---



# Protocol



Field trial  
Blind  
Randomised

5 groups (n=571)

- Negative control (n=121)
- Contact florfenicol (n=134)
- Pen florfenicol (n= 84)
- Total florfenicol (n=114)
- Positive control (n=120)  
(tulathromycin)

5 groups (n=479)

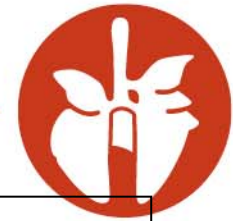
- Negative control (n=108)
- Contact florfenicol (n=90)
- Pen florfenicol (n= 95)
- Total florfenicol (n=88)
- Positive control (n=96)  
(tulathromycin)

# Pen and individual cage

---

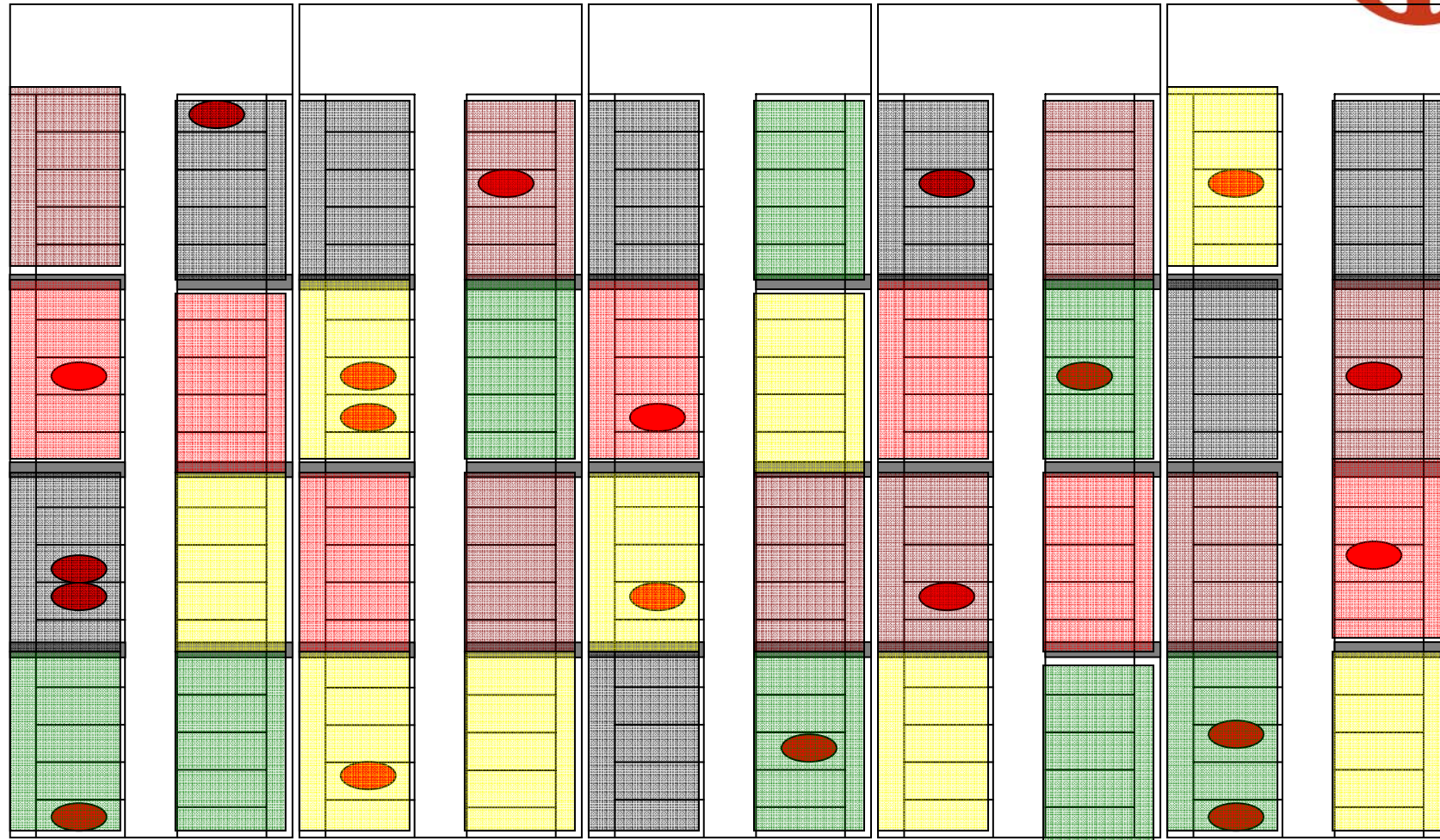


# Example of outbreak



Outbreak was primarily bacterial. Animals are < 2 months old

# Randomisation





































































































**Only sick animals  
florfenicol**


**Contact  
florfenicol**


**Pen  
florfenicol**


**Total  
florfenicol**


**Total  
tulathromycin**

		florfenicol								tulathromycin	
Clinical case present in pen		 	 	 	 	 	 	 			
		 	 	 	 	 	 	 			
No clinical case present in pen		 	 	 	 	 	 	 			
		 	 	 	 	 	 	 			
		 	 	 	 	 	 	 			
		 	 	 	 	 	 	 			
		 	 	 	 	 	 	 			

 healthy calf,  
not treated

 sick calf,  
treated

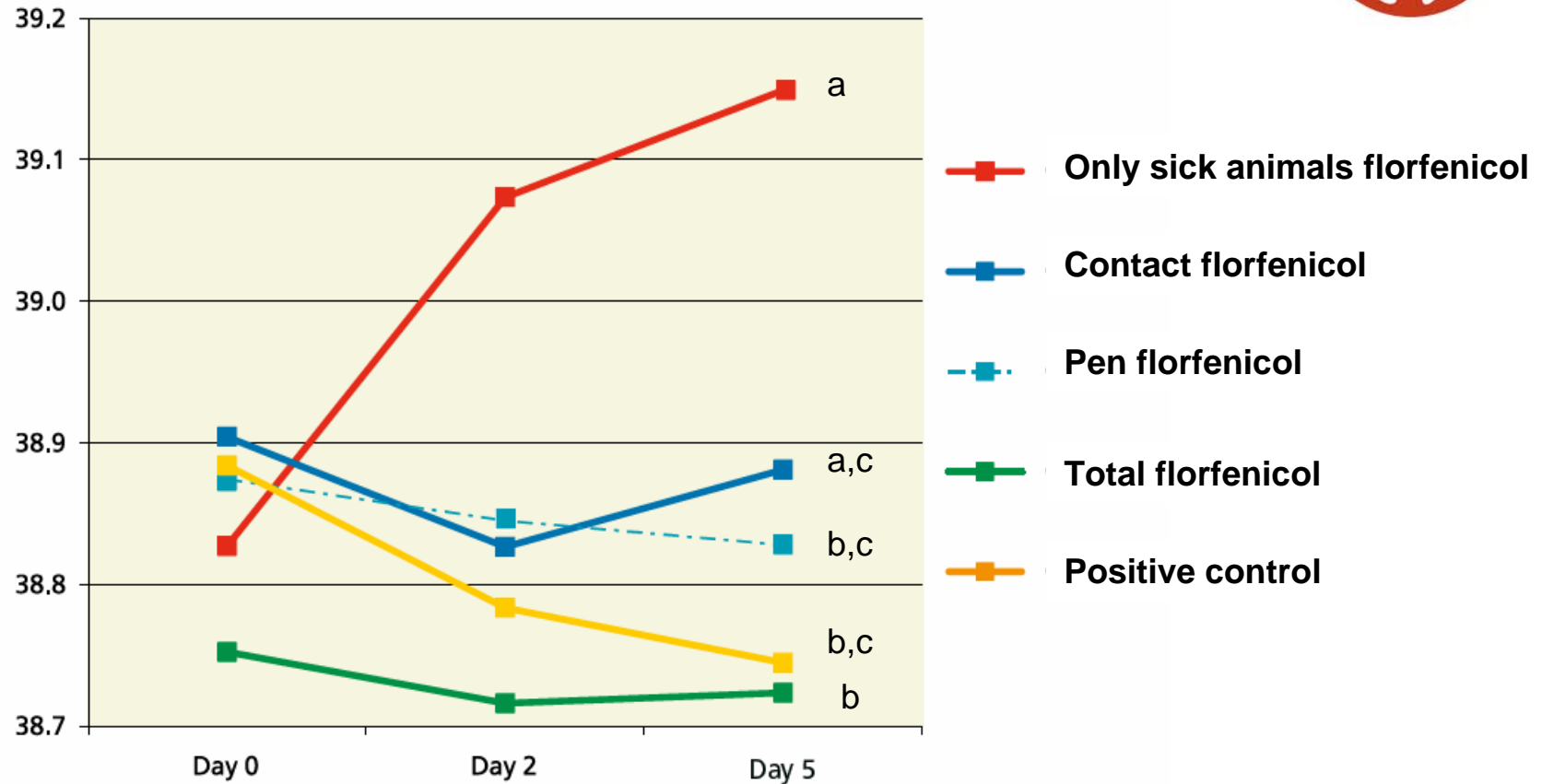
 healthy calf and treated  
with florfenicol (day 0)

 healthy calf treated with  
tulathromycin (day 0)

# Average treatment group rectal temperature



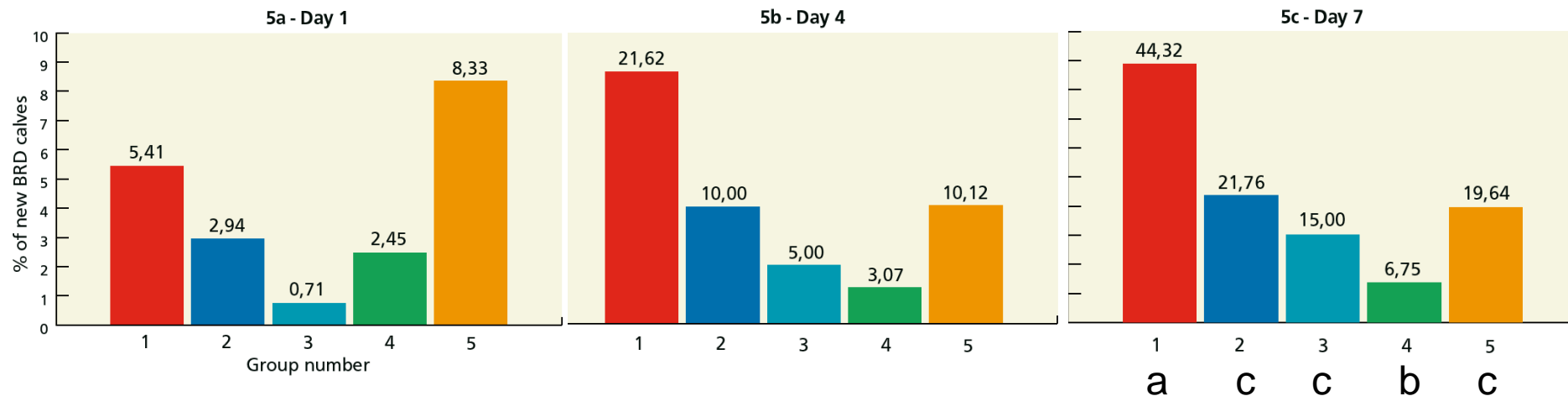
Non affected animals on day 0



Values with different subscripts differ significantly -  $p < 0.05$

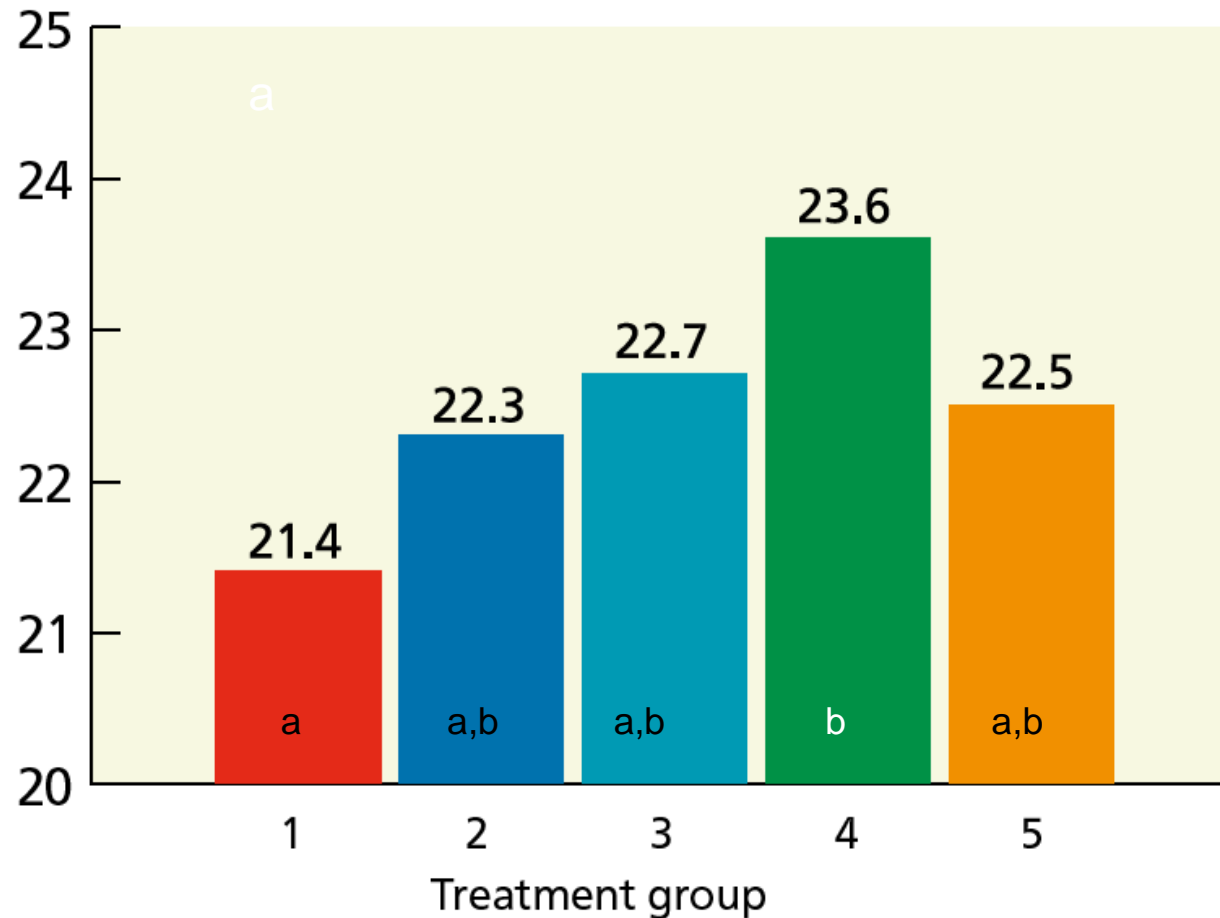
**Total metaphylactic treatment and pen treatment had a significantly lower average group rectal temperature**

# New infections D1-D7



- Cure of sick animals has an indirect effect; cure prevents spreading to other animals
- The more healthy animals you treat, the lower the percentage of new infections

# Weight gain (D0-D27)



Same trends are seen at for the slaughterhouse weights with numerical differences of up to 9kg but no significant differences due to large variation in the groups

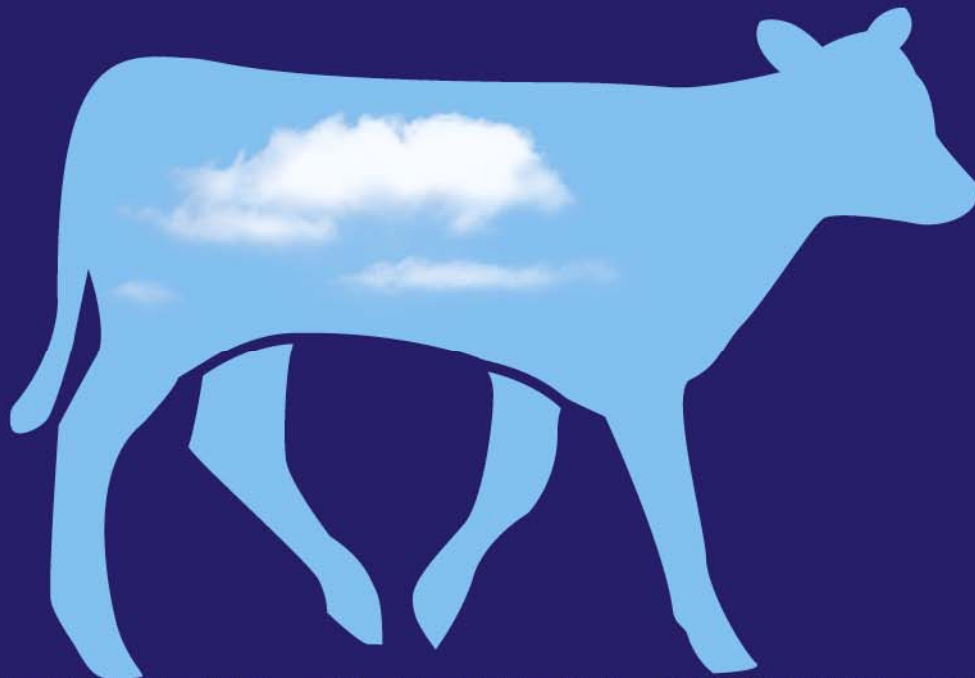
# Conclusions

---



- Treatment of the entire group is best.
- Cure of sick animals has an indirect effect, cure prevents spreading to other animals.
- Florfenicol treatment of all calves resulted in less new BRD cases than treatment with tulathromycin of all calves.
- Prevention of disease results in significantly higher weight gain after 28 days.

**Thank you for your attention.**

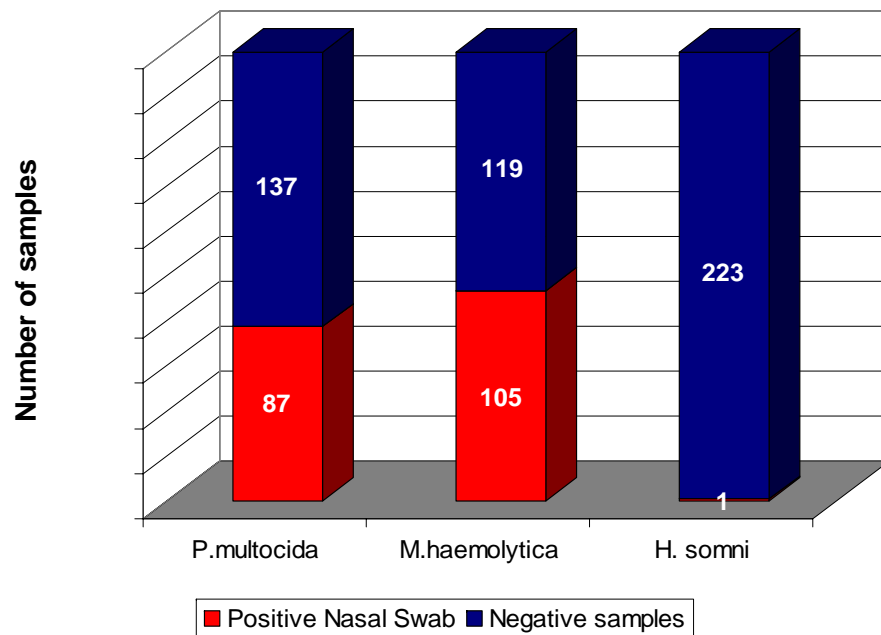


**EVERY BREATH COUNTS**

# Number of pathogens isolated



## Nasal Swabs



## B.A.L

