

# Preliminary results from an ongoing field study on the effect of Catosal® in the treatment of subclinical ketosis in cows



Sarasola P.<sup>1</sup>, Aramendi U.<sup>1</sup>, Spiecker-Hauser U.<sup>2</sup>, Schmidt B.<sup>2</sup>

1. Ondax Scientific SL, Spain

2. Bayer HealthCare, Animal Health, Germany

## Study objectives

The aim of the present investigation was to assess the efficacy and safety of Catosal® in the treatment of subclinical ketosis in cows.

## Methods

At the time of writing this abstract, there is an ongoing multicentre, placebo-controlled, randomised and masked field study being conducted to evaluate the effects of Catosal® in the treatment of sub-clinical ketosis in dairy cows. In this study, cows from several dairy farms in Spain were screened by a milk test (Ketolac BHB®, Biolab GmbH) within two weeks of calving. Cows with a positive response (i.e.,  $\beta$ -hydroxybutyrate (BHB) milk levels  $\geq 200 \mu\text{mol/l}$ ) and the absence of clinical signs of ketosis were enrolled in the study and were randomised to one of three treatment groups: two injections of Catosal® (T<sub>1</sub>), one injection of Catosal® and one of saline (T<sub>2</sub>), two injections of saline (T<sub>3</sub>), administered intravenously on days 0 and 3, respectively, at a dose volume of 5 ml/100 kg body weight. Blood samples for assessments of changes in BHB, glucose, glutamate dehydrogenase (GLDH) and cholesterol were collected on days 0, 3 and 6, respectively. A subgroup of 17 animals showing baseline serum BHB levels of  $\geq 3.2 \text{ mmol/l}$  and an absence of clinical signs of ketosis was selected from this study for an interim analysis.

## Results

The primary efficacy criterion was the treatment success, defined as the proportion of animals with serum BHB levels of  $\leq 1.2 \text{ mmol/l}$  on days 3 and 6 in each treatment group. Results showed that 30% and 60% of the animals in T<sub>1</sub> were classified as treatment successes on days 3 and 6, respectively. In contrast, none of the animals in T<sub>2</sub> and T<sub>3</sub> was classified as treatment successes. This effect was confirmed by statistically significant ( $p < 0.01$ ) treatment differences on the evolution of serum BHB and glucose levels over time. Serum levels of GLDH and cholesterol did not show treatment-dependent changes in this preliminary analysis. All treatments were well tolerated. No treatment-related adverse events were observed.

## Conclusion

These preliminary results indicate that two injections of Catosal® administered twice at an interval of 3 days is safe and effective in the treatment of subclinical ketosis in cows.