**RUMINANT PRODUCCTION** 

# Effects of Supplementing a Mix of Nucleotides to Dairy Calves prior Weaning on Respiratory Afflictions and Immune Response during the **Postweaning Period** Alex Bach,<sup>a,b</sup> Àngela Ferrer,<sup>b</sup> Dani Martínez-Puig,<sup>c</sup> and José Ahedo<sup>d</sup>

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### OBJECTIVE

To evaluate the effects of a mix of nucleotides supplementation through the milk replacer on immune response and calf performance after weaning.

### MATERIALS AND METHODS

Animals and treatments

- Seventy-eight dairy replacement calves (initial age 18±6.3 d and BW = 43±6.1 kg) were fed 2 L of milk replacer (MR) twice daily via a bottle at 0730 and 1630 until 45 d of life, and then a daily dose of 2 L of MR at 0730 for an additional week.
- X At 37 d of age, half of the calves received a daily dose of 3 g of a mix of nucleotides (Nucleoforce®, Bioiberica, Spain) supplemented through the morning feeding of MR until weaning time (52 d).
- After weaning, calves were moved from individual hutches into pens holding 8 animals until reaching 111±2.1 d (when the study was completed).
- Animal performance was monitored from 52 until 111 d of life.
- Respiratory afflictions were monitored daily from 37 to 111 d of life.
- Blood samples from half of the animals randomly chosen from each treatment group were obtained by venipuncture of the jugular vein at the ages of 37 and 52 d.

## Calculations and Statistical Analyses

- Incidence of respiratory afflictions was analyzed using mixed-effects logistic regression, and the number of respiratory cases and time elpased between them using a mixed-effects Poisson regression analysis.
- Body weight gain and blood determinations were analyzed using a mixed-effects ANOVA.

#### RESULTS

- Control.

