Saccharomyces boulardii modulates the bovine herpesvirus type 5 vaccine immune responses.

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Abstract
There have been significant efforts toward the development of more efficient vaccines. Several efforts have been made to produce effective vaccines against bovine herpesvirus 5 (BoHV-5). We examined the use of the probiotic Saccharomyces boulardii (Sb) as a potential adjuvant to improve vaccine efficiency. We found that the supplemented animals exhibited an enhanced systemic IgG antibody response toward Th1 in favor of IgG2 and increased mRNA expression levels of the cytokines IFN-γ, IL-12, IL-17 and IL-10 in the spleen. These results suggest that Sb may provide a promising means for improving the efficiency of vaccines.

Material and Methods:

Conclusions:
The data obtained in this study allow us to conclude that Saccharomyces boulardii has an adjuvant effect on the vaccine immune response against BoHV-5 in mice, suggesting that this effect is mediated by cytokines (IFN-γ, IL-12, IL-17 and IL-10) modulated by Sb during the immunization process. Thus, the use of this probiotic can contribute significantly to improving the response elicited by conventional vaccines, particularly those that rely on cell-mediated immune responses.