Rumen metabolites of periparturient dairy cows varying in SARA susceptibility modify bacterial composition and fermentation

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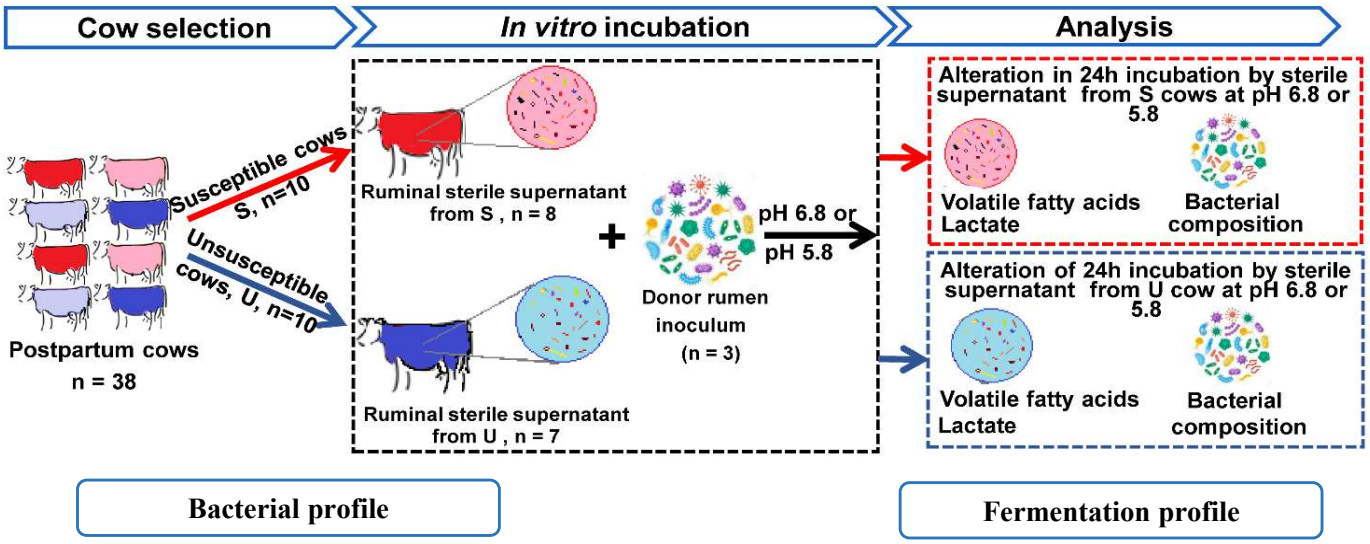
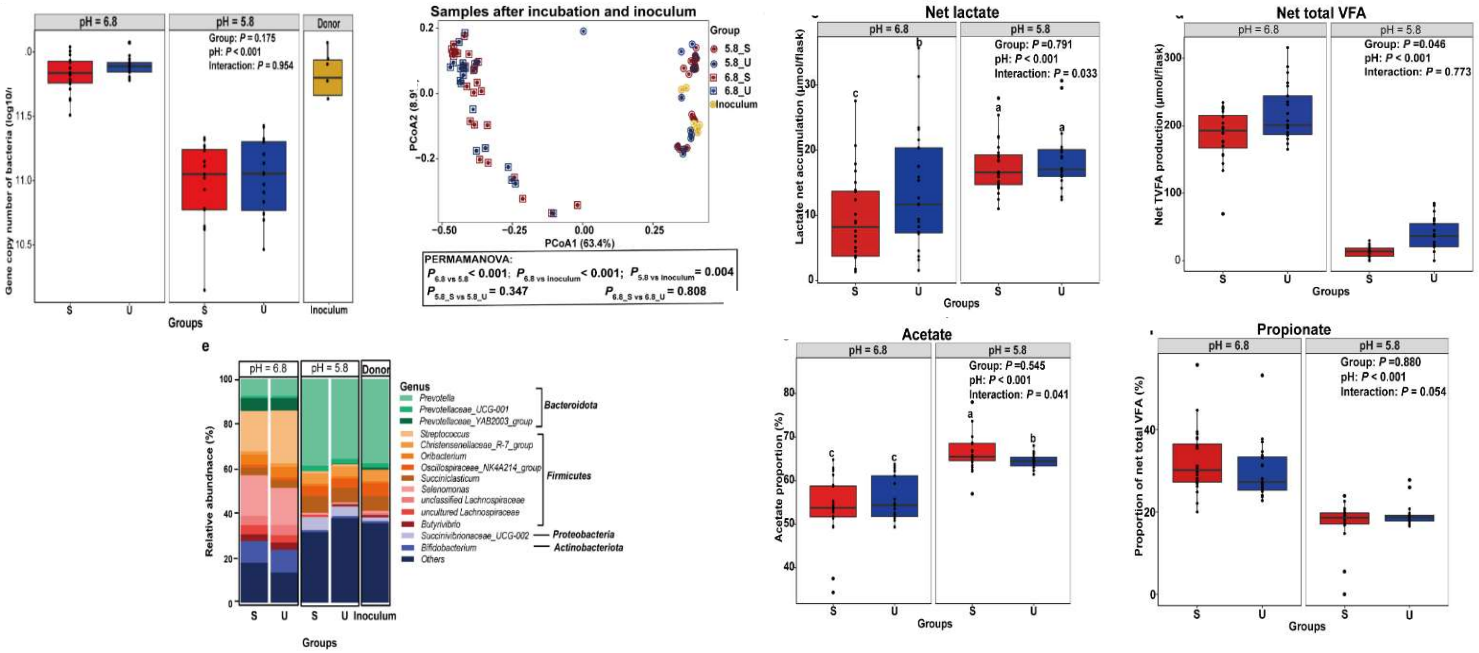
Metabolites produced by rumen microbes play a significant role in the productivity and health of the animal. Rumen microbial composition determines the type and amount of metabolites produced at a given time point. However, **these metabolites, can, in turn, influence the microbial composition and their metabolic capability.**

The aim of this ***in vitro*** **experiment** is to investigate whether sterile ruminal supernatant obtained from **SARA-susceptible (S-group)** and **unsusceptible (U-group)** dairy cows alter the bacterial composition and the fermentation activity of inocula obtained from healthy donor cows at **normal (6.8)** and **low (5.8) PH** conditions.





Significant modifications in some fermentation parameters (e.g.VFA production, lactate accumulation, and VFA profile) and bacterial composition (at phylum and genus levels) were observed based on the specific metabolites used in the *in vitro* incubation.

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