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## Probiotics for animals: advances in the study of their potential



Probiotics are those microorganisms that proportion benefits to the host, and applied in the animals health constitute an interesting object of study. In this paper, a research group from UAB's Applied and Environmental Microbiology confirmed the probiotic potential of *Lactiplantibacillus plantarum* in *Helix aspersa* snails, and also the 15% trehalose as the most effective cryoprotectant substance for the survival of the bacteria during the process of lyophilization. The results represent a breakthrough for the administration of probiotics in animals.

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The World Health Organization (WHO) together with Food and Agriculture Organization of the United Nations (FAO) define probiotics as live microorganisms that administered in adequate amounts provide some benefits in the host and because of this, the use of probiotics to improve the health status of animals has been a point of interest in recent years.

In this research, a strain of *Lactiplantibacillus plantarum* with probiotic potential isolated from the intestinal microbiota of the snail (*Helix aspersa* Müller) has been studied to add it to its feed and improve their health status. First of all, it has been demonstrated that the strain of *Lactiplantibacillus plantarum* has probiotic potential following the guidelines jointly dictated by WHO and FAO. Then, the conservation of the strain has been evaluated showing that one of the ways to preserve microorganisms is the lyophilization method which consists of freezing the microorganism and then separating this water from the substrate and thus obtaining a

dry product to obtain the bacteria in the form of a powder to, finally, being added to the snail feed.

Because of freezing can cause different cell damage, substances known as cryoprotectants are also necessary. For this reason, a study of different cryoprotectants has been carried out to verify which one provides a better survival rate over time. Of all the cryoprotectants proved, 15% of trehalose has been the one that has given the best result.

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### References

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