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Editorial

Meat Bio Preservation as a Promising Method in Food Technology

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Meat is a nutritious food rich in proteins that is highly perishable and has a short shelf life unless preservation approaches are used. However, it is easily contaminated by pathogenic and harmful microorganisms from the time of slaughter to consumption. And since foodborne pathogens generally do not provide an organoleptic indication of their presence, the organoleptic disturbances caused by the spoilage microorganism serve as a warning to the consumer that food may not be safe for consumption, thus protecting millions of people from the disease state of food. Therefore, it is important to make meat safe for consumers in terms of stability, transport and storage. For this reason, numerous preservation approaches in food technologies have been achieved. The preservation of food is a continuous struggle that aims to eliminate or reduce the potential for the release of pathogenic microorganisms that deteriorate in food. So far, approaches aimed at improving food safety have been based on chemical preservatives, antibiotics or the application of more drastic physical treatments (for example, high temperatures or refrigeration). However, these methods have many drawbacks. Currently, there is a strong debate about the safety aspects of chemical preservatives due to the deterioration/reduction of the nutritional value of foods, episodes of adverse reactions to food, cardiovascular diseases, many carcinogenic and teratogenic attributes, residual toxicity and global emergency of the antimicrobial resistance phenomenon in foodborne pathogens.

At present, and to harmonize consumer demands with the necessary safety standards, traditional methods of controlling microbial spoilage and food safety hazards are replaced by combinations of innovative technologies that include biological antimicrobial systems, such as lactic acid bacteria (LAB) and/or their bacteriocins and phage therapy. Biological preservation can be defined as the extension of shelf life and food safety through the use of natural or controlled microbiota and/or its antimicrobial compounds. It has gained increasing attention as a natural means to control the shelf life and safety of food products. One of the most common forms of promising preservation approaches in foods are phage therapy and predatory bacteria, processes based on the use of virulent bacteriophages and some predatory bacteria (*Bdellovibrio bacteriovorus* and *Micavilbrio aeruginosavorus*) against pathogenic and harmful bacteria to improve microbiological safety and the quality of the food. It may be difficult to understand how microbe is eating another microbe but it is true and this phenomenon found in the larger world. On the other hand the consumers may be aware towards using of biological control but when we realized that these microorganisms were highly host specific and they are highly virulent towards the pathogens only in this situation we understand the importance of implement these approaches in the food technologies not only to improve safety and quality of food but also to control the antimicrobial resistance phenomenon in the food chain. So, these approaches have emerged in recent years as a powerful tool to develop quality attributes of livestock products including meat and milk products.

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