

11th International Conference on

Probiotics and Prebiotics

Lactic acid bacteria as biological food preservatives and bio-control agents

Desalegn Amenu Delesa*Jimma University College of Natural Sciences, Ethiopia*

Lactic acid bacteria have the potential ability to act as Biological food preservatives since they have the ability to produced anti-fungal and antibacterial metabolites that can constrain and preclude pathogens proliferation and infectious diseases, hence they also act as biological control agents. The bio preservation ability is due to the production of several broad-spectrum antimicrobial compounds and most of the LAB have generally regarded as safe (GRAS) status. The use of chemical and physical preservatives is a conventional method to food spoilage and control infections, but it is associated with disadvantages, such as the hazardous impact on public health, environmental contamination, resistance development among pathogens, and high cost of agrochemicals. Therefore, biological control (use of live organisms) particularly LAB is an alternative approach for the treatment of infections and control of food spoilage. The mechanisms involved in biocontrol are hyper parasitism or predation, production of antibiotics, lytic enzymes, and induction of host resistance. The ability to produce several antibacterial and antifungal substances confers a bio preservation and Biological control potential to lactic acid bacteria. The bio-control potential of lactic acid bacteria is demonstrated in the prevention of different infectious diseases. Thus, living cells or product formulations of lactic acid bacteria may be prepared and used as an alternative bio preservative and biocontrol technology. This review paper is aimed to discourse potential application off the lactic acid bacteria and their principal antimicrobial compounds as biological preservation of foods and bio-control agents against food spoilage and pathogens and to control infectious diseases.

Keywords: Biological food preservation, Bio-control agents, lactic acid bacteria, food-borne pathogens and food spoilage bacteria.

Biography

The author is currently pursuing his PhD study at Jimma University, in Food Microbiology and he has M.Sc. in Microbiology. He more experience in Research, laboratory skill and some soft wares. Currently the author has more than 30 international and national published journals

wadadesalegn@gmail.com