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Innovative functional ingredients from plant sources in food applications

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New food safety issues emerge for many reasons. It could be due to a microorganism evolving to become a pathogen or a pathogen becoming more virulent. The globalized food supply chain and food production methods are also seen as contributing factors. Other reasons are the change in eating habits of people and their desire to lead a healthy lifestyle. Consequently, there has been an increase in the consumption of fresh/unprocessed/additive free food. Food safety and quality and sustainability of production are some of the driving forces that are presently changing the market for fresh food. The challenges of addressing the safety issues have resulted in the development of innovative technologies to improve safety of fresh food. Among, these technologies, the most promising are those based on the search for affordable and environmentally friendly novel technologies. Natural preservation technologies using plant extracts are being increasingly explored to extend the shelf life of fresh food. Plant antimicrobials are phytochemicals which are important for the proper functioning of the plant and used as plant defense agents against microorganisms and other predators. Phenolic compounds are a rich source of antioxidants which can extend the freshness of the product by preventing oxidation. The Australian native food industry with its diverse and rich flora has a huge potential to contribute to the growing natural functional ingredient market. Case studies of natural antimicrobials in extending the storage life of meat, seafood and horticultural products will be discussed with successful commercial applications.

Biography

Yasmina Sultanbawa is a Senior Research Fellow at the Queensland Alliance for Agriculture and Food Innovation (QAAFI), University of Queensland. She has 18 years' experience in value addition to food and has a track record of working with industry and attracting national and international funds where commercialization has been a key outcome. She has a Master's degree in Food Science from the University of Reading in the UK and a PhD in Food Chemistry from the University of British Columbia in Canada. Some of her current research work is based on the bioactivity of Australian native foods and their potential applications in the food and nutraceutical industries.

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