Microbiological Quality and Bioactive Components of Hydrolysed Edible Bird Nest

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Abstract

There are more than 24 species of insectivorous, eco-locating swiflets distributed around the world, but only a few produce nests that are deemed edible by humans. The majority of edible bird nests (EBNs) traded worldwide come from two heavily exploited species, the White-nest swiftlet (*Aerodramus fuciphagus*) and the Black-nest swiftlet (*A. maximus*).

EBN contains an epidermal growth factor EGF-like component which can stimulate cell division and growth, enhance tissue growth and regeneration. Anti-microbial activities have been studied on the EBN and its hydrolysates. EBN extract also demonstrated its' potential as an antimicrobial agent against foodborne pathogens such as *Staphylococcus aureus, Escherichia coli, Candida albican and Aspergillus niger*. The glycopeptides and sialic acids from the EBN may also have a potential to be a prebiotic on growth of probiotic microorganisms.

A recent study concludes that EBN contained both lactoferrin and ovotransferrin. These constituents contribute to the antioxidative effect of EBN. We believe that, with proper extraction method, EBN's lactoferrin can be used as a biological growth inhibitor in a media or fermenter culture. Majority of the EBN's nutritional value was stored in the glycoprotein and had been identified. This is due to variety of glycoprotein isolation and purification methods developed specifically for EBN. However, there is still much work need to be done.

Biography

Abdul Salam bin Babji obtained his Ph. D. in Food Science and Technology from University Nebraska-Lincoln in 1982. He has since then been affiliated with Universiti Kebangsaan Malaysia, Malaysia until present. His research mainly focus on Meat and poultry meat product development with emphasis on healthful meat products looking into replacing synthetic food additives in meat products with phytochemicals-extracts of herbs and spices are tested for effectiveness as antioxidants and anti-microbial and extension of quality and shelf life of the products.