



Pepitides and protein in Royal Jelly

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Royal jelly, a honey bee secretion, plays a important role in caste determination in honey bees because it serves as the source of nutrition for young larvae destined to become queens. It is also fed to adult queens. Royal jelly possesses various functional properties and has been used as a medication, health food, and cosmetic in many countries. Royal jelly is 67% water, 12.5% protein, 11% monosaccharides, 6% fatty acids and 3.5% 10-hydroxy-2-decenoic acid (10-HDA). It consists of trace materials antibacterial and antibiotic component, and also some trace of vitamin like A, D, E. Royal jelly is sold as an herbal medicine. There are no particular process of regulated manufacturing standards in herbal compounds and some marketed medicines have been found to be contaminated with hazardous metals or other drugs. health supplements should be purchased from good source to decrease the risk of contamination. Royal jelly contain many nutrients which provide good health benefits and also it provides antioxidants and anti inflammatory effect that reduces inflammation and decreases oxidative stress

Major royal jelly proteins (MRJPs)

The family of proteins which are secreted by honey bee. The family consists of nine proteins, they are MRJP1 also called royalactin, MRJP2, MRJP3, MRJP4, and MRJP5 are present in the royal jelly secreted by

worker bees. MRJP1 is the most present in largest in volume. The five proteins constitute 82-90% of the total proteins in a royal jelly. Royal jelly which is rich in nutrient-rich mixture of vitamins, sugars, fats, proteins and also enzymes. It is used for feeding the larvae. Royal jelly has been used in traditional medicine since ancient period, and the MRJPs are shown to be the main medicinal components. They are synthesized by a family of nine genes, which are in turn members of the yellow family of genes such as in the fruitful and bacteria. They are contribution to be involved in various development of queen larva and worker larvae, thus produces division of labour in the bee colony.

Peptides in Royal Jelly

Peptides isolated from natural fonts are the object of different studies the main objective is to searching new molecules possessing antibacterial activity. The studies on peptides originally isolated from the Royal Jelly, We found that jelleins are mainly productive against gram-positive bacteria the jelleins and on some analogs having a UV reporter at the N- or C-terminus. Therefore, they act in synergy with peptides belonging to the family of temporins such as temporin A and temporin B against *Staphylococcus aureus* A170 and *Listeria monocytogenes*.