### **OPINION ARTICLE**

## **Biological Functions of Royal Jelly**

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#### ARTICLE HISTORY

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ders, cancer, diabetes, and atherosclerosis, as well as the negative effects of various harmful factors and drugs. Royal jelly is a bee substance that is fed to queen bees throughout their lives, and it helps them maintain their physical fitness, fertility, and longevity. Propolis and royal jelly have been shown to improve health by reducing the onset of age-related chronic diseases. Royal jelly is a protein-rich fluid made by nurse bees' hypo pharyngeal and mandibular glands. It has an important role in honeybee biology as well as human health. However, certain RJ proteins are unknown, and locating N-glycosylation modification sites on royal jelly proteins requires more research. The cephalic glands of honeybees generate royal jelly. Royal jelly is a food supply for queen honey bees throughout their lives, as well as a factor in fertility and longevity. Royal jelly has long been thought to be good for human health. We just discovered that royal jelly slows down the deterioration of motor function as people age by changing muscle fibre size. However, the functional component of royal jelly and how it impacts skeletal muscle metabolism are still unknown. Discovering chemicals with longevity-promoting properties and unravelling their underlying mechanisms is one of the most difficult issues in the study of ageing. Royal jelly has been said to have a variety of health benefits. Royal jelly that has been treated with protease exhibits extra pharmacological properties. Royal jelly exact mechanism of action and the components are responsible for these effects are mainly unknown. The mechanisms that control longevity have been identified as being evolutionarily conserved.

# Description

Royal jelly is a bee product that is widely utilised in cosmetics, medicine, and other sectors. It can also have a biological role in a variety of disorders. The main active ingredients in the functional food royal jelly, such as major royal jelly protein, fatty acids, phenols, flavonoids, and others, and summarises the active role of royal jelly in the maintenance of human health, including immunity, lifespan, memory, digestive system, blood glucose, obesity, antibacterial, and anti-cancer effects, among which memory regulation can be used in the treatment of Alzheimer's disease. Preconception women may experience oxidative stress, which can affect the reproductive system and result in infertility. The antioxidants in royal jelly can help the body overcome oxidative stress caused by a lack of antioxidants. Royal jelly is a natural foodstuff that is provided to bee queens throughout their lives, and it helps them grow and develop, reproduce, and live a long life. Despite the fact that these particular effects of royal jelly are well documented, no fed diet experiments in fish have been conducted to yet. Propolis, bee pollen, and royal jelly are just a few of the compounds found in honeybee products, all of which have long been renowned for their medicinal and health-promoting characteristics. Since antiquity, their vast biological effects have been known and exploited. Natural antioxidants such as flavonoids, phenolic acids, and terpenoids are thought to be present in bee products. Natural substances capable of counteracting the effects of oxidative stress underlying the pathogenesis of a variety of diseases, such as neurodegenerative disor-



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