

24th World Congress on **Pharmacology**
&
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Neurological actions of honeybee products

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Statement of the Problem: According to the World Health Organization, two billion people will be aged 60 years or older by 2050. Aging is a major risk factor for a number of neurodegenerative disorders. These age-related disorders currently represent one of the most important and challenging health problems have impact on the economic and social. Therefore, much attention has been directed towards the design and development of neuroprotective agents derived from natural sources.

The honeybees (*Apis mellifera* L.) have several products, including honey, propolis, royal jelly, bee venom, and bee pollen. Bee products meet the criteria of being natural products that have long-recognized medicinal properties. Historically, bee products nutritional and medicinal values have been considered for thousands of years by Ancient Egyptian, Persians, Romans and Chinese in supplementary nutrition and alternative diets. Bee products are often sold as nutritional supplements and/or health products, and with potential anticancer, antimicrobial activities, antioxidant, anti-nociceptive, and anti-inflammatory. Bee products polyphenols have neuroprotective actions via quench biological reactive oxygen species that cause neurotoxicity and aging as well as the pathological deposition of misfolded proteins, such as amyloid beta.

In the current talk will concerned on the neuroprotective of bee products and its ingredients against neurodegenerative diseases including Alzheimer's disease, Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis and depression.

Recent Publications:

1. Biotech N, Corporation M, Road J, Gung C, Hospital M, Science M, Health, N (2007). Propolin G, a prenylflavanone, isolated from Taiwanese propolis, induces caspase-dependent apoptosis in brain cancer cells. *Journal of Agricultural and Food Chemistry*, 55: 7366–7376.
2. Giampieri F, Quiles JL, Orantes-Bermejo FJ, Gasparrini M, Forbes-Hernandez TY, Sánchez-González C, Battino M (2018). Are by-products from beeswax recycling process a new promising source of bioactive compounds with biomedical properties? *Food and Chemical Toxicology* 112:126–133.
3. Kumar A, Sehgal N, Kumar P, Padi SSV, Naidu P. (2008). Protective effect of quercetin against ICV colchicine-induced cognitive dysfunctions and oxidative damage in rats. *Phytotherapy Research* 22: 1563–1569.
4. Squillaro T, Schettino C, Sampaolo S, Galderisi U, Di Iorio G, Giordano A, Melone MAB (2018). Adult-onset brain tumors and neurodegeneration: Are polyphenols protective? *Journal of Cellular Physiology*, 233:3955–3967.

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5. Tomás A, Falcão SI, Russo-almeida P, Vilas-boas M (2017). Potentialities of beebread as a food supplement and source of nutraceuticals: Botanical origin , nutritional composition and antioxidant activity. *Journal of Apicultural Research* 8839.
6. Unno K, Takabayashi F, Yoshida H, Choba D, Fukutomi R, Kikunaga N, Hoshino M (2007). Daily consumption of green tea catechin delays memory regression in aged mice. *Biogerontology* 8: 89–95.

Biography

Hesham R. El-Seedi working in the area of isolation, structure elucidation and synthesis of biologically active natural products from medicinal plants, marine and bee products. Recently, we started also a project on nanoparticles synthesis. Prof. Hesham is a former fellow of the Japanese Society of Promotion of Science (JSPS), Faculty of Science and Technology, Keio University, Japan, under direction of Prof. Shosuke Yamamura and Prof. S. Nishiyama. Throughout his carrier, he worked in pioneer internationally recognized laboratories including Geneva University, Switzerland, in collaboration with Prof. Kurt Hostettmann, Kunglia Tekniska Högskola (KTH), Stockholm, Sweden (since 2007), Faculty of Pharmacy, Uppsala Biomedical Center, Uppsala University, Sweden and Menoufia University, Egypt. He was appointed as Adjunct Faculty Professor at the International Center for Chemical and Biological Sciences (ICCBS), Karachi, Pakistan, 2017 and was rewarded two Swedish Research Links grants for the 2017-2019. He has published peer-reviewed international research articles and scientific papers, reviews, chapters in Peer-Reviewed International Journals

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