Chapter 9
Ethnobotanical, Pharmacological, and Therapeutic Importance of Sesame Seeds Along With Their Role in the Biogenic Synthesis of Important Chemicals

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ABSTRACT

Sesame (Sesamum indicum) is a flowering plant belonging to the sesamum genus, sometimes referred to as benne. Since prehistoric times, people have grown sesame seeds in tropical climates all throughout the planet. One of the earliest crops to be processed for oil refining was sesame seed. There are a lot of phytochemicals in sesame seeds, both black and white, including eight primary metabolites and sixteen

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secondary metabolites. Sesame seeds are widely utilised in traditional medicine and cooking due to their nourishing, healing, and protecting qualities. The sesame plant is also used to create a variety of nanoparticles, including iron and silver nanoparticles. For optimal use, an examination of the ethnobotanical and medicinal applications of this very nutritious oilseed—which is also commercially significant—is appropriate. This study's main goal is to learn more about the regular benefits of sesame seeds for pharmacological, medicinal, and ethnobotanical applications.

INTRODUCTION

Sesame seed classification

Pedaliaceae Family

Sesamum Genus

indicum Species

An individual from the Pedaliaceae family, sesame (*Sesamum indicum*) is annual herbaceous plant. Because of its robust defense against rancidity and oxidation (Bedigian & Harlan, 1986), it is sometimes referred to as the "Queen of Oilseeds"; its general names include ginkgelly, til, and benne seed. 50-60% of sesame seeds are composed of premium oil that is high in natural antioxidants, sesamolin, sesamin, polyunsaturated fatty acids (PUFA) and tocopherol equivalents (Brar & Ahuja, 1980). Growing for its edible, pod-forming seeds, it is a popular plant in humid regions of the world. It is applied as a poultice using seeds and fresh leaves. It is planted for its edible oil and its seed, which is abundant in protein. A decades-old crop, sesame is cultivated throughout Africa (Ram, Catlin, Romero, & Cowley, 1990). However, it was hypothesized by Oplinger et al. (1990) that approximately Four millennia ago, it was a valuable crop of oil production in Assyria and Babylon. The Chinese produced soot from their ink blocks and lit themselves with sesame oil. Sesame seeds, also known as benne seeds, were imported to America by African slaves and were soon used in Southern recipes often as an ingredient. Early Egyptian semsent, Coptic semsem, and Arabic simsim are the origins of the English term sesame (J. Morris, 2002). A significant portion of the sesame crop in the world is refined into oil. In the top 13 crops of oilseed, it is in ninth rank and accounts for 90% of the global edible oil production (Saha, Dinar, Nabila, & Roy, 2014). In various regions of the world, sesame is an important dietary source. In China and Japan, it enhanced the nutritional value and warded off numerous ailments for many centuries. Seeds of sesame are also good source of phytosterols, lignans, minerals, tocopherols and other micronutrients as well as dietary fiber (Elleuch, Bedigian, & Zitoun, 2011). Sesame seeds have various colors from creamy white to carbon black. People typically consume around two times as much white sesame as black sesame. (J.

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Udayaraja G. K. (2017). *Pharmaceutical Sciences: Breakthroughs in Research and Practice (pp. 14-30).*
www.irma-international.org/chapter/pharmacogenomics-genome-wise-association-clinical-studies/174119