A review of the dermatological effects and applications of *Nigella sativa* (Black Seed)

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*Nigella sativa* (N. sativa) seed is commonly known as ‘Black Seed’ has been an important natural remedy for many ailments for centuries in traditional systems of medicine. *N. sativa* contains many active components, including: thymoquinone, thymohydroquinone, dithymoquinone, thymol, carvacrol, nigellimine, nigellicine, nigellidine and alphahederin. In addition, *N. sativa* seed is reported to possess numerous pharmacological effects: immune stimulation, anti-inflammatory, antioxidant, anticancer, hypoglycemic, antihypertensive, antiasthmatic, antimicrobial and antiparasitic, etc. Some authors have reviewed pharmacotherapeutic activities of *N. sativa* in general, but their dermatological applications are not sufficiently described in these reviews. Skin is immediately exposed to numerous noxious stimuli: Microbial infections, trauma, chronic irritation and extremes of temperature and performs many physiological functions, to mention is its involvement in immune mechanisms. Literature search revealed a lot of published articles regarding effects and applications of *N. sativa* related to skin, e.g. ether extract of *N. sativa* was reported to possess inhibitory effect on Gram-positive bacteria (*Staphylococcus aureus*) and Gram-negative bacteria (*Pseudomonas aerogenosa*), including their multidrug resistant strains. Ether extract of *N. sativa* and its active principles (thymoquinone, thymohydroquinone and thymol) were demonstrated to have antifungal activity against clinical isolates of important genera of dermatophytes: Trichophyton, Epidermophyton and Microsporum. Similarly, *N. sativa* extract/thymoquinone was found to be beneficial in acne, eczema, psoriasis and squamous cell carcinoma. The present work is intended to review the scientific knowledge about this important natural herb pertaining to skin problems. It is hoped that our effort would be of interest to skin specialists, general physicians, scientists and the public.

Biography

Mohammad A Randhawa graduated from King Edward Medical College, Lahore, in 1973 and completed his Masters from University of Punjab in 1977. Then after, he was deputed for Postgraduate training in Clinical Pharmacology to St Bartholomew’s Hospital, London, UK. On his return to Pakistan, he obtained PhD degree from Quaid-i-Azam University, Islamabad. Currently, he is Professor and Head of the Department of Pharmacology, College of Medicine, Northern Border University, Arar. He has published more than 40 papers in reputed scientific journals and has reviewed numerous research projects and manuscripts, mostly related to membrane transport of drugs and *N. sativa* (Black seed).

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