

8th International Conference on

NATURAL & ALTERNATIVE MEDICINE

September 25-27, 2017 Dubai, UAE

Role of Natural Antioxidants in the Oxidative Stress induced Skin Photoaging

Chanchal Garg

Maharshi Dayanand University, India

Photoaging is a process which depends especially on the extent of sun exposure and the quantity of melanin in the skin. The basic mechanism involved in skin aging is the oxidative stress and the formation of free radicals known as reactive oxygen species (ROS). Skin, being rich in lipids, proteins, carbohydrates, DNA etc is highly prone to the adverse effects of ROS caused by oxidative stress. It is an established fact that the epidermis of the skin possess an extremely efficient natural antioxidant defence mechanisms supported by various types of antioxidant enzymes such as peroxidases, catalases and glutathione. But the protective impact exerted by them is limited due to excessive production of reactive oxygen species, leading to skin aging. Antioxidant potential of large number of phytoconstituents obtained from plant extracts reduces the harmful effects of oxidative stress and helps in the prevention of the clinical signs of skin aging. Topical application of antioxidant substances, such as tocopherol, ascorbic acid, coenzyme Q10, plant extracts with phenolics as well as different combinations of these compounds, helps in maintaining the skin antioxidant reservoir, thus increasing the antioxidant skin defence thereby reducing the harmful effects of free radicals and oxidative stress. For example, tetrahydro curcuminoids derived from curcuminoids present in roots of *Curcuma longa* is capable of preventing free radical formation and also neutralising the existing free radicals, anthocyanins present in Acai palm significantly decreases the UVB induced DNA damage and free radical species in human keratinocytes. Similarly, polyphenols derived from green tea effectively destroy the free radical and reverses the aging process. Thus, antioxidants with free radical scavenging activities possess great significance in the protection and therapeutics of age-related disease involving free radicals. Present work is based on protective role of natural compounds in the oxidative stress induced Photoaging and its future potential.

Biography

Dr. Chanchal Garg has completed her Ph.D from Jamia hamdard, New Delhi and is currently pursuing her postdoctoral studies from Maharshi Dayanand University, Rohtak. She has also worked as woman scientist on a research project titled "Standardization and Evaluation of anti-obesity Herbal Drugs" as principal investigator sanctioned under women scientist scheme (WOS-A) DST, GOI, New Delhi. She has many international and national publications to her credit. Her one of the publication is published in a highly reputed journal having an impact factor of 7.9. She also has a patent and is the author of two books and book chapters. Also she has presented many papers in both national and international conferences.

cgarg72@gmail.com

Notes: