

# ASIA-PACIFIC DERMATOLOGY AND COSMETOLOGY CONFERENCE

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### **Glutathione as a skin lightening agent: Hot issues on safety and efficacy**

Nowadays, skin lightening merchandise is obtainable in the form of creams, pills, soaps or lotions. Sad to note that most are experience based and not evidence based. Mechanisms to achieve skin lightening include tyrosinase, peroxide inhibition, scavenging of reactive oxygen species and the use of agents against melanogenic inflammatory response. However, the mainstay of skin lightening is of course the regular use of sunscreens. Glutathione is a ubiquitous compound containing a biologically active Sulfhydryl (SH) group found in our bodies. Fruits and vegetables are good dietary sources of glutathione. Glutathione as a master antioxidant helps promote skin whitening. Acting as a primary anti-aging factor, it promotes a longer and healthier life, protects us from harmful free radical damage, supports the immune function, acts as a gate keeper for lungs and gut, detoxifies the body of noxious chemicals, helps to protect against alcohol, tobacco damage and abuse. It can regenerate spent vitamins C & E in the body. Until recently, the mechanism of action of glutathione as a skin whitening agent was unknown. (1) Direct inactivation of the enzyme tyrosinase by binding with the copper-containing active site of the enzyme, (2) mediating the switch mechanism from eumelanin to pheomelanin production, (3) quenching of free radicals and peroxides that contribute to tyrosinase activation and melanin formation and (4) modulation of depigmenting abilities of melanocytotoxic agents. These concepts supported by the various experimental evidence presented form basis for future research in the use of glutathione in the treatment of pigmentary disorders. Hot issues on IV glutathione, push or drip, topical route will be dispelled. Handog EB, Datuin MSL, Singzon IA, did an open-label, single-arm trial of 30 Filipino females (Fitzpatrick skin types IV or V) receiving a glutathione-containing lozenge daily for 8 weeks. The authors found a significant decrease in melanin indices from baseline to end point. No serious adverse events and laboratory examination findings remained normal.

### **Biography**

Evangeline B Handog has completed her FPDS and she is the First Woman President of the International Society of Dermatology. She is the Chair of the Department of Dermatology of Asian Hospital and Medical Center in Alabang, Muntinlupa City. She is a Volunteer Consultant at the Research Institute for Tropical Medicine where she heads the Cosmetic Dermatology Unit. Her interest is in pigmentary conditions, particularly melasma and vitiligo is evident in her researches and recently launched book, *Melasma and Vitiligo in Brown Skin* (Springer).

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