Background and different treatment modalities for melasma: Conventional and nanotechnology-based approaches

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Abstract

"Extensive melanin production and accumulation inside the skin may result in a number of disorders, among which is acquired hyperpigmentation, such as melasma. Skin hyperpigmentation is attributed to either the increase in the number of melanocytes or the hyperactivity of melanogenic enzymes. Genetic susceptibility, ultraviolet radiation, hormonal remedies as well as the abnormal release of the Ŭ-melanocyte stimulating hormone (Ŭ-MSH) represent the provoking factors contributing to such disorder. On the account of their prominent localization in skin-exposed areas, hyperpigmentation may possess cosmetic and psychosocial relevance, and subsequently many efforts have been exerted to help rectify this skin disorder. The current review presents the approaches adopted to treat melasma. It also reviews the active molecules counteracting the melanogenesis process and the diverse nanotechnology-based delivery systems, which showed successful topical delivery of hypopigmenting agents for the treatment of melasma.
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