Structured Nanosystems for Dermal Delivery of Therapeutics: Options, Opportunities and Clinical Implications

Aims & Scope:

This thematic issue will describe with detail understanding of the structure, functions and role of skin and various skin diseases. However, various commercial formulations are available, but majority of conventional skin formulations (topical preparations) are intended to deliver the drug for a local, rather than a systemic action. At present, there is wide expansion of research into dermatologic treatment due to a critical need for newer therapeutic treatment options for treating complicating dermatologic diseases. This issue will focus mainly on the newer aspect in nanotechnology based approach that present the nanosystems as a carrier for drug delivery systems for managing the therapeutic outcome. Nanotechnologies are presently fit in various field, furthermore, the application of nanotechnology in the pharmaceutical field especially in dermal delivery that will be revolutionized the administration of drugs. The submitted article will also provide valuable information about recent innovation in regard to dermatological therapy with improvement in the dermal localization of bioactives into the affected skin region, via structured nanosystems that deliver the drugs directly to the target cells. After application, these nanocarriers can effectively penetrate through the stratum corneum into viable skin and accumulate at the target site. However, noteworthy uptake does occur after damage and in certain diseased skin. The continual progression of the nanocarriers for dermal drug delivery, new pharmaceutical products based on these colloidal nano-carriers could be expected to be marketed in the next future. Instead of this, it will also cover the nanocosmetics that have ability to enhance the permeability of the skin layers; a decrease the amount of active to have the same effect as a conventional cosmetic; protecting effects; improvement of the performance; a decrease the risk of irritation of the skin by a gradual release of the active; an excellent tolerability and, ultimately, an increase of compliance. One of the significant aspects is that accessing the drug amount that will reach inside the deeper layers of skin and this forms the basis
of pharmacokinetics of drug(s) in skin referred as dermatokinetics. The compilation will be more beneficial for understanding the basic principal between the interactions of nanocarriers and skin, skin lipid with the influence of particle composition on drug distribution within the skin strata. This thematic issue will accept submissions of comprehensive review papers on above mentioned topics / theme with their basics, modes of action, therapeutic values, various dermatological diseases treatment options, emerging innovations and up to date knowledge perspectives, which could lead to designing and development of effective therapeutics with usefulness and methodologies of dermatokinetics for nanocarrier-mediated topical delivery.

Key words: Skin, nanotechnology, drug delivery, topical delivery, dermatokinetics, nanocosmetics, nanocarriers, drug, therapeutic effect, local delivery

Subtopics:

- Antipsoriatic Therapy: Discovering New Horizons
- Tretinoin Nano Formulations for Topical Treatment of Acne
- Lipid based nanoparticles as carriers for dermal delivery of antioxidants
- Nanostructured Lipid Carriers: A Newer Paradigm in Topical Delivery for Dermal and Transdermal Applications
- Nanocarriers mediated topical drug delivery for psoriasis treatment
- Dermatokinetics as an important tool to assess the bioavailability of drugs by topical nanocarriers
- Challenges in Dermal Delivery of Therapeutic Antimicrobial Proteins and Peptides
- Nanosystems for skin delivery: from drugs to cosmetics
- Antioxidant Nanoplatforms for dermal Delivery: Melatonin.
- Lipidic Nano Architectures For The Dermal Delivery Of Bioactives

Schedule:

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