Penetration and permeation enhancers in topical delivery

The growing interest in transdermal, topical and subcutaneous drug delivery is a reflection of the industry’s quest for alternative routes of administration, much needed for the delivery of new chemical entities (biologics in particular) as well as for enabling and enhancing the drug pipelines for known compounds that stand to benefit from reformulation. Needle free passage of drugs to and across the skin layers is a significant challenge that necessitates appropriate vehicles enabling a) solubilisation and suspension of the active in the dose; b) facilitating passage of the active across the outermost layer and barrier function of the skin, the stratum corneum; c) permeation of the active in subsequent layers of the epidermis; and if the case may be, d) partitioning and diffusion of the active into the dermis thus reaching the systemic circulation. Supported by recent case studies, the aim is to present the rationale for selection and inclusion of unique penetration and permeation enhancers in topical formulation design.

Biography

Jasmine Musakhanian is Scientific & Marketing Director at the Pharmaceutical Division of Gattefossé USA. She has over 25 years of multi-disciplinary experience in excipients functionality and applications. A 1986 graduate of McGill University in human nutrition and food chemistry (MSc, Food Science) she first worked as research and teaching associate at McGill University. Later she held technical support positions with various excipients providers. Since joining the Gattefossé group in 1997, she has focused on lipid excipients and lipid based drug delivery systems for oral liquid and solid dosage forms as well as topical formulations. She is author of technical and scientific reviews; actively involved in scientific programming at AAPS and CRS; and is a frequently invited speaker at scientific meetings.

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