

Drug Formulation & Bioavailability Congress

September 05-07, 2016 Beijing, China

Vesicular nanocarriers designed for the topical treatment of psoriasis

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Psoriasis is a chronic inflammatory skin disease with unknown etiology. It affects significantly the quality of life of patients as much as other chronic diseases such as cancer or diabetes. Psoriasis therapy varies depending on its severity but there is still a need of more effective and safe treatments. Topical treatment is considered as first option to treat psoriatic skin. It offers targeted delivery to the dermis and epidermis with reduction of systemic absorption and consequently minimizing side effects. However, the skin represents an effective barrier in localized skin delivery. Thus, the available conventional formulations of anti-psoriatic agents suffer from the poor penetration through the skin, resulting in low topical bioavailability. Nanocarriers are promising approach, used largely in the last decades to improve the drawbacks combined with the conventional preparations. They provide controlled release of therapeutic agents into skin with localized effect by creating skin reservoirs. Vesicular systems such as liposomes, ultradeformable liposomes, ethosomes and transethosomes are developed as drug carrier systems to target lower layers of skin with new approaches based on modification of vesicle ingredients. These vesicular nanocarriers could enhance the deposition of drug into target sites of the skin layers, consequently topical bioavailability may also be increased and dosing frequency decreased. In this context, vesicular nanocarriers of selected lipophilic antipsoriatic drugs were developed to provide a targeted topical delivery for the treatment of psoriasis.

Biography

Sevgi Gungor is currently an Associate Professor of Pharmaceutical Technology at Faculty of Pharmacy, Istanbul University, Turkey. She is working as a Lecturer since 2004. She has also worked as a Visiting Scientist at University of Bath during 2005-2006 and 2007-2008. She has published more than 30 papers in peer reviewed journals, 7 book chapters in international books. She has given more than 50 oral and poster presentations in international conferences. Her research focuses on the enhancement of skin permeation of drugs with enhancers, colloidal, vesicular and micellar nanocarriers and iontophoresis, the characterization of skin transport mechanism of drugs and the development of innovative topical & transdermal systems.

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