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## Micelles as nanosized carriers for skin delivery of drugs

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Skin delivery of drugs is an alternative approach for the treatment of dermatological diseases due to its superiorities including, targeting the site of infection, reduction of the risk of systemic side effects, and enhancement of the efficacy of treatment. But, human skin is a well-organized membrane, and particularly its outermost layer, which is called as stratum corneum, is an excellent barrier to penetration of drugs across the skin. The efficiency of the topical therapy strongly depends on the penetration of drugs through the target layers of skin. Thus, the effective drug concentration levels in the skin should be achieved. In recent years, nanosized drug carriers have been widely investigated for delivery of drugs via skin. Polymeric micelles are of interest to both scientific and industry community due to their potential applications in drug delivery as nanosized drug carriers. They are assemblies of nanoscale size (25 to 150 nm) from amphiphilic block polymers. The polymer micelles characterize by core-shell morphology (internal core and external shell) formed through self-association of hydrophilic and hydrophobic block copolymers in water. Micellar carriers topically applied would have some superiorities such as improving solubility of hydrophobic drugs in the water, decreasing side-effects (irritation, etc.) of the drugs, keeping the drugs from environmental factors (oxidation, etc.), targeting of drugs into skin layers. Therefore, nanosized polymeric micelles could be considered as promising drug carriers for the effective treatment of dermatological diseases.

### Biography

Sevgi Güngör has completed her PhD in 2001 and worked Post-doctorate at Istanbul University (Turkey). She became a Lecturer at Istanbul University Faculty of Pharmacy in 2004. She has also worked as visiting Scientist at University of Bath in between 2005-2006; 2007-2008. She has published 30 papers in peer reviewed journals, 6 book chapters in international books. She has given more than 50 oral and poster presentations in international conferences. Her research focuses of the enhancement of skin permeation of drugs with enhancers, colloidal, vesicular, micellar nanocarriers, and iontophoresis; the characterization of skin transport mechanism of drugs; and the development of innovative topical & transdermal systems.

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