Shayan F Lahiji, J Pharm Drug Deliv Res 2017, 6:3 (Suppl)
http://dx.doi.org/10.4172/2325-9604.C1.018

Solvent-free lipophilic novel drug delivery system via dissolving microneedles

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Lipophilic drugs require hazardous organic solvents for their solublization which makes it difficult to produce a non-toxic drug for pharmaceutical market. Therefore, recently there were various researches regarding solvent free systems. In this study, we developed a solvent-free lipophilic drug delivery system via creating nano-sized colloidal structures and fabrication of dissolving microneedles (DMNs). DMNs are currently being used in various research fields such as vaccine delivery, cosmetic application and biological drug delivery. This delivery system provides advantages over topical application as well as hypodermic drug delivery systems, Here, we investigated effects of capsaicin on the mice with rheumatic arthritis by comparing DMN based solvent-free lipophilic delivery system and solvent-based system. Results showed a promising potential of our newly developed system compared with conventional systems used for solvent-free lipophilic drug delivery.

Biography

Shayan F Lahiji has completed his education at Yonsei University (Republic of Korea) with outstanding contributions to science and novel drug delivery systems. Due to his various achievements in science, he was invited to a wide range of conferences and congresses around the world to participate, present his scientific findings and share his knowledge of novel drug delivery systems with other scientists. He has been awarded for “best researcher, best research awards, best poster presentation, best academic poster and more”.

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