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Solid lipid nanoparticles based controlled drug delivery of Acyclovir

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Viral infection present on skin surface requires both systemic and tropical/transdermal due to lesser availability of drug at skin surface. Present study deals with the development of acyclovir containing solid lipid nanoparticles for transdermal/topical drug delivery. Solid lipid nanoparticles of acyclovir were prepared by ether injection method. Solid lipid nanoparticles were prepared by acyclovir, glyceryl mono stearate, brij 35, propylene glycol, liquid paraffin and double distilled water. Total five formulations i.e. F1 to F5 were prepared in different quantity of brij 35. All the solid lipid nanoparticles formulations were characterized on the basis of viscosity, electron microscopy, particle size by zetasizer, polydispersity index, encapsulation efficiency and *in vitro* drug release study. Viscosity of the formulation was found from 3190 to 3850 cp. Average size of solid lipid nanoparticles and polydispersity index of developed formulation F2 found to have 326 nm and 0.482 respectively, determined by zetasizer. Encapsulation efficiency of formulation F2 was found to have 68.34%. Formulation F1, F2 and F3 followed order release kinetics and formulation F4 and F5 followed Peppas-Korsmeyer.

Biography

Lavakesh Omray has completed his B Pharmacy, M Pharmacy and PhD from Dr. Harisingh Gour University, Sagar, India. Currently he is a Director at Radharaman Institute of Pharmaceutical Sciences, India. He is having 20 years of industrial and educational experiences.

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