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Floating capsules of Acyclovir with Piperine as a bioenhancer

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The aim of the present study was to formulate and characterize the capsules of acyclovir microspheres with piperine which were prepared by emulsification solvent evaporation method. Piperine was added to determine its effect on acyclovir bioavailability. The microspheres were characterized for size, shape, entrapment efficiency, *in vitro* drug release, and *in vitro* pharmacokinetic parameters. The morphological characterization of microspheres was done using a scanning electron microscope. The microspheres were spherical and had particle size in the range of 400 to 525 μm . The percent drug entrapment efficiency varied between $56.12 \pm 1.32\%$ to $87.32 \pm 5.28\%$. The drug release was decreased at higher polymer concentrations. Based on *in vitro* results, further *in vitro* studies were carried out on Sprague Dawley strain rats to evaluate the bioavailability of acyclovir. Nearly two times higher AUC₀₋₂₄ value of acyclovir-loaded piperine containing microspheres ($15614.13 \pm 6953.13 \text{ ng h ml}^{-1}$) was observed as compared to the drug solution ($7552.33 \pm 3219.09 \text{ ng h ml}^{-1}$).

Biography

Smriti Khatri has completed her MPharm from SGSITS College, Indore in 2003 and PhD from JNU, Jaipur in 2012. She is working as an Associate Professor in Ram-Eesh Institute of Vocational and Technical Education, Greater Noida, UP, India. She has teaching experience of more than 12 years and is an expert in the formulation of dosage forms, drug regulatory affairs and intellectual property rights. She has published more than 25 papers in international and national journals.

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