

(54) Title of the invention : ANDROGRAPHOLIDE AND PIPERINE LOADED HERBOSOMAL FORMULATION OF FOR ENHANCEMENT OF HEPATOPROTECTIVE AND ANTIOXIDANT ACTIVITY

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(57) Abstract :

Andrographis paniculata extract water-soluble show good pharmacological activity possesses low bioavailability. Andrographolide extract along with piperine (a nutraceutical bioenhancer) was formulated as a herbosomal formulation in the present study and investigated to resolve the poor solubility and enhance hepatoprotective and antioxidant studies of APLH (Andrographolide and piperine loaded herbosomes) complex. The APLH formulation analysed by the help of different evaluation parameter like entrapment efficiency, DSC, SEM, zeta sizer , PDI, Zeta potential, In-vitro drug release kinetics, Ex-vivo permeation studies of APLH lipid complex, antioxidant, and In-vivo hepatoprotective studies. The APLH formulation particle size, PDI, zeta potential and entrapment efficiency were found to be 393.21, 0.334, -30, 82.21% and DSC demonstrated that APLH interact physically with lipid within the herbosomes. Formulation also exhibited a significantly prolonged release of APLH lipid complex in dissolution studies. APLH formulation has shown good antioxidant activity than Andrographolide and Piperine Pure Mixture, APLH formulation has shown more prolonged liver protective activity on the basis of their SGOT, SGPT, ALP and total bilirubin. The APLH formulation has a sustained releasing feature, which means it has the potential to work for a long time inside the body. The results of the study have shown that formulation can improved with poor solubility, permeability, and hepatoprotective efficacy when compared to pure extract and showed better result than standard drug silymarin. The study shows that phospholipid-based APHL lipid complex is a promising and viable strategy for improving the delivery of herbal extract with poor bioavailability.

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