

Special Issue: NCNN-2014

(National Conference on Nanoscience and Nanotechnology - 2014)

Optimization of Lipid Concentration for the Development of Anticancer Agent Based Ethosomal Formulation

Rakesh Raj*, Pooja Mongia Raj and Alpana Ram

Institute of Pharmaceutical Sciences, Guru Ghasidas Vishwavidyalaya Bilaspur C.G., India, E-mail: rakeshraj82@gmail.com

www.peertechz.com

Cancer is the major drastic disease in present scenario. Skin cancer generally treated by conventional cream that leads skin irritation and low therapeutic effect. Development of vesicular carrier for the enhancement of transdermal flux is the major concern towards non invasive approach. In this study we developed lipid based elastic carrier using soya phosphatidyl choline, ethanol and 5-fluoro uracil as model drug. Developed carrier was characterized for vesicle size, size distribution and zeta potential. Transmission electron microscopy was used to estimate surface morphology. Entrapment efficiency of the prepared carrier was evaluated by sephadex G50 column method. Results showed spherical, unilamellar structures with low polydispersity, nanometric size and improved entrapment efficiency over other delivery formulations. *In-vitro* drug release studies revealed that initial burst release and then controlled release of bioactive. *In vitro* studies of 5-fluoro uracil across dialysis bag resulted in enhanced flux from elastic liposomes that was significantly ($P < 0.05$) greater than that with ethanolic drug solution, conventional liposomes or plain drug solution. Optimized formulation for *in-vitro* cell line study is selected for further studies and is under process.

Keywords: Ethosome, 5-Fluoro uracil, Transdermal delivery, *In vitro* release