# Gelatine Based Nanoparticles as Drug Delivery System of Lornoxicam Gel

*Mona El Assal*

**Abstract**

Abstract:
The purpose of contemporary study was to project GNP by using of two step desolvation method. Biodegradable hydrophilic gelatin nanoparticles used as a delivery system of anti-inflammatory lornoxicam after gel formulation using each of hydroxyl propyl methyl cellulose (HPMC) and carbopol as gelling agent. The size and shape of the nanoparticles were examined by optical microscope and transmission electron microscopy, particles with a mean diameter of 240.6 nm and 0.1 poly dispersibility index PDI were produced and the percentage of entrapment efficiency was found to be 87.1%. The optimum amount of LOR loading was obtained. Four formulas were prepared F1 standard LOR carbopol gel, F2 standard LOR HPMC gel, F3 GNP ïLOR containing carbopol as gelling agent and F4 GNP ïLOR which has HPMC as gelling agent are GNP-LOR gel. Permeation of drug through membrane was determined by Franz diffusion cell. Further stability studies were carried out at 4Co for a period of 8 weeks. Vivo study was carried on white albino male rats to compare between different lornoxicam gel formulations. Conclusion: Results show that the two step desolvation is an appropriate method for preparing GNP. LORF3 which has carbopol as gelling agent was of lower release rate with maximum % inhibition of edema.

*International Journal of Pharmaceutical Sciences Review and Research 2016, October*