Mokale Vinod J et al., J Anal Bioanal Tech 2014, 5:4
http://dx.doi.org/10.4172/2155-9872.S1.019

OMICS Group Conferences
Accelerating Scientific Discovery

5th International Conference and Exhibition on
Analytical & Bioanalytical Techniques
August 18-20, 2014 DoubleTree by Hilton Beijing, China

Formulation and optimization of proniosomes of famotidine: An *in-vitro* and *ex-vivo* study

Mokale Vinod J, Naik Jitendra B, Patil Harshada I, Patil Ajit P and **Shirude Priyanka R**
North Maharashtra University, India

The aim of study was to develop proniosomal system for famotidine, a potent H2 receptor antagonist that could efficiently deliver entrapped drug over prolonged period of time. The Proniosomal system was formulated by selecting various ratios of span 60 and cholesterol using coacervation-phase separation method. The formulated systems were characterized for drug excipient compatibility studies by FTIR, vesicle size determination by particle size analyzer, % drug encapsulation, drug release profiles, FESEM for surface morphology, XRD and vesicular stability at different storage conditions. By using this method, the % drug loading resulted by encapsulation of proniosome was found to be 78-89%. Increase in cholesterol and surfactant concentration increases encapsulation efficiency but further increment decreases encapsulation. *In vitro* drug release studies showed prolonged release of entrapped famotidine. The highest % cumulative drug release was achieved in formulation FAM2 (96%) in 24 hr. The *ex vivo* data of release of famotidine from proniosomal formulations have shown significantly increase percent release & flux with comparison to same dose of marketed preparation of famotidine. Stability studies were carried out at refrigerated conditions, higher drug retention was observed. It is evident from this study that proniosomes are a promising prolonged delivery system for famotidine and have reasonably good stability characteristics.

mokalevinod@gmail.com