

# Liposome Encapsulation: A Promising Approach to Enhanced and Safe Mefenamic acid Therapy

Qais B. Jarrar, Zuraini Ahmad, Arifah Abdul Kadir, Zainul Amiruddin Zakaria and Muhammad Nazrul Hakim

**Abstract** — Mefenamic acid (MEF) is a non-steroidal anti-inflammatory drug (NSAID) characterized by low bioavailability with relative high toxicity. Despite the efforts which have been paid to enhance its bioavailability, its inherent toxicity remains the limiting factor for its medical uses. Designing MFE as a prodrug of ester derivatives can attenuate gastrointestinal (GI) toxicity, but shows no advantages in term of therapeutic efficacy. Liposomes have a dual action and would be a promising tool to enhance MFE bioavailability and reduce its gastric and systemic adverse reactions. This review covers the pharmacological and toxicological aspects of MFE and provides substantial trend to enhance its clinical therapy.

**Keywords** —Bioavailability, Mefenamic acid, Proliposome, Phospholipids, Toxicity