



Preparation and Characterization of Rosuvastatin Calcium Nanoemulsions

Manish K. THIMMARAJU ¹, Vidyasagar RAMAGIRI ¹, Khaggeswar BHEEMANAPALLY ¹,
Soumya BOJJA ¹, Venu KOLA ¹, Raghunandan NERELLA ¹ & Mahendran BOTLAGUNTA ²

¹ *Balaji Institute of Pharmaceutical Sciences, Laknepally, Warangal, Andha Pradesh, India.*

² *Biomedical research Laboratory, Department of Biotechnology,
K L University (Koneru Lakshmaiah Education Foundation) Vaddeswaram,
Guntur 522 502, Andha Pradesh, India.*

SUMMARY. Rosuvastatin calcium is a lipid lowering drug molecule and the bioavailability of this drug is very poor. To identify a new drug released system and to improve its water solubility, we have developed stable emulsions using various oil phases, surfactants and cosurfactants. Among others, Capmul MCM C8 EP oil and surfactant Poloxamer 407 showed the highest solubility in RST than others. Drug loading and dissolution parameters were analyzed using HPLC method. Results showed that Capmul PG 8 NF with Poloxamer 188 and Labrafil M 2130 CS was found to be most stable nanoemulsion. The mean diameter of globule for these formulations were 189 ± 16.65 , 198 ± 10.76 , and 193 ± 8.63 nm.

KEY WORDS: Bioavailability, Formulation, Nanoemulsion, Oral, Rosuvastatin calcium.

* Author to whom correspondence should be addressed. *E-mail:* bmnchowdary@gmail.com