



Studies on *In-Vitro* Transcutaneous Delivery of Losartan Potassium, Influence of Penetration Enhancers and Barrier Membrane

Kailash C. PETKAR ^{1*}, Yogesh V. PORE ² & Bhanudas S. KUCHEKAR ³

¹ Pharmacy Department, M.S. University of Baroda, Vadodara, 390002, Gujarat, India

² Department of Biopharmaceutics, Government College of Pharmacy, Karad, India

³ Maharashtra Institute of Technology, MIT campus, Paud Road, Pune, India

SUMMARY. Formulation and *in vitro* evaluation of losartan potassium (LP) loaded transdermal delivery system (TDS) was investigated for controlled release and improved therapeutic efficacy. TDS (patches) were prepared by varying the composition of Eudragit RL 100 and Eudragit RS 100 (5:0, 4:1, 3:2, 2.5:2.5, 2:3, 1:4 and 0:5). Patches were evaluated for thickness, content uniformity, mechanical properties, moisture uptake and *in vitro* drug release. Technological parameters for all the formulations were found to be within the limit. *In vitro* studies showed relatively high permeation of LP (F1- 42.17 ± 1.13 %) from the formulation comprising 4:1 ratio of polymer. Inclusion of capsaicin (55.70 ± 1.55 %) and pluronic F-68 (70.88 ± 1.20 %) to formulation F1 resulted increased permeation of LP across human skin. In conclusion, this study demonstrated the potential of simple transdermal adhesive patch incorporating LP to deliver therapeutically useful dose *in-vivo* for the treatment of hypertension.

KEY WORDS: Capsaicin, Eudragit, Losartan potassium, Pluronic F-68, Sex, Skin, Transdermal delivery.

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