

Dua K. Application of model independent approach on *in vitro* release of extemporaneously prepared semisolid formulations containing metronidazole with marketed silver sulfadiazine 1% cream, USP: A comparative investigation. *Bull. Pharm. Res.* 2013;3(1):1-5.

Abstract: In an attempt for better treatment of bacterial infections, various semisolid formulations containing 5% w/w of metronidazole were prepared and evaluated for *in vitro* drug release and *in vitro* skin permeability using dialysis membrane and rat abdominal skin respectively using model independent approach. The f_1 lower than 15 and f_2 higher than 50 indicated similarities in the *in vitro* diffusion and permeation profiles of the extemporaneously prepared selected semisolid formulations and marketed silver sulfadiazine 1% cream, USP. Amongst all the semisolid formulations prepared, carbopol gel base was found to be most suitable dermatological base for metronidazole and the results obtained for *in vitro* diffusion and *in vitro* skin permeation studies are comparable with that of marketed silver sulphadiazine 1% cream, USP.

Key words: Semisolid formulation, Ointment, Metronidazole, Silver sulfadiazine.

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*Author to whom correspondence should be addressed:

Dr. Kamal Dua (kamalpharmacist@gmail.com)

Department of Pharmaceutical Technology, School of Pharmacy and Allied Health Sciences,
International Medical University, Bukit Jalil, 57000 KL, Malaysia

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