



Transdermal Delivery of Probenecid: the Effects of Vehicles and Enhancers on Permeation Through Pig Skin

Lucía LHEZ ^{1*}, Daniel A. ALLEMANDI ², Santiago D. PALMA ²,
Nora B. PAPPANO ¹ & Nora B. DEBATTISTA ¹

¹ Facultad de Química, Bioquímica y Farmacia. Universidad Nacional de San Luis.
Lavalle 1155, 5700 - San Luis. Argentina.

² Facultad de Ciencias Químicas. Universidad Nacional de Córdoba.
Ciudad Universitaria 5000 - Córdoba. Argentina.

SUMMARY. Vehicles and enhancers effect on *in vitro* probenecid permeation through dermatomed abdominal pig skin was investigated. The permeability of different probenecid percentages dispersed in vehicles as vaseline, carbopol/ethanol/water and carbopol/propylene glycol was tested. The 1.3% L-menthol addition, as permeation enhancer, over probenecid/vaseline formulations showed the highest values for both, flux and permeation coefficient. Permeation experiments of the probenecid formulations in carbopol/propylene glycol showed that the carbopol/probenecid concentration relation is the most important issue to be considered. Comparatively to lipophilic vehicle (vaseline), carbopol dispersions seen to be more convenient as vehicle for topical administration of probenecid. The results obtained from this study may be helpful in the development of a probenecid transdermal drug delivery system.

KEY WORDS: Abdominal pig skin, Enhancers, Probenecid permeation, Transdermal delivery system.

* Author to whom correspondence should be addressed. E-mail: llhez@unsl.edu.ar