Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **31** (6): 835-43 (2012)

Regular Article
Received: April 24, 2012
Revised version: July 16, 2012
Accepted: July 17, 2012

Pharmacological Evaluation of Two Liposomal Doxorubicin Formulations

Luis A. MEDINA [1,3]*, Lizbeth MARTÍNEZ-ACEVEDO [1,3],
Carlos JUÁREZ-OSORNIO [1,3], Patricia GARCÍA-LÓPEZ [2],
Jazmin M. PÉREZ-ROJAS [2], Rafael JURADO [2] & Héctor VÁZQUEZ-BECERRA [1,3]

[1] *Instituto de Física, Universidad Nacional Autónoma de México, México, D.F. 04510, México.*
[2] *Instituto Nacional de Cancerología, Subdirección de Investigación Básica, México D.F. 14080, México.*
[3] *Unidad de Investigación Biomédica en Cáncer INCan-UNAM,*
Instituto Nacional de Cancerología, México D.F. 14080, México.

***SUMMARY*. Two liposomal formulations of doxorubicin (Caelyx® and Doxopeg®) were evaluated for phospholipid content, doxorubicin concentration, liposomal size, zeta potential, osmolarity, phospholipid peroxidation, *in vitro* release of the drug, pharmacokinetic profile, and cytotoxicity in cancer cell cultures. Phospholipid concentration was not statistically different between formulations. Doxorubicin concentration was in the range of 2.0 mg/mL. Size and zeta potential were in the order of 80 nm and -37 mV, respectively. Osmolarity and peroxidation in both formulations was similar and the *in vitro* drug release assay indicated minimal release (2 %) of the doxorubicin content after 48 h. Pharmacokinetics parameters in both formulations were very similar and no statistical difference was observed between them; the effect on the growth inhibition in cell lines was also not different. Caelyx® and Doxopeg® are similar in terms of its composition, physical parameters, stability, pharmacokinetics and growth inhibition in cancer cell lines.**

KEY WORDS: Doxorubicin, Doxopeg®, Caelyx®, Liposomes.

* Author to whom correspondence should be addressed. *E-mail:* medina@fisica.unam.mx