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Membranes affinity of hydroxycamptothecins, anticancer agents, determined by fluorescence spectra analysis

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Keywords

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Abstract

In this paper the method of determination of membranes affinity of hydroxycamptothecins is described. Under physiological conditions hydroxycamptothecins easily hydrolyze and convert into inactive carboxylate form. The process of deactivation is inhibited when the molecules of drug are bound to cell membranes so it is desirable that hydroxycamptothecins molecules bind easily to membranes. A quantitative measure of drugs affinity to membranes is the association constant. To determine this parameter the small unilamellar liposomes are used as model membranes. The affinities of 10-hydroxycamptothecin, SN-38 and DB-67 to membranes are determined. The association constants are calculated on the basis of changes of fluorescence spectra.



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