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Formulation and evaluation of camptothecin suppository as drug delivery for colorectal cancerFatmi Sofiane^{1,2}, M Iguer-Ouada², M Lahiani-Skiba¹ and M Skiba¹¹ Rouen University, France² Abderrahmane-Mira University, Algeria

The aim of the present work is to design and evaluate suppositories of camptothecin, an anticancer agent. Rectal suppositories of camptothecin alone, in binary systems (dispersed in PEG 6000 and complexed with cyclodextrin) and ternary systems (camptothecin complexes dispersed in PEG 6000) were prepared using various hydrophobic and hydrophilic polymeric bases like Semi-synthetic glyceride (Suppocire® AM Pellets) and polyethylene glycols (PEGs) mixtures. The obtained formulations were evaluated by various physical parameters like weight variation, drug content, hardness and liquefaction time. *In-vitro* release study was performed in USP type I apparatus using phosphate buffer pH 7.2 as dissolution media. The suppositories prepared were within permissible range of all physical parameters. *In vitro* drug released from water soluble base (PEG) was greater than that from oil soluble base, to reach ninety percent (90%) of drug dissolution. It is also established that the drug release from all the formulations is by diffusion mechanism ($r = 0.9547$ to 0.9967) according to Higuchi's equation. This work offers a new approach to colorectal cancer treatment.

Biography

Fatmi Sofiane has completed his PhD at the age of 34 years from Abderrahmane-Mira University and postdoctoral studies from Abderrahmane-Mira University. He has published more than 7 papers in reputed journals:

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