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Effects of ethyl cellulose & hydroxy propyl methyl cellulose polymer on the release profile of diltiazem hydrochloride sustained release pellets

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In the present study, the effect of cellulose polymers Ethyl Cellulose & Hydroxy Propyl Methyl Cellulose, was evaluated on the release profile of drug from sustained release pellet. Diltiazem Hydrochloride, an antihypertensive, cardio protective agent and slow channel blocker was used as a model drug to evaluate its release characteristics from different pellets formulations. Diltiazem Hydrochloride sustained release pellets were prepared by drug loading (drug binder suspension) on neutral pellets followed by different percentages of spraying, i.e. 2%,4%, 6%, 8% and 10% coating suspension using ethyl cellulose & hydroxy propyl methyl cellulose polymer in a fixed 85:15 ratios respectively. The in vitro dissolution studies of Diltiazem Hydrochloride from these sustained release pellets were carried out in pH 7.2 phosphate buffer for 1,2,3,4,5,6,7 and 8 hrs using USP-I method. Statistically significant differences were found among the drug release profile from different formulations. Polymer content with highest concentration of Ethyl cellulose on the pellets shows highest release retarding rate of the drug. The retarding capacity decreases with the decreased concentration of ethyl cellulose. The release mechanism was explored and explained with zero order, first order, Higuchi and Korsmeyer's equations. Finally the study showed that the profile and kinetics of drug release were functions of polymer type, polymer concentration & the physico chemical properties of the drug.

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Control and comparision of irratic proliferation of leukemia cells from the bone marrow and peripheral blood by bark powder of walking mango tree and normal mango tree

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Control and comparision of irratic proliferation of leukemic cells from bone marrow and peripheral blood by bark powder of walking mango tree and normal mango tree. The aim of our study is to check whether the bark of the walking mango tree(mangifera indica) or normal mango tree exhibit any control on the proliferation of malignant leukemic cells in bone marrow and peripheral blood. Bone marrow and the peripheral blood sample containing more number of leukemic cells were collected from M.S.Ramaiah Hospital and with the standard values of the samples were incubated for 24 hours with 0.5gms of bark powder of walking mango tree and normal mango tree and parallely control samples were maintained without the bark powder for both. The result shows that in the control 100% increase of cells were noticed in both walking mango tree and normal mango tree plateswhereas in the bone marrow after 24 hours of incubation only an average of 4 cells were remaining and peripheral blood sample only 2 cells on average of cells were remaining in walking mango tree plates and in the normal mango tree plates there was an increase of cells in plate. So it is recorded that both bone marrow and peripheral blood the samples of walking mango tree bark powder plates shows total 98-99% inhibition of proliferation of leukemic cells whereas in normal mango bark plates there was absolutely no decrease in cells this will be discussed in the paper.

Biography

Shirisha.N.S studying BSc(biotechnology,microbiology,chemistry) final year(Vth sem) in M.S.Ramaiah College of Arts,Science and Commerce,Bangalore. I have done very few and small projects and I have presented those papers in National and International Conferences. I got chance in doing 4 powerpoint presentations and 10 poster presentation. Am still continuing my work under the guidance of prof. Dr. Geetha vishwanathan.

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