ABSTRACT BOOK

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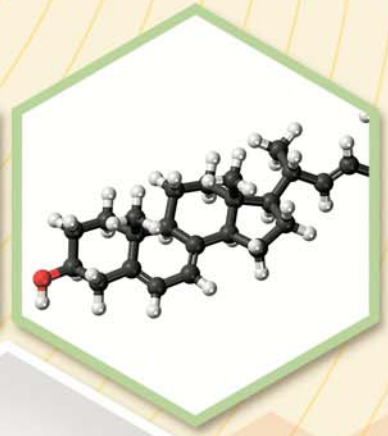

management of chronic and acute surface wounds especially in underdeveloped SOUTH-EAST ASIAN region.

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SOLID STATE MANIPULATION OF TELMISARTAN WITH ALUMINUM HYDROXIDE: AN ASSESSMENT OF BIOPHARMACEUTICAL PROPERTIES AND ITS PHYSICAL STABILITY

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The aim of the present research work is to improve the biopharmaceutical properties as well as physical stability of telmisartan via mechanochemical activation with aluminum hydroxide. Telmisartan was milled in its solid state with aluminum hydroxide and investigate the affinity between a carboxylic model drug telmisartan and aluminum hydroxide. Telmisartan and telmisartan-aluminum hydroxide blend were characterized by different analytical studies and examine the extent of transformation of telmisartan crystalline state to amorphous state. Solubility study revealed that when telmisartan was milled with aluminum hydroxide, more than 20 folds improvement in solubility of pure drug was observed. *In-vitro* release study showed greater dissolution of telmisartan from telmisartan-aluminum hydroxide milled powder as compared to pure drug. FTIR study revealed that when telmisartan was milled with aluminum hydroxide, the free acid carbonyl peak of telmisartan at 1723.17 cm^{-1} was disappeared and a new carboxylate peak at 1582.13 cm^{-1} was appeared and this may be an indication of an acid-base reaction between the carboxylic acid of telmisartan and aluminum hydroxide. DSC study stated that in the milled samples, the melting endotherm of telmisartan was gradually shifted to lower temperature and the intensity as well as sharpness of the endotherm was decreased. XRD and SEM studies revealed complete amorphization of telmisartan on milling with aluminum hydroxide for 2 h at 2:1 ratio. Stability study revealed that on storage also telmisartan-aluminum hydroxide bound state was physically stable and the amorphous state of telmisartan in milled powder was unchanged.

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DUAL ROLE OF ANANDAMIDE IN THE ANTIEPILEPTIC ACTIVITY OF DIAZEPAM

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Anandamide is an endogenous ligand for transient receptor potential vanilloid receptor type 1 (TRPV1) and cannabinoid type 1 (CB_1) receptor. At a higher dose it activates TRPV1 producing pro-convulsant effects while at lower dose anticonvulsant effects are profound via CB1. It could be contemplated that change in concentration of endogenous anandamide might consequently, influence the antiepileptic activity of a drug. The present study was undertaken to investigate the influence of high and low dose of anandamide in the anticonvulsant action of diazepam against pentylenetetrazole (PTZ)-induced seizures in mice. The experiments were carried by i.c.v. administration of anandamide, (1, 10, or 100 µg/mouse), AM404 (anandamide transport inhibitor), URB597 (fatty acid amide hydrolase inhibitor), capsaicin (1, 10, or 100 µg/mouse) or capsazepine (a TRPV1 antagonist: 10, or 100 µg/mouse) either alone or in combination with diazepam in Swiss male mice of 20-25g against a subconvulsive dose of pentylenetetrazole. Anticonvulsant effect at low dose (10 µg/mouse) of anandamide, AM404, URB597, and capsazepine (10, or 100 µg/mouse) augmented the anticonvulsant effect of diazepam, while proconvulsant effect at high dose (100 µg/mouse) of anandamide, AM404, URB597, and capsaicin (1) attenuated the protective effect of diazepam against PTZ-induced seizures. The anticonvulsant effect of diazepam was abolished in presence of capsaicin and AM251, a CB1 antagonist, at a dose, inactive per se. Thus, our data indicate that endogenous anandamide might influence the anticonvulsant effect of diazepam either activating TRPV1 or CB_1 receptor.