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Formulation and evaluation of perindopril transmucosal drug delivery system

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Perindopril erbumine is an ACE inhibitor, used in treatment of hypertension. There are certain inherent drawbacks associated with this drug like shorter biological half life, undergo first pass metabolism, poor bioavailability. So this drug needs an alternative drug delivery system to conventional formulations. Perindopril buccoadhesive films were prepared by using HPMCK15M, Gantrez, Sodium alginate, polycarbophil mucoadhesive polymers. The physicochemical interaction between drug and polymers were investigated by DSC and FTIR. Prepared films were evaluated for their physicochemical properties, bioadhesive strength, *in vitro* dissolution studies, ex vivo permeation studies. The ex vivo permeation studies were carried out across pork buccal mucosa using Franz diffusion cell. Residual solvent concentration was determined by gas chromatography. The formulations showed satisfactory physicochemical characteristics. DSC and FTIR studies revealed no interaction between drug and polymer. All formulations showed sustained release over a period of 12 hours. By fitting the data into zero order, first order, Higuchi model and Peppas model, it was concluded that drug release from films followed Peppas model and the mechanism of the drug release was found to be non fickian diffusion. Stability studies of optimized formulation were carried out at 40°C/75% relative humidity. The formulation was found to be stable over a period of 3 months with respect to drug content and ex vivo permeation through porcine buccal membrane.

Biography

P. Subhash Chandra Bose has completed his M. Pharm from JSS College of Pharmacy, Mysore (Rajiv Gandhi University of Health Sciences). He is having 3 years industrial experience and 4 years experience in academics. He is doing Ph D in the area of "Buccal mucoadhesive drug delivery systems" in centre for pharmaceutical sciences, JNTUH, Hyderabad. He has published 11 papers in reputed journals and also presented more than 40 papers in various national and international conferences/ seminars. He is Life Member of APTI.

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Anti inflammatory activity of ethanolic and methanolic extracts of stem bark of plumeria acutifolia. poir

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To evaluate the anti inflammatory activity of ethanol and methanol extracts of stem bark of Plumeria acutifolia. Poir in albino wistar rats. Methods: The activity was evaluated by using acute inflammatory model: Carrageenan induced paw edema and chronic model: cotton pellet granuloma methods with the standard reference of diclofenac sodium (5 mg/kg p.o). The acute toxicity study as per OECD was performed with the extracts; both extracts showed no toxicity signs up to the level of 2000 mg/kg. Results: Both ethanol and methanol extracts (250 & 500 mg/kg p.o) exhibited significant ($P<0.01$) dose dependent protective effect against inflammation. Anti inflammatory activity of ethanol and methanol extracts of stem bark may be due to the inhibition of various inflammatory mediators and may be related to inhibition of the early phase and late phase of inflammatory responses. Hence present investigation established some pharmacological evidences to support the folklore claims that Plumeria acutifolia. Poir is used as anti inflammatory agent.