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FORMULATION AND EVALUATION OF NANOPARTICLES CONTAINING ANTI-COVID DRUGS FOR CONTROLLED DRUG RELEASE

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Abstract

Favipiravir belongs to Biopharmaceutics ClassificationSystemClassIdrugthathashighersolubilityandhigher permeability. The drug needs to be administeredfrequently(2-3timesaday)total1800mgdrug/dayandalsohave shorter half life it means the drug is eliminatingfromthebodyin2-4.5hrs.Thepresentstudywastoovercomethehalflife of favipiravir . So, it is formulated intonano-particleswerepreparedusingahydrophobicpolymer-ethylcelluloseby modified solvent evaporation technique.Optimizedformulationwasselectedandpreparedintoatabletformulations using different excipients which controlthedrugrelease.Thefavipiravirloadednanoparticlesweresentto(FT-IR)studies and it shown the absence of interactionsofdrugwithotherexcipientsandalsootherstudieslikeDSC,SEM.Attheendof the 10th hour, F1-F6 formulationsreleased84.71%–96.43%ofthedrug.AmongalltheformulationsF6waschosenasa best formulation and used toprepareavariouscontrolledreleasetablets.Basedonmanyevaluationstudies,thebest tablet formulation was chosen. The in vitro dissolution drugreleaseofdrugwascontrolledoverextendedperiodoftimewhichwasaffectedbythe polymer and its amount of polymer.

Keywords: Nanoparticles , favipiravir , Ethyl cellulose, controlled release, covid -19

Bio graphy

S.Abhishek has his own experience in valuation and passion for ML and data. The research team built this model after many years of experience in research, evaluation, work in both hospitals and scientific laboratories. This approach meets all the requirements for precise, specific, sensitive diagnostics.

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