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Gaba containing polymeric nanoparticulate system for brain delivery

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Gamma aminobutyric acid (GABA) is a key neuro transmitter which is widely distributed in the central nervous system, where it usually inhibits impulse transmission. A number of study is being performed on epilepsy, inhibition of γ -amino butyric acid (GABA) synthesis, blockage of release or postsynaptic reaction were determined to provoke convulsions. Decrease in GABA concentrations in cerebrospinal fluid was seen with GABA concentrations in brain nerve terminals, febrile convulsions and patients resistant to epilepsy treatment. Several new approaches are being developed in an attempt to increase the entry and persistence of antiepileptic agents in the brain. One of the main strategy is polymeric nanoparticles for the treatment of epilepsy. In this study, GABA was successfully incorporated into unique polymeric nanoparticles prepared with reverse emulsion polymerization method depending on the most recent epilepsy theory related to GABA. Thermal analyses, particle size, zeta potential, thermal study, X-ray diffraction, infrared analyses, drug loading and *in vitro* release studies were performed on nanoparticles prepared.

Biography

G Yurtdaş Kirimliođlu completed her MSc thesis on Pharmaceutical Technology about inclusion complexes with antifungal active agent in 2010. She is currently a final year PhD research student in Department of Pharmaceutical Technology at Anadolu University. Her researches focuses on novel technologies to enhance drug delivery. Since 2009 she has been working as an Research Assistant at the same Department at Faculty of Pharmacy in Anadolu University.

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