

عنوان مقاله:

Baicalein incorporated nanoliposome disaggregates alpha-synuclein fibrils

محل انتشار:

بیستمین کنگره ملی و هشتمین کنگره بینالمللی زیستشناسی ایران (سال: 1397)

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خلاصه مقاله:

The aggregation and oligomerization of alpha-synuclein (α -Syn), a protein which is available at high concentration in the brain's neuronal cells, is believed to play an important role in the pathology of Parkinson's disease. There are several molecules which have the potential to inhibit aggregation but a few could depolymerize mature fibrils. Baicalein, a small molecule derived from Scutellaria baicalensis Georgi, showed to have potential to inhibit fibrillization. Nevertheless, its low solubility and stability disrupt its function in the body fluid. Nowadays, using nanoparticles as candidates for drug delivery is welcome worldwide as they can unravel some problems regarding drugs characters like their high hydrophobicity, instability and low solubility in physiological fluids. Herein, we report on the potential of baicalein incorporated nanoliposome (NLP-Ba) to disaggregate/depolymerize α -Syn aggregates in vitro. The protein was undertaken during the fibrillation process and the adopted mature fibrils were exposed to NLP-Ba either without or with or shaking. NLP-Ba showed to have high potential to depolymerize fibrils by using ThT fluorescens intensity and FPLC (SuperoseTM 6 10/300 GL, Prep Grade column). This result demonstrated that the potential of baicalein in the NLP could still be preserved. This study could open a new avenue in using potential but unstable drug in neurodegenerative diseases

کلمات کلیدی:

Alpha-synuclein, Baicalein, Nanoliposome, Parkinson's disease

لینک ثابت مقاله در پایگاه سیویلیکا:





