

عنوان مقاله:

Investigating the interaction of several herbal extracts with α -synuclein by surface plasmon resonance

محل انتشار:

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خلاصه مقاله:

proteins under particular conditions convert into highly ordered fibrillar aggregation from their native conformation; that are described as amyloid fibrils. α -Synuclein is a small natively unfolded protein that its fibrillation is the causative factor of Parkinson's disease. The previous studies indicate some particular compounds such as flavonoids are able to prevent the fibril formation. In this study the effect of few herbal extract (Berberis , Quercus robur, Zizyphus vulgaris, Salix aegyptica) that reported containing flavonoids, were investigated on α -Synuclein fibrillation by ThT fluorescence and the results were confirmed by Surface plasmon resonance. Therefore α -Synuclein was expressed, purified and concentrated to 2.2 mg/ml. subsequently the anti-amyloidogenic effects of extracts were analyzed using thioflavin T (ThT). The results showed that Berberis and Salix aegyptica extract could decrease the ThT fluorescence that represents the fibrillization has been decreased. To confirm these results, Surface plasmon resonance (SPR), a label free biosensor technique was also used.

کلمات کلیدی:

α -Synuclein, amyloid fibril, herbal extract, ThT fluorescence, Surface plasmon resonance

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