

Anti bacterial and anti Alzheimer effects of caffeine by inhibiting the production of Nanobiofibrils amyloid

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Abstract Introduction: Alzheimer's disease (AD) is a neurodegenerative disorder with an increase in amyloid- β (A β) in the brain and cognitive impairment is progressive. Can A β dimers, oligomers and fibrils are collected, and these materials can be toxic. Caffeine, the most natural stimulant and psychedelic, with a variety of neurological disorders, such as sleep deprivation, alcohol consumption, diabetes, Parkinson's disease, and Alzheimer's disease is less. For this reason, in this study the effects of caffeine anti-Microbial and anti-Alzheimer's disease amyloid was evaluated by inhibiting the production Nano fibrils. **Methods:** In this study, the caffeine tea extract and its components by gas chromatography mass (GC mass) were evaluated. The antibacterial activity of the extract method of determining the minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) were examined. Alzheimer effect of caffeine have been studied with the use of Congo red spectroscopy and transmission electron microscopy images (TEM) was used to confirm the presence of fibrils. **Results:** by following the method of gas chromatography, the amount of caffeine in caffeine powder extracted, the probability of 97% was confirmed in 9.24 minutes. The results of the MIC and MBC methods on the growth of Staphylococcus bacteria, respectively, 0/03, 0/06 respectively and on Escherichia coli, was 0/06, 0/13 respectively. Increasing the amount of soluble extract the decrease in production has confirmed the anti-Alzheimer's amyloid nano bio fibril caffeine extract. **Conclusion:** The active ingredient caffeine, tea extract has antibacterial and anti-Alzheimer's disease and as an alternative to synthetic drugs is recommended. **Key words:** Alzheimer's disease, caffeine, nano biofibril, amyloid

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