ABSTRACT

The present study was aimed to identify the phytoconstituents from the methanolic extract of Artocarpus hirsutus fruit pulp using GC-MS analysis and dock the selected compounds with Acetylcholinesterase, a key target in the treatment of Alzheimer's Disease (AD). From the results of the selected compounds, Ethyl oleate showed better interaction with Acetylcholinesterase which had a better Glide Score of -7.5 Kcal/mol followed by Pentacosanoic acid, methyl ester (-6.7Kcal/mol), Methyl petroselinate (-6.1Kcal/mol), 3-Methyl-3-nonanol (- 5.8Kcal/mol), 2,2-Dimethylpropyl2,2-dimethyl propane sulfinylsulfone (-5.8 Kcal/mol), Methyl tricosaoate (-5.8Kcal/mol) when compared to the synthetic drug Rivastigmine (-5.6Kcal/mol). Further in vitro analysis of methanolic extract proved its high efficiency for antioxidant activity (DPPH radical scavenging activity (90.80%), TPC (7.36±0.06), Reducing power ability (75.16±0.31)). The results of the study clearly indicates that Artocarpus hirsutus fruit pulp can be added as a food supplement to reduce the risk of several diseases related to oxidative stress, especially AD.