Antihypertensive Activity and Phytochemicals Analysis of *Chassalia curviflora* Extracts

Wan Nur Hazirah W. Kadir1 and Nor Adila Mhd Omar

Faculty of Industrial Sciences & Technology, Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300 Gambang, Kuantan Pahang, Malaysia.

Abstract: The objectives of this study are to determine the antihypertensive activities of leaves and flower of *Chassalia curviflora* and compare the potential between two different extraction methods which are hot water and methanol extract. The biuret protein assay was conducted to determine the protein protein concentration in samples. The phytochemical in leaves and flower extracts of *C. curviflora* were analyzed by using GC-MS. The result of protein concentration in *C. curviflora* flower was higher compared to leaves extract of 0.6648 mg/ml and 0.5431 mg/ml, respectively. The hot water extract of *C. curviflora* flower showed the highest antihypertensive activity with the percentage of ACE inhibitory activity of 95.50 ± 0.06% with IC50 value of 3.71 µg/ml. The 10 highest peak area (%) of phytochemical in all samples were: bis(2-ethylhexyl) ester (34.64 %), Cyclotrisiloxane, hexamethyl- (31.14 %), (Phenylthio)acetic acid, 1-adamantylmethyl ester (30.90 %), Hexanedioic acid, Cyclononasiloxane, octadecamethyl- (18.357 %), Oleic Acid (16.56 %), n-Hexadecanoic acid (15.23 % and 14.15 %), 4H-Pyran-4-one, 2,3-dihydro-3,5-dihydroxy-6- methyl- (16.43 % and 12.98 %) and Trichloromethane (11.03 %). In conclusion, both of leaves and flower of *C. curviflora* have a potential as antihypertensive agent.

Keywords: Leaves extract; Flower extract, ACE inhibitory, Gas Chromatography–Mass Spectrometry (GCMS).