

## Antioxidant and $\alpha$ -glucosidase inhibitory activities of isolated compounds from ipomoea aquatica

### ABSTRACT

*Ipomoea aquatica* Forsk is a green leafy vegetable that is a rich source of amino acids and vitamins. Antioxidant and  $\alpha$ -glucosidase inhibitory activities of the hexane (IAHE) and methanol (IAME) fractions of the vegetable portion of *I. aquatica* were investigated. The IAME fraction exhibited a strong scavenging effect of the 2,2-diphenyl-2-picryl hydrazyl (DPPH) free radicals, and this fraction contained the highest phenolic contents. Phytochemical investigation of the IAME fraction yielded three known compounds, namely 3,5-di-O-caffeoylquinic acid (1), 4,5-di-O-caffeoylquinic acid (2) and quercetin 3-O- $\beta$ -D-glucoside (3). The structures were unambiguously elucidated based on 1D and 2D-NMR analyses ( $^1\text{H}$ ,  $^{13}\text{C}$ , COSY, HSQC, HMBC) and mass spectrometry data. Compound 3 was isolated for the first time from this plant

**Keyword:** Antioxidant activity; Total phenolic content;  $\alpha$ -glucosidase inhibition; Spectral analysis