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Bioassays-guided purification of chemical constituents with antioxidant and anti-inflammatory properties from *Hemigraphis alternata*

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Studies suggested that the therapeutic properties of plants are originated from bioactive compounds found within them. These compounds are candidates for drug development and extensive works have been conducted to isolate them. The plant of interest is *Hemigraphis alternata* (Red flame ivy). Previous studies suggested that leaves of *Hemigraphis alternata* exhibited promising antioxidant and anti-inflammatory activities, but there is no work which has isolated and identified the bioactive compounds from this plant. This represents the first study to do so. Our study aims to investigate the antioxidant properties of methanol crude extract of *H. alternata* freeze dried leaves using iron chelation, ferric reducing and nitric oxide scavenging assay, and to study its anti-inflammatory activity using LPS-activated RAW 264.7 nitric oxide production inhibition assay and lipoxygenase enzyme assay. This is followed by isolation of chemical constituents via bioassays-guided purification. The current work has successfully isolate *H. alternata* fractions that can chelate iron and reduce ferric, inhibit LPS-stimulated RAW 264.7 nitric oxide production and inhibit lipoxygenase enzyme. These assays are used to guide purification work to isolate corresponding active constituents, which will be identified using different spectroscopic methods.

Biography

Wong Kak Ming is currently pursuing his PhD at Monash University Malaysia. He has completed his Honors in Bachelor of Science (Biotechnology) at the same campus. His current research is focused on the isolation and identification of bioactive compound(s) from the plant *Hemigraphis alternata*. The project is supervised by Dr. Emily Goh Joo Kheng and Dr. Cheow Yuen Lin.

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