DPPH Free Radical Scavenging Activity and Total Phenolic Content of Talisay *(Terminalia catappa)* Seeds

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ABSTRACT

Free radicals, a class of highly reactive molecules derived from the metabolism of oxygen is believed to be involved in many health disorders. It is generated as by-products of biological reactions or from the environment. Antioxidant-based drugs and formulations for the prevention and treatment of complex diseases have attracted a great deal of research interest in natural antioxidants. It is deemed necessary to screen medicinal plants for their antioxidant potential. *Terminalia catappa* is a widely-distributed tree in the Philippines with promising potentials in pharmacology. Evaluation of the *in vitro* antioxidant activity of methanolic, dichloromethane, and hexane extracts of *Terminalia catappa* seeds were carried out using two assays: 1, 1-diphenyl-2-pycrylhydrazyl (DPPH) free radical scavenging assay and total phenolic content assay. Results revealed that methanolic extracts showed a significantly higher free radical scavenging activity and a four-fold increase in its activity relative to the standard Butylated Hydroxytoluene (BHT). Furthermore, methanol, DCM and hexane extracts have high total phenolic content. Present results indicate that *Terminalia catappa* is a potential source of antioxidant and a good candidate for the development of new nutraceuticals for treatment of diseases. Phytochemical screening to determine the group of secondary metabolites present and toxicity evaluation for recommendation as nutritional substitutes and human consumption are recommended.