Silver Nanoparticles of Extracts of *Microsorum pteropus*: Preparation and Antioxidant Assay

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In this study, silver nanoparticles (SNPs) were prepared from *Microsorum pteropus* methanol extract, as a new approach in the development of therapeutic strategies against diseases caused by oxidative stress, reactive oxygen and nitrogen species. Isolation and X-ray single-crystal structural analysis of sucrose was succeeded. UV spectra with peaks between 431 to 436 nm confirmed synthesized SNPs and IR analysis showed O-H, N-H functional groups of alcohol, phenol, amine, and aliphatic C-H stretching vibrations of hydrocarbon chains of the synthesized nanoparticles. 1,1-Diphenyl-2-picrylhydrazyl (DPPH) and hydrogen peroxide scavenging assays were utilized to confirm the antioxidant potential. The maximum DPPH reduced was 36.2 % at 25 µg/mL and hydrogen peroxide scavenged was 56.5 % at 40 µg/mL by the SNPs. Ascorbic acid was used as the reference compound and the result were dosed dependent with values P < 0.05 considered significant. IC$_{50}$ value of 47.0 and 35.6 µg/mL for were obtained, respectively indicating their capability to eliminate potentially damaging oxidants involved in oxidative stress and their related diseases.