**Phytochemical and biological activity studies of the leaves of garcinia hombroniana pierre**

## ABSTRAK

Garcinia is the biggest genus in the family of Clusiaceae (Guttifereae). Garcinia has gained a wide interest of researchers due to the remedial qualities and it has been used in traditional therapies and medicine. Our research work focused on the phytochemical investigation and biological activity studies of the leaves of Garcinia hombroniana. The phytochemical investigation of the chloroform extract of G. hombroniana had led to the isolation of ten known compounds, identified as friedelin (CP-1), stigmasterol (CP-2), taraxerol (CP-3), garcihombronane D (CP-4), lupeol (CP-5), betulin (CP-6), betulinic acid (CP-7), stigmasterol glucoside (CP-8), 4-hydroxybenzoic acid (CP-9), and palmitic acid (CP-10). The isolated compounds recovered from column chromatography were purified using recrystallization technique. Structure elucidation of pure compounds was determined using Fourier Transform Infrared (FTIR), Nuclear Magnetic Resonance (NMR) spectroscopy, and Electron Ionization Mass Spectrometry (EI-MS). n-hexane, chloroform, ethyl acetate, acetone, and water extracts of the leaves of G. hombroniana were tested for their antioxidant activities using the total phenolic content (TPC), total flavonoid content (TFC) and 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging activity assays, and also the anti-Alzheimer (cholinesterase) activities. All extracts showed weak antioxidant activities with inhibition less than 60%. Meanwhile, 50-75% of inhibition against AChE was observed, indicating a weak Alzheimer's disease inhibition.