

Phytochemical composition of *Agathis borneensis* (Araucariaceae) and their biological activities

ABSTRACT

Agathis borneensis is a tropical tree from the Araucariaceae family, found in Malaysia. The tree is highly valued for its medicinal properties based on traditional knowledge, however, little is known on its chemical constituents. Using gas chromatography-mass spectrometry (GC-MS), we identified 60 chemical compounds, constituting five major classes of terpenes: monoterpene hydrocarbons, oxygenated monoterpenes, oxygenated diterpenes, oxygenated sesquiterpenes and sesquiterpene hydrocarbons, from the leaves and stem bark. The principle bioactive compounds were cyclohexane, farnesol, germacrene D, β -caryophyllene and δ -cadinene. The presence of caryophyllene oxide and β -caryophyllene in *A. borneensis* is particularly of interest, as they are reportedly antiplasmodial agents.

Keyword: Damar minyak; Borneo kuari; Medicinal plant; Gas chromatography-mass spectrometry; Terpene