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Isolation of Stilbenes from the Stem of *Gnetum Microcarpum*

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Over the last 15 years, plant stilbenes have received considerable interest, due to their biological activities and possible pharmacological applications. Large numbers of natural stilbenes isolated from plants are oligomers which include dimers, trimers and tetramers. Gnetaceae is a family of the most advanced members of tropical gymnosperms in the order Gnetales (division Gnetophyta). It composed of only one genus, *Gnetum* and there are about 30 to 40 species in the tropical lowlands of the world, from northeastern South America, tropical West Africa, and south China to Southeast Asia. Various species in the family have been used as folk medicine for the treatment of arthritis, bronchitis and asthma. The leaves and the fruits are also used as food in many parts of the tropics. The plants of Gnetaceae are known to contain stilbene oligomers as their major chemical constituents, in which their structural formations are unique. In this research, the lianas of *Gnetum microcarpum* has been investigated. *Gnetum microcarpum* Blume grows in Malaysia and is not recorded in folk medicines. The standard procedures of extraction, fractionation, isolation and elucidation were used for the accomplishment of this research. The stem of *Gnetum microcarpum* was chopped, air dried, grind into powder and extracted using acetone. The crude extract obtained was fractioned with vacuum liquid chromatography (VLC) and each fractions were subjected to multiple column and radial chromatography techniques for isolation and purification process. Four known stilbenes were successfully isolated from the stem of *Gnetum microcapum* namely resveratrol (1), gnetol (2), gnetucleistol C (3) and gnetucleistol D (4). The structure of these stilbenes were determined using several spectroscopic methods which were 1D and 2D NMR, UV, IR and MS.

Keyword: Gnetaceae, *gnetum microcarpum*, stilbenes