

Novel Acyclic Diterpeneoid from Bornean Local Red Chilli Pepper *Capsicum frutescens* L.

ABSTRACT

An unknown acyclic diterpene (3*S*, 6*E*, 10*E*, 14*Z*)-3-hydroxy-3,7,11,15-tetramethyl-1,6,10,14-hexadecatetraene acid (1) along with four known secondary metabolites (3*S*, 6*E*, 10*E*, 14*Z*)-20-hydroxygeranylinalool (2), trans-capsaicin (3), nordihydrocapsaicin (4) and capsidiol (5) were isolated from the Bornean red chilli pepper *Capsicum frutescens* L. The structures of the secondary metabolites were determined based on spectroscopic data analysis such as NMR, HRESIMS, and IR data. The new compound 1 is a carboxylic acid precursor that would condensate with vanillylamine in the phenylpropanoid pathway in the biosynthesis of capsaicinoids. Discovery of this compound is an important milestone in our understanding of the capsaicinoids biosynthesis.