Neoiriepentaol and nangenyne, halogenated diterpenoid and C15-acetogenin from red alga Laurencia nangii Masuda collected in Borneo [2018]

ABSTRACT

The red algal genus Laurencia is a prolific producer of halogenated secondary metabolites. A new tricyclic dibrominated diterpenoid, neoiriepentaol (1) and chlorinated C₁₅-acetogenin, nangenyne (2), along with two known terpenoids, neoirietetraol (3) and dactyloxene A (4), were isolated from methanol crude extract of red alga Laurencia nangii. The structures were established based on one- and two-dimensional nuclear magnetic resonance (NMR), Fourier-transform infrared (FTIR), and high-resolution electrospray ionization mass spectrometry (HRESIMS) data. These compounds were screened against seven species of marine fungi. Compounds 1–3 exhibited activity against Lagenidium thermophilum and Haliphthoros sabahensis. Potent activity was showed by 1 with L. thermophilum hyphal inhibition at MIC value of 12.5 μ g mL⁻¹ and hyphal motility was observed at 50 μ g mL⁻¹ within 24 h.