New constituents with iNOS inhibitory activity from mycelium of Antrodia camphorata.

Yang SS, Wang GJ, Wang SY, Lin YY, Kuo YH, Lee TH.

Abstract

In continuing our investigation on the bioactive constituents of mycelium of Antrodia camphorata, antroquinonol B (1), 4-acetyl-antroquinonol B (2), 2,3-(methylenedioxy)-6-methylbenzene-1,4-diol (3) and 2,4-dimethoxy-6-methylbenzene-1,3-diol (4) along with antrodin D (5) were isolated by the guidance of an inducible nitric oxide synthase (iNOS) inhibitory assay and identified on the basis of their spectroscopic analysis. The effect of these compounds on the inhibition of NO production in lipopolysaccharide (LPS)-activated murine macrophages was further evaluated. Compounds 4 and 5 significantly inhibited NO production without any cytotoxicity, the IC(50) values being 32.2 +/- 0.1 and 26.3 +/- 1.6 microg/mL, respectively. Compounds 1 and 2 possessed greater effects on NO inhibition, with IC(50) values of 16.2 +/- 0.8 and 14.7 +/- 2.8 microg/mL, respectively, but displayed cytotoxicity at considerably higher concentrations. Compound 3 showed the lowest percent cell viability of 45.5 +/- 1.8 % as observed in treated cells at a concentration of 16.8 microg/mL.