

Triterpenoids, Steroids, and a New Sesquiterpen from *Inonotus obliquus* (Pers.: Fr.) Bond. et Sing.

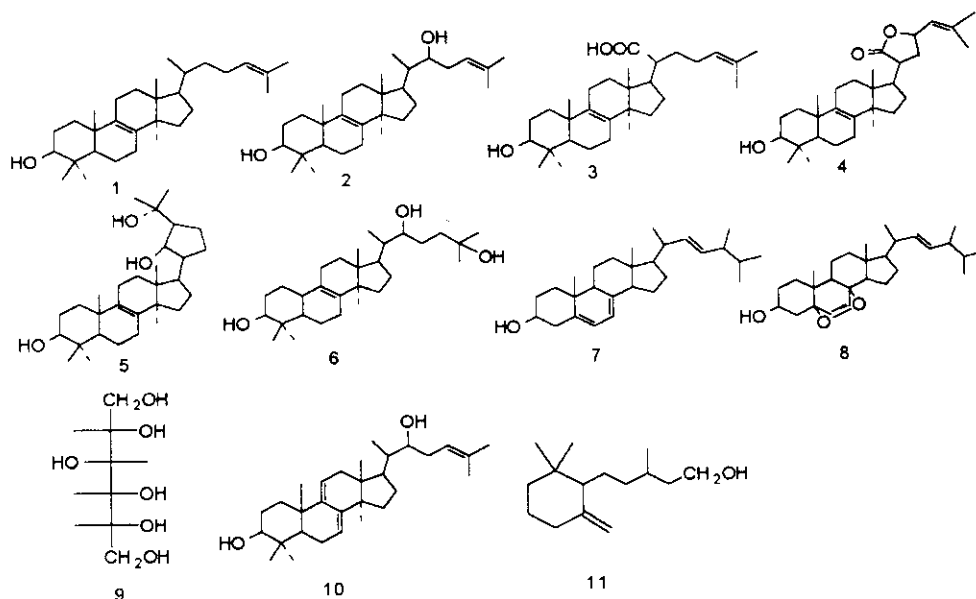
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Inonotus obliquus (Pers.: Fr.) Bond. et Sing. is a white-rot fungus belonging to Hymenochaetaceae. This fungus is found in alpine regions and northern regions in Japan. In Eastern Europe, the sclerotia of this fungus have been used since the 16th or 17th century as a folk medicine for cancer. Also, the Khanty race of West Siberia uses this fungus to prevent and treat heart disease, liver disease, stomach disease, and tuberculosis.

Six triterpenes including three new triterpenes from extracts of sclerotia of *I. obliquus* and four compounds from extracts of cultured my-

celia of *I. obliquus* have been isolated. They were lanosterol (1), inotodiol (2), trametenolic acid (3), 3 β -hydroxy-8,24-dien-lanosta-21,23-lactone (4), 21,24-cyclopenta-lanosta-3 β ,21,25-triol-8-ene (5), and 3 β ,22,25-trihydroxy-lanosta-8-ene (6) from the sclerotia and lanosterol (1), ergosterol (7), ergosterol peroxide (8), glucositol (9), 3 β ,22-dihydroxy-lanosta-7,9(11),24-triene (10), and 5-(2'-ene-6',6'-dimethylcyclohexa)-3-methyl-pentanol (11) from the cultured mycelia. The biogenetic relationship of these compounds is discussed in detail.



1, Lanosterol; 2, inotodiol; 3, trametenolic acid; 4, 3 β -hydroxy-8,24-dien-lanosta-21,23-lactone; 5, 21,24-cyclopenta-lanosta-3 β ,21,25-triol-8-ene; 6, 3 β ,22,25-trihydroxy-lanosta-8-ene; 7, ergosterol; 8, ergosterol peroxide; 9, glucositol; 10, 3 β ,22-dihydroxy-lanosta-7,9(11),24-triene; 11, 5-(2'-ene-6',6'-dimethyl-cyclohexa)-3-methyl-pentanol.