

## Inhibition of Melanin Biosynthesis of Cyclic Diarylheptanoids from *Acer nikoense*

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Cyclic diarylheptanoids with a biphenyl ether linkage such as a series of acerogenins have been isolated from the bark of *Acer nikoense* (Aceraceae), a Japanese folk medicine for hepatic disorders and eye diseases. A series of acerogenins exhibited a range of biological activities such as anti-inflammatory, antihepatotoxic, antibacterial, and inhibitory activity on nitric oxide production. There are well-known natural biphenyl ethers such as glycopeptide vancomycin, cyclic peptides from *Rubia cordifolia*, and macrocyclic bisether marchantin A from the liverwort *Marchantia* species. These structurally interesting cyclic diarylheptanoids continue to be of interest from biological points of view as well as providing challenging targets for total synthesis.

Our interest has been focused on inhibition of tyrosinase enzyme by a series of cyclic diarylheptanoids, acerogenins and the other biological activities. Fractions and acerogenins prepared from *Acer nikoense* showed inhibition of tyrosinase enzyme and melanin biosynthesis, and also showed vasorelaxant activity on rat aorta.