The Pharmacokinetics and Tissue Distribution of Honokiol and its Metabolites in Rats.

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Abstract
Honokiol (HK) is the main bioactive compound isolated from the bark of Magnolia officinalis. The present work is the first to report the pharmacokinetics and distribution of HK and its two metabolites of hydroxylated HK conjugated with glucuronic and sulfuric acid (M1) and HK monoglucuronide (M2) in plasma, liver, kidney and brain following oral administration of HK (40 mg/kg) to healthy Wistar rats. The results showed that only HK but not M1 or M2 was found in brain. Additionally, our work indicated that M2 not HK was the major compound in liver and plasma. The elimination of HK in liver, kidney and brain, and M2 in liver and kidney was more rapid than in plasma. The finding suggested that some of the pharmacological activity of HK might be generated by M2 but not HK.

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