

**ISOLATION OF FOUR NEW COMPOUNDS
FROM THE TUBERS OF *GASTRODIA ELATA* BLUME**

Hye Sook Yun-Choi, Mi Kyung Pyo and Kyung Mi Park

Natural Products Research Institute, Seoul National University, Seoul 110-460, Korea

Gastrodia elata Blume (Orchidaceae) is a saprophyte growing in the woods of Korea, China and Japan. The tubers of this plant have been considered as one of the very important herbal medicines in oriental countries and were used for the treatment of headaches, migraine, dizziness, childhood convulsion, epilepsy, rheumatism, neuralgia and other neuralgic and nervous affections. In the course of our search for plants with anti-platelet and/or anti-thrombotic potentials, several solvent fractions prepared from the MeOH extract of the tubers of *Gastrodia elata* were observed to attenuate the thrombotic symptoms in both mouse and rat models of thrombosis.

Investigations on the chemical components of this plant have led to the isolation of four new components in addition to several known 4-hydroxybenzyl derivatives including 4-hydroxybenzaldehyde, 4-hydroxybenzyl alcohol, 4-hydroxybenzyl methyl ether, 4-(4'-hydroxybenzyloxy)benzyl methyl ether, bis(4-hydroxybenzyl)ether, 4-(β -D-glucopyranosyloxy)benzyl alcohol, tris[4-(β -D-glucopyranosyloxy)benzyl]citrate, 1,2- and 1,3-bis[4-(β -D-glucopyranosyloxy)benzyl]citrate, 2,4-bis(4-hydroxybenzyl)phenol. The structures of the four new compounds were identified, from elemental analytical and spectroscopic data, as 4,4'-dihydroxybenzyl sulfoxide (I), α, α' -[bis-2-(5-carboxaldehyde)furanyl]dimethyl ether (II), 3-O-(4'-hydroxybenzyl)- β -sitosterol (III) and 4-[4'-(4''-hydroxybenzyloxy)benzyloxy]benzyl methyl ether (IV).