

Conference abstract PO-54

Isolation and Synthesis of Trimethylcitryl Galactopyranoside, a New Component from *Gastrodia elata* and its Inhibitory Effect on GABA Transaminase

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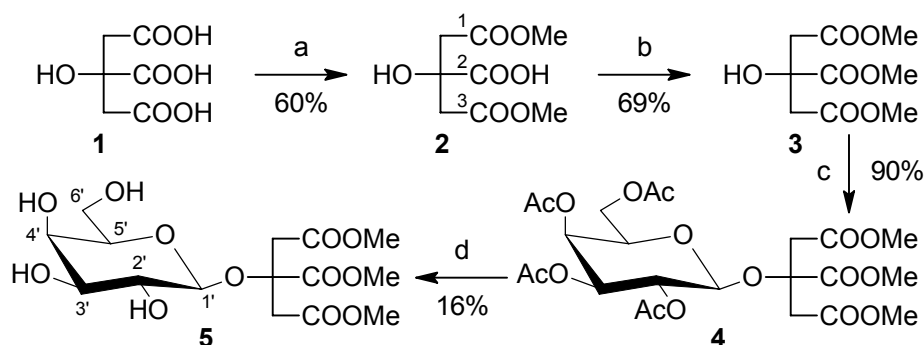
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The rhizome of *Gastrodia elata* Blume (Gastrodiae rhizoma, Orchidaceae) has been used in traditional medicine as an anticonvulsant and sedative in Korea, Japan and China. Identification of its constituents has focused mainly on phenolic compounds: besides a major phenolic glucoside (gastrodin, [4-(β-D-glucopyranosyloxy)benzyl alcohol]), more than 15 phenolics were isolated [1–4]. Among them, tris[(4-β-D-glucopyranosyloxy)benzyl] citrate (parishin), 1,2-bis[(4-(β-D-glucopyranosyloxy)benzyl] citrate (parishin B) and 1,3-bis[(4-(β-D-glucopyranosyloxy)benzyl] citrate (parishin C) contain a citrate moiety, further, 1,3-dimethyl citrate was also reported. Recently, we isolated a citrate containing constituent from *G. rhizoma*, and characterized its structure as trimethyl 2-(β-D-galactopyranosyloxy) citrate (**5**). This new natural citrate glycoside shows an inhibitory activity on GABA transaminase, suggesting an anticonvulsive effect. In this study we report the isolation, structure elucidation, activity, and practical synthesis of this new compound from citric acid (**1**) in a four-step reaction.



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