A new steroid glycoside and furochromones from Cyperus rotundus L.

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Abstract:

Further phytochemical investigation of the aerial parts of Cyperus rotundus L. afforded a new steroid glycoside named sitosteryl (6′-hentriacontanoyl)-β-D-galactopyranoside (4) in addition to three furochromones, khellin (2), visnagin (3) and ammiol (9). Furthermore, benzo-γ-pyrone (coumarin) (1), salicylic acid (5), caffeic acid (6), protocatechuic acid (7), p-coumaric acid (8), tricin (10) and isorhamnetin (11) were isolated. The structures of these compounds were established by spectroscopic methods. The isolated furochromones were tested for insect antifeedant activity against larvae Spodoptera littoralis when incorporated in artificial diet and offered to larvae in a chronic feeding bioassay. Also, visnagin, khellin and sitosteryl (6′-hentriacontanoyl)-β-D-galactopyranoside showed strong cytotoxic activity against L5178y mouse lymphoma cells and were also active in the brine shrimp lethality test.

Keywords:

Cyperus rotundus L., Cyperaceae, Steroid glycoside, Furochromones, Antifeedant and cytotoxic activities

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