

A new lignan from the stem bark of *Fagraea fragrans* Roxb.

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LIGNANS OF *Cinnamomum tenuifolium* AND *Coix lacryma-jobi*

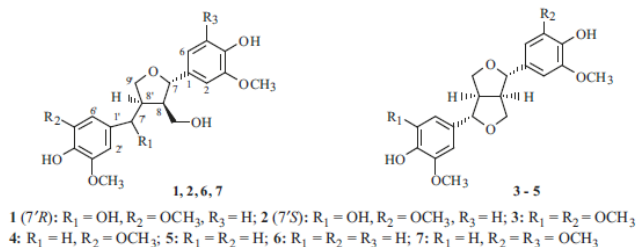
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Two new lignans, named (7*R*)-7'-hydroxy-5'-methoxylariciresinol (1) and (7*S*)-7'-hydroxy-5'-methoxylariciresinol (2) were isolated from the stems of *Cinnamomum tenuifolium* (Lauraceae) and the roots of *Coix lacryma-jobi* L., along with five known compounds, (+)-syringaresinol (3), (+)-medioresinol (4), (+)-pinioresinol (5), (+)-lariciresinol (6), and (+)-5,5'-dimethoxylariciresinol (7). The structure of the new lignan was elucidated by spectroscopic and physical evidence.

Keywords: *Cinnamomum tenuifolium*, *Coix lacryma-jobi* L., lariciresinol, lignan.

Cinnamomum tenuifolium f. *nervosum* (Meisn.) H. Hara (Lauraceae) is a medium-sized evergreen tree endemic to Lanyu Island, Taiwan, all plant parts being conspicuously free of the odor of cinnamon [1]. Previous studies on the aerial parts of *C. tenuifolium* have reported the presence of butanolides, secobutanolide, lignans, terpenoids, benzenoids, benzodioxocinone, and steroids [1–5]. In the course of screening for biologically and chemically novel agents from Formosan plants in the family Lauraceae [6–17], *C. tenuifolium* was chosen for further phytochemical investigation, while as a part of our continuing investigation into the phytochemical and bioactive compounds of *Cinnamomum* genus plants, a new lignan, (7*R*)-7'-hydroxy-5'-methoxylariciresinol (1) was obtained.

Coix lacryma-jobi L. is an annual or perennial herbaceous plant of the Graminae family. Its dry mature kernel, called coix seed, is used in traditional Chinese medicine. The roots and seeds of *C. lacryma-jobi* L. are utilized for medicinal, pharmaceutical, and cosmetic preparations and dietary supplements [18, 19], including fatty acids, phenolic compounds, triolein, and coixol [20–22]. The chemical constituents of the roots of *C. lacryma-jobi* L. have not as yet been reported. The compounds derived from the roots include a new lignan, (7*S*)-7'-hydroxy-5'-methoxylariciresinol (2). Five known lignans, (+)-syringaresinol (3) [23], (+)-medioresinol (4) [24], (+)-pinioresinol (5) [25], (+)-lariciresinol (6) [26] and (+)-5,5'-dimethoxylariciresinol (7) [27] were obtained by systematic extraction and isolation from the stems of *C. tenuifolium* and of the roots of *Coix lacryma-jobi* L. In this paper, we report the isolation and structural elucidation of the new lignans.



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