

## Polyphenols from *Eritrichium sericeum* Cell Cultures

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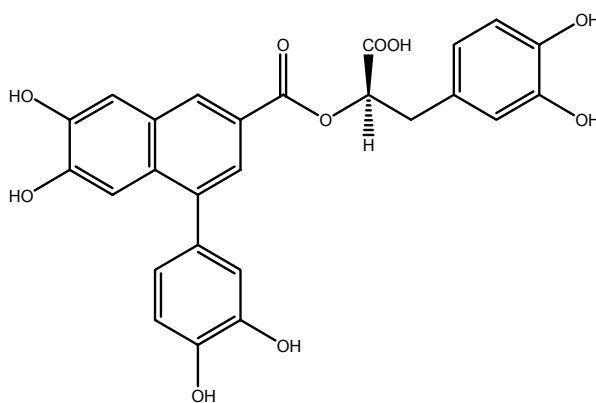
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It is known, that rabdosiin, a caffeic acid tetramer, possesses a potent anti-HIV activity. We initiated a search of plant cell cultures producing this and related substances. *Eritrichium sericeum* (Boraginaceae) callus and root cultures were analyzed by HPLC for caffeic acid metabolite (CAM) production. Two substances, (-)-rabdosiin and rosmarinic acid were identified as main CAMs produced by these cultures. The *E. sericeum* root culture produced 1.5 % and 4.5 % of dry weight of (-)-rabdosiin and rosmarinic acid, respectively. By comparing biosynthetic ability of different *Boraginaceae* cell cultures, we found that *Lithospermum erythrorhizon* cells, in contrast with *E. sericeum* cells, produced rabdosiin as (+) enantiomer. Moreover, the *E. sericeum* culture accumulated 2-4-fold higher levels of CAMs than the *L. erythrorhizon* culture. A new substance – eritrichin, a trimer of caffeic acid, was isolated from cultured *E. sericeum* cells. Its structure has been determined as (2*R*)-3-(3,4-dihydroxyphenyl)-2- {[4-(3,4-dihydroxyphenyl)-6,7-dihydroxy-2-naphthoiloxy}propanoic acid. We proposed that eritrichin is a putative biosynthetic precursor of rabdosiin.



This work was supported by grants 03-04-49515 and 03-04-48102 of the Russian Foundation for Basic Research, grants 04-3-A-05-065 and 04-3-A-06-012 of the Far Eastern Branch of Russian Academy of Sciences, and grants of Programmes "Molecular and cellular biology" and "Fundamental sciences for medicine" of the Presidium of RAS.