

论文

桔梗悬浮培养对细胞天麻素的生物转化

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摘要:

关键词: 桔梗 天麻素 生物转化 悬浮培养细胞

BIOTRANSFORMATION OF GASTRODIN BY CELL SUSPENSION CULTURE OF *PLATYCODON GRANDIFLORUM*

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Abstract:

AIM To modify the structure of gastrodin using cell suspension cultures of *Platycodon grandiflorum* as biocatalyst. METHODS Using plant tissue and cell culture techniques to establish cell suspension cultures, and chromatographic and spectral techniques to isolate and identify the product. RESULTS 1) The medium of MS + 5.0 mg·L⁻¹ NAA was good for the induction and growth of the callus cultures, and that of MS + 0.5 mg·L⁻¹ NAA + 0.5 mg·L⁻¹ 6-BA + 0.2 mg·L⁻¹ 2,4-D for the growth of suspended cell cultures. 2) Gastrodin was bioconverted to *P*-hydroxy-methyl-phenol, the deglycosylderivative, in good yield by cell suspension cultures of *Platycodon grandiflorum*. CONCLUSION Biotransformation using plant cell suspension cultures is an approach to structural modification of some natural products.

Keywords: *Platycodon grandiflorum* biotransformation cell suspension cultures gastrodin

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