

论文

右旋黄皮酰胺在大鼠肝微粒体中的代谢转化

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摘要:

目的: 研究黄皮酰胺的主要代谢途径, 为进一步研究黄皮酰胺代谢的立体选择性打下基础。方法: 用大鼠肝微粒体体外温孵法对右旋黄皮酰胺((+)-clausenamide)进行温孵, 用硅胶柱色谱、制备TLC分离纯化代谢产物并通过光谱分析鉴定其结构。结果: 分离得到5个代谢产物CM1,CM3,CM4,CM5及CM6,其结构分别鉴定为6-羟基, 4-羟基, 4, 6-二羟基, 4-苯环邻位羟基, 4, 7-苯环间位-二羟基黄皮酰胺。结论: 黄皮酰胺的代谢主要发生羟化或双羟化,CM3是其主要代谢产物,量较少的CM4,CM6为其进一步代谢产生的双羟基代谢产物;另2个代谢产物CM1,CM5产生的量也较少; CM2未分离得到, 但通过HPLC分析知其为右旋黄皮酰胺的微量代谢产物。

关键词: 右旋黄皮酰胺; 肝微粒体; 体外代谢; 高效液相色谱法

METABOLIC TRANSFORMATION OF (+)-CLAUSENAMIDE IN RAT LIVER MICROSOMES

Yao Qingqiang and Wang Muzou

Abstract:

AIM: To find the metabolic pathway of (+)-clausenamide in rat liver microsomal incubate and give the basis of studying the stereoselectivity of the metabolism of clausenamide. METHODS: (+)-Clausenamide was incubated in rat liver microsomal incubate containing NADPH-generating system and the metabolites were isolated and purified by using silica gel column and preparative TLC and then their structures were determined by ¹HNMR and MS. RESULTS: Five metabolites, CM1, CM3, CM4, CM5 and CM6, were obtained, and their structures were determined as 6-hydroxyl-, 4-hydroxyl-, 4,6-dihydroxyl-, 4-phenyl-ortho-hydroxyl-, 4,7-phenyl-meto-dihydroxyl- clausenamide by ¹HNMR and FAB-MS. CONCLUSION: The metabolism of (+)-clausenamide were hydroxylation or dihydroxylation. CM3 is the main monohydroxyl-metabolite, both CM4 and CM6 are dihydroxyl- metabolites generated from CM3. The amount of the other two metabolites, CM1 and CM5, is much less. Although CM2 is not isolated from the incubate it is also detected by HPLC.

Keywords: liver microsomes metabolism *in vitro* HPLC (+)-clausenamide

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