

纤维化的干预和它有效减少转化生长因子 TGF- β 1 和肝脏内胶原蛋白表达相关。研究结果表明,霍山石斛多糖对肝损伤和肝纤维化的干预活性,使它有可能发展成为一种新的预防肝脏疾病的药物和保健食品。

关键词 霍山石斛 多糖 肝损伤 肝纤维化 肝保护作用

Prevention of selenium-induced liver injury and fibrosis by polysaccharides from an edible plant *Dendrobium huoshanense*

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Abstract This study was carried out to investigate the preventive effects of a homogeneous polysaccharide from *Dendrobium huoshanense* on liver injury and fibrosis induced by sodium selenite. Sprague-Dawley rats with the subcutaneous injection of sodium selenite at the dosage of 3.28 mg kg⁻¹ b. wt. were set as the animal model. Rats treated with sodium selenite and polysaccharide at 50 (low dose), 100 (medium dose), and 200 (high dose) mg kg⁻¹ b. wt. were used as the prevention groups. Biochemical and histological analysis showed that the polysaccharide significantly ameliorated liver injury and prevented the progression of liver fibrosis. Oral administration of polysaccharide effectively attenuated the toxicity of selenite to liver tissue judged by the decreased activities of serum aminotransferase (ALT, AST and LDH). Meanwhile, polysaccharide also reduced the levels of H₂O₂ and malondialdehyde (MDA), elevated the levels of GSH, restored the fluidity of hepatic cytoplasm membrane, and retained the activities of endogenous antioxidative enzymes SOD, CAT and GST. Furthermore, the prevention of liver injury and fibrosis by the polysaccharide was supported by reduced expression of TGF- β 1 and type I collagen. These results suggested that the polysaccharide may be developed into a novel antifibrotic agent for the prevention of liver injury and fibrosis.

Key words *Dendrobium huoshanense* Polysaccharide Liver injury Fibrosis Hepatic protection

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蓝靛果花色苷对人结肠癌 HT29 细胞增殖和凋亡的影响

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摘要 目的:探讨蓝靛果花色苷对人结肠癌 HT29 细胞生长抑制作用及其机理研究。方法:不同浓度蓝靛果花色苷作用于人结肠癌 HT29 细胞 48h;采用噻唑蓝(MTT)法检测蓝靛果花色苷对人结肠癌 HT29 细胞的生长抑制作用,通过 AO/EB 法观察凋亡细胞的形态变化,流式细胞仪检测细胞凋亡。结果:蓝靛果花色苷能显著抑制人结肠癌 HT29 细胞生长;AO/EB 观察出现了典型的凋亡细胞形态特征;流式细胞仪分析图上出现凋亡细胞的百分比。以上各指标中,随着蓝靛果花色苷浓度增大作用加强。结论:蓝靛果花色苷对 HT29 细胞生长抑制作用的机理可能与其诱导人结肠癌 HT29 细胞凋亡有关。

关键词 蓝靛果 花色苷 人结肠癌 HT29 细胞 生长抑制作用 细胞凋亡

Effects of anthocyanins from *Lonicera edulis* on Proliferation and Apoptosis of Human colon HT29 Cells

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Abstract Objectives: To study the inhibitory effects of anthocyanins from *Lonicera edulis* on human colon cancer HT29 cells and its possible mechanism. Method: HT29 cells were treated with anthocyanins in different concentration for 48 h; and the proliferation of HT29 cells were measured by MTT assay. AO/EB was used to observe the morphology of apoptotic cells and flow cytometry to analyze the HT29 apoptosis. Results: The proliferation of HT29 cells was the proliferation of inhibit by anthocyanins from *Lonicera edulis*. Typical morphological features of apoptosis were observed by AO/EB. The different percentages of apoptotic cells present in flow cytometry analysis. The effect on HT29 cells was enhanced with increasing amount of anthocyanins. Conclusion: The mechanism of anthocyanins from *Lonicera edulis* on HT29 cell growth inhibition may be related to the induction of apoptosis.

Key words *Lonicera edulis* Anthocyanins Human colon cancer cells Growth inhibitory effect Apoptosis

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雷丸多糖的提取分离及其抗氧化活性研究

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摘要 目的:研究雷丸多糖的提取分离技术及其抗氧化活性。方法:用纤维素酶法酶解后对雷丸多糖进行了提取工艺研究,通过乙醇沉淀、Sevage法除蛋白,活性炭脱色,再经 Sephadex G-200 柱层析法对其进行了纯化,得到雷丸多糖 OL1、OL2 和 OL3,并对其进行了抗氧化活性的研究。结果表明提取雷丸多糖的最佳工艺条件为:提取温度 40℃,酶添加量 0.08%,提取时间 90 min;结论:纤维素酶法可大大缩短提取时间,是极具应用前景的雷丸多糖的提取方法。雷丸多糖具有较强的清除自由基能力,是天然抗氧化剂的良好来源,可以进一步开发利用。

关键词 雷丸 提取 分离 抗氧化活性

Study on Extraction, Isolation and Antioxidant Activity of Polysaccharide from *Omphalia lapidescens*

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Abstract Objective: To investigate the extraction and purification of *Omphalia lapidescens* polysaccharide and its antioxidant activities. Methods: The *O. lapidescens* polysaccharide was extracted after enzymolysis