药学学报 1990, 25(5) 321-325 DOI: ISSN: CN:

论文

鹿茸有效成分对小鼠肝脏RNA和蛋白质合成的影响

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摘要:

多次给小鼠po鹿茸多胺30mg/kg,对[^{3}H]leucine和[^{3}H]uridine掺入肝组织蛋白和RNA有明显的促进作用,而庸茸非多胺则无此作用;当腐胺剂量为21mg/kg时,不仅促进[^{3}H]leucine和[^{3}H]uridiae掺入肝组织蛋白和RNA,也促进[^{3}H]uridine掺入肝细胞核的RNA中,并增强RNA聚合酶的活性;精脒在剂量为8mg/kg时,仅对[^{3}H]leucine掺入肝组织蛋白有促进;而精胺在1mg/kg时,没有观察到上述各种现象。此结果提示,鹿茸多胺类物质是鹿茸中刺激小鼠肝组织蛋白和RNA合成的主要活性物质,这种刺激小鼠肝组织蛋白和RNA合成效应是由于鹿茸多胺能够显著地增强RNA聚合酶的活性。

关键词: 鹿茸 多胺 蛋白质 核糖核酸 核糖核酸聚合酶

INFLUENCE OF THE ACTIVE COMPOUNDS ISOLATED FROM PILOSE ANTLER ON SYNTHESES OF PROTEIN AND RNA IN MOUSE LIVER

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Abstract:

The polyamines of pilose antler (PASPA) consist of putrescine (PU, 70.9%), spermidine (SPD, 26.3%) and spermine (SP, 2.8%). The incorporations of [^{3}H] leucine into protein and [^{3}H] uridine into RNA in mouse liver tissue were increased when PASPA was given orally to mice at the dose of 30 mg/kg for 4 successive days. The incorporations of [^{3}H] leucine into liver protein and [^{3}H] uridine into the cytosolic and nuclear RNA were also increased by treatment with PU (21 mg/kg). In addition, the RNA polymerase activity in the solubilized liver nuclear fraction of PU (21 mg/kg)-treated mice was increased. SPD only promoted the synthesis of protein in mouse liver tissue at the dose of 8 mg/kg. However, SP showed no effect on the synthesis of protein and RNA polymerase activity under the used dose (1 mg/kg). The results suggest that PASPA is the main active substance responsible for the promotion of the synthesis of protein and RNA in mouse liver.

Keywords: Pilose antler Protein RNA RNA polymerase Polyamines

收稿日期 1989-03-20 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

参考文献:

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