

论著

绿芦笋提取液抑制肿瘤细胞核酸生物合成的研究

夏俊, 陈治文, 石莹

蚌埠医学院生物化学与分子生物学教研室, 安徽 蚌埠 233003

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摘要 目的: 研究绿芦笋原汁和提取液对小鼠S180肉瘤细胞和小鼠艾氏腹水癌细胞(EAC)核酸生物合成的影响。方法: 采用3H-TdR和3H-UR掺入肿瘤细胞DNA和RNA的方法, 观察不同浓度的芦笋原汁和提取液对肿瘤细胞核酸生物合成的抑制作用。结果: 绿芦笋原汁及其乙醇提取液浓度分别为20、40、80、160 mg/ml时, 对S180 DNA的掺入抑制率分别为: 20.40 %、52.19 %、56.90 %、77.11 %和53.25 %、76.86 %、88.86 %、94.62 %; 对S180 RNA的掺入抑制率分别为: 24.70 %、41.53 %、76.06 %、85.72 %和60.17 %、80.90 %、94.08 %、97.26 %; 对EAC的DNA掺入抑制率分别为: 5.16 %、13.00 %、31.44 %、57.09 %和20.56 %、43.02 %、58.55 %、75.99 %; 对EAC的RNA掺入抑制率分别为: 10.52 %、23.04 %、45.60 %、68.39 %和13.37 %、32.60 %、59.70 %、81.85 %。结论: 不同浓度的绿芦笋原汁和提取液能显著抑制肿瘤细胞核酸的生物合成, 且抑制程度随原汁和提取液浓度的升高而增强。结果显示, 在20~160 mg/ml浓度范围内, 绿芦笋乙醇提取液的作用强于同等量的绿芦笋原汁。

关键词 [绿芦笋](#); [小鼠S180肉瘤细胞](#); [小鼠艾氏腹水癌细胞](#); [DNA和RNA生物合成](#)

GREEN ASPARAGUS EXTRACTS INDUCE THE INHIBITION OF NUCLEIC ACID BIOSYNTHESIS IN TUMOUR CELLS

XIA Jun, CHEN Zhi-wen, SHI Ying

Departments of Biochemistry and Molecular Biology, Bengbu Medical College, Bengbu 233003, China

Abstract Purpose : To study the inhibitive effects of green asparagus juice and extracts on nucleic acid biosynthesis of mouse sarcoma S180 cell and mouse Ehrlich ascitic tumour cell. Methods:The inhibition rates of the nucleic acid biosynthesis in tumour cells were investigated with 3H-TdR and 3H-UR incorporation DNA and RNA, respectively. Results:As treated with different doses of the juice and alcohol extracts of green asparagus (20, 40, 80, 160 mg/ml), the inhibitive rates of S180 DNA were 20.40 %, 52.19 %, 56.90 %, 77.11 % for the juice and 53.25 % , 76.86 % , 88.86 % , 94.62 % for the alcohol axtracts . The inhibitive rates of S180 RNA were 24.70 %, 41.53 %, 76.06 %, 85.72 % for the juice and 60.17 % , 80.90 % , 94.08 % , 97.26 % for the alcohol axtracts; the inhibitive rates of EAC DNA were 5.16 %, 13.00 %, 31.44 %, 57.09 % for the juice and 20.56 % , 43.02 % , 58.55 % , 75.99 % for the alcohol axtracts; the inhibitive rates of EAC RNA were 10.52 % , 23.04 % , 45.60 % , 68.39 % for the juice and 13.37 % , 32.60 % , 59.70 % , 81.85 % for the alcohol axtracts respectively . Conclusion:The juice and the alcohol extracts of green asparagus all could induce the significantly inhibit the biosynthesis of DNA and RNA in tumour cells, and the inhibition was enhanced with the increase of the concentration of the juice and extracts .The results showed that the inhibition effect of alcohol extracts was obviously greater than that of the juice within a concentration range of 20 to 160 mg/ml.

Keywords [green asparagus](#); [mouse sarcoma S180 cell](#); [mouse Ehrlich ascitic tumour cell](#); [biosynthesis of DNA and RNA](#)

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▶ 本文作者相关文章	
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