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60Cor-线对人血淋巴细胞DNA和RNA合成能力的影响1）

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摘要 例人血在体外接受60Cor-线照射后进行培养，用3H-胸腺嘧啶核苷（3H-TdR）和14C-尿嘧啶核苷（14C-UR）作掺入实验，以反映DNA和RNA的合成能力。应用滤膜法收获细胞，液体闪烁计数器测定双标记样品，发现r-线对DNA和RNA合成的影响有一定规律，即随照射剂量的培加，3H和14C掺入的放射性呈指数下降。经统计处理分别得到照射剂量和3H-TdR、14C-UR掺入的放射性计数的对数值两变量间的直线回归方程。10拉德的照射导至3H-TdR和14C-UR掺入的放射性计数显著性减少，RNA比DNA合成受抑更明显。

关键词

分类号

THE EFFECT OF 60Coγ-rays on The Abilties of Dna And Rna Syntheis of Human BloodLymphocytes

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Abstract

Seven samples of human buman blood were exposed to60Coy-rays in uitro,aftro,after whichthe blood was cultured.3H-TdR inaorporation was used in this experimebt in order to refleet the adilities of DNA and RNA synthesis. By employing the filter film method, the cells were harvested. The double-labelled samples were counbed by the liquid scintillation counter. It was shown that the 60Coγ-rays had a definite effect on CAN and RNA synthesis. With increasing radiation dosage, the radioactivity of 3H and 14C incorporation decreased exponentially. By statistical analysis, the linear regression equations expressing the relationship between the radiation dosage and the logarithm of the radioactivity count for 3H-TdR and 14C-UR incorporations were obtained respectively. Irradiaticn with 10 rad induced decrease of radioactivity count of 3H-TdR and 14C-UR incorporation significantly. Synthesis of RNA rather than DNA was depressed apparently.

Key words

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