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螺旋藻多糖对核酸内切酶活性和DNA修复合成的增强作用

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摘要 本文用核酸内切酶实验和放射自显影术研究了螺旋藻水溶性多糖对DNA切除修复的效应。结果表明，该多糖能显著增强辐射引起DNA损伤的切除修复活性和程序外DAN合成(UDS) 。考察切除修复的时程，发现螺旋藻多糖的存在不但能加快损伤DNA切除反应和UPS的初时速度，而且能延缓以上两个重要修复反应的饱和。

关键词 螺旋藻,多糖,内切酶活性,DNA修复合成

分类号

Enhancement of Endonuclease Activity and Repair DNA Synthesis by Polysaccharide of Spirulina platensis

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Abstract

The effect of a waetr-soluble polysaccharide from bluegreen alga Spirulina platensis on excision repair was monitored by endonuclease assay and measuring unscheduled DNA synthesis (UDS). The results showed that the presence of the polysaccharide enhanced significantly both UV damaged DNA incision activity and UDS in the root-tip cells of Vicia faba irradiated with gamma-rays. We have examined the process of excision of two separate assays. It was found that the polysaccharide increased the initial rate and postponed the saturation of both incision activity and repair DNA synthesis. The implications of these findings for the possible mechanisms are discussed.

Key words Spirulina platensis Polysaccharide Endonuclease activity Repair DNA synthesis

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