

农学—研究报告

莪术CPD染色和45S rDNA荧光原位杂交核型分析

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摘要:

为了对莪术[Curcuma zedoaria (Christm.) Roscoe]的染色体进行识别并对该物种基因组的结构及进化进行初步研究,利用改进的火焰干燥法及荧光原位杂交技术,对莪术中后期染色体的长度,着丝粒的位置及随体的数目进行分析。PI和DAPI组合(CPD)染色后和相继的45S rDNA探针荧光原位杂交结果显示,莪术具有五对45S rDNA位点,三对位于8, 22, 31号染色体末端的CPD带区,二对位于4, 30号染色体的短臂上。第五号短臂为富含GC对的非45S rDNA位点。该实验建立了莪术的经典核型,为非整倍体,核型公式为2n=62+1=40m+12sm+1m,其核型不对称性为2A型。

关键词: 荧光原位杂交

Karyotype Analysis of Curcuma zedoaria (Christm.) Roscoe. by Using CPD Staining and FISH with 45S rDNA

Abstract:

The aim of the study was to identify the chromosomes of Curcuma zedoaria (Christm.) Roscoe., and know something initially of the genome structure and evolution. In this study, mitotic metaphase chromosomes of Curcuma zedoaria (Christm.) Roscoe. were well prepared by using an advanced chromosome preparation method. A classic karyotype of Pennsetum was constructed according to chromosome length, centromere position, and the occurrence of NOR. By fluorescent analysis and CPD staining we found that there were five pairs of 45S rDNA signals located on different chromosomes, three pairs signals are on the NORs of the chromosomes 8, 22 and 31, the other two pairs are on the shorts arms of the chromosomes of 4 and 30, corresponding the location of CPD staining bands; the last sites of CPD staining was on the short arm of the chromosome 5. The result of this study was that Curcuma zedoaria (Christm.) Roscoe was aneuploid, and the karyotype was 2n=62+1=40m+12sm+1m, belonging to 2A.

Keywords: fluorescence in situ hybridization

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1. 吴菁华, 张志忠, 吕柳新.水仙荧光原位杂交体系的建立[J]. 中国农学通报, 2008,24(11): 287-289
2. 李富生 何丽莲.原位杂交技术及其在甘蔗研究中的应用[J]. 中国农学通报, 2004,20(4): 54-54

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