

黄鳝染色体体内SCE 检测系统的建立*

狄少杰, 刘凌云

北京师范大学生物系 100875

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摘要 应用IdU-毛玉米油体内SCE技术, 以不同剂量的典型诱变剂MMC和CP对70尾黄鳝的脾、肾、血淋巴细胞进行了体内诱发SCE敏感性测试。结果: 三种细胞的染色体SCE自发频率均较低, 不同剂量MMC和CP诱发黄鳝三种细胞SCE频率均较对照组显著增加。诱变剂剂量与诱发SCE 频率呈线性关系。三种细胞染色体SCE对MMC和CP的敏感性次序为肾>脾>血淋巴细胞。与几种鱼和其它动物比较, 黄鳝三种细胞的SCE自发频率均较低, 对MMC和CP诱发SCE的敏感性均较高, 因此认为黄鳝可作为较理想的体内SCE检测系统。

关键词 [黄鳝,染色体,姐妹染色单体交换\(SCE\)](#)

分类号

The Establish ment of in vivo SCE Detecting System of Chromosomes in *Monopterus albus**

Di Shaojie Liu Lingyun

Department of Biology, Beijing Normal University, Beijing 100875

Abstract

Using SCE in vivo technique of only once injected IdU(5 iododeoxyuridine) raw maize oil, we tested the sensitivity of sister chromatid exchanges (SCE) with different doses of mitomycin (MMC) and cyclophosphamide (CP) in three kinds of cells(blood lymphocytes, spleen cells and kidney cells) of *M. albus*, Altogether 2279 SCD-2 metaphases in 70 fish were calculated and analysed statistically. The results indicated that the spontaneous frequencies of SCEs in three kinds of cells were very low. After treating chromosomes with different doses of MMC and CP, the SCE frequencies induced by MMC and CP were increased significantly. The linear relationship between the dosage and SCE frequencies was analysed. The SCE sensitivity of three kinds of cells was kidney>spleen> lymphocytes. Comparing the SCEs in *M. albus* with that of several fishes and other animals, we found that the spontaneous frequencies of SCEs in three kinds of cells of *M. albus* were very low and their sensitivity of SCEs induced by MMC and CP with different doses was higher than that of above mentioned animals. The results of this study suggest that the SCE detecting system of chromosomes in vivo in *M.albus* should be a useful tool to assay the mutagens, and especially to investigate dangerous chemicals in water.

Key words [Monopterus albus](#) [Chromosome](#) [Sister chromatid exchange \(SCE\)](#)

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