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### 秋水仙碱诱导铁皮石斛多倍体研究初报

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#### Study on the Use of Colchicine to Induce Polyploidy of *Dendrobium candidum* Wall. ex Lindl

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摘要

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**摘要** 采用浸泡法对铁皮石斛的拟原球茎、丛生芽进行多倍体诱导。结果表明:用0.09%秋水仙碱处理24 h诱导丛生芽效果最佳,变异率达到48%,死亡率为10%。通过对叶、气孔、染色体的检测,证明变异芽为四倍体或嵌合体。四倍体较二倍体发生了显著变化且嵌合体需要分割培养为整倍体。二倍体细胞染色体数为 $2n=2x=38$ ,四倍体细胞染色体数为 $2n=4x=76$ 。

**关键词:** 铁皮石斛 多倍体 秋水仙碱 染色体

**Abstract:** To induce polyploidy, the protocorm like bodies and caespitose shoots of *Dendrobium candidum* were soaked with different concentrations of colchicine solution and different treating times. The results showed that the optimum condition was soaking shoots in 0.09% colchicine solution for 24h, the highest induction rate was about 48% and the death rate was 10%. The characteristics of leaves, stoma and the number of chromosome of treated plants were checked and some plants were determined to be tetraploid, others were different chimeras needed to be separated, tetraploid were distinctly different from diploid. The number of chromosomes of tetraploids cells was  $2n=4x=76$ , while that of diploid cells was  $2n=2x=38$ .

**Keywords:** *Dendrobium candidum*; polyploid; colchicine; chromosomes

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