

# NaCl胁迫对大麦细胞分裂及染色体行为的影响 Cell Division and Chromosome Behavior of Hordeum vulgare Seedlings under Salt Stress

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**摘要** NaCl溶液培养导致大麦幼苗根尖细胞有丝分裂指数下降, 细胞姐妹染色单体交换(SCE)频率增高, 且诱发包括染色体断片、后期染色体桥、不均等分裂及间期细胞微核等的染色体行为异常。细胞平均SCE频率及异常分裂细胞的比率与NaCl浓度和作用时间呈正相关。结果提示: NaCl浓度高或作用时间较长时对大麦细胞具有遗传学毒性。

**Abstract:** The effects of NaCl solution on chromosome behavior and sister chromatid exchanges(SCE) of barley were studied. Abnormal chromosome behavior including chromosome fragmentation, micronuclei, anaphase bridges and unequal split was found in root tip cells of Hordeum vulgare seedlings. Mitotic index decreased but SCE frequency increased significantly when barley incubated with NaCl solution. The effects of NaCl solution depended on its concentration and treatment duration. The higher the treated concentration was, the higher the ratio of chromosomal aberration was. The longer the treatment duration was, the higher the degree of the effects was. The results showed that NaCl solution was genotoxic when the concentration was higher and the treated time was longer.

**关键词** [大麦](#) [NaCl](#) [染色体行为异常](#) [姐妹染色单体交换](#) **Keywords** [Hordeum vulgare](#) [NaCl](#) [abnormal chromosome behavior](#) [sister chromatid exchange](#)

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## Abstract

## Key words

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