

## 论著

### 母爱剥夺诱导的抑郁大鼠海马miR-16的表达

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**摘要:** 目的: 研究母爱剥夺是否诱发成年大鼠抑郁样行为表现, miR-16是否参与母爱剥夺诱发抑郁的病理过程. 方法: 在SD大鼠出生后第1天按窝随机分为母爱剥夺组( $n=17$ )和正常对照组( $n=17$ ). 母爱剥夺组大鼠在出生后第1至14天每天接受6 h的母爱剥夺刺激, 正常对照组大鼠不接受任何实验处理. 在大鼠13周龄时采用强迫游泳和糖水偏爱实验评定大鼠的抑郁水平; 采用实时荧光定量RT-PCR检测大鼠海马miR-16的表达水平. 结果: 在强迫游泳实验中, 母爱剥夺组大鼠的被动漂浮时间显著长于对照组大鼠, 糖水偏爱率显著低于对照组( $P < 0.05$ ); 与对照组比较, 母爱剥夺组大鼠海马内miR-16的表达水平显著增加( $P < 0.05$ ), miR-16表达水平与抑郁样行为水平显著相关( $P < 0.05$ ). 结论: 母爱剥夺能使大鼠成年后表现出抑郁样行为, 海马内miR-16表达水平升高, miR-16可能参与母爱剥夺诱发大鼠抑郁样行为的病理过程.

**关键词:** 母爱剥夺 抑郁 海马 miR-16

### Expression of miR-16 in the hippocampus of depressed adult rats induced by maternal deprivation

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**Abstract:** Objective: To detect the expression of miR-16 in the hippocampus of a rat depression model induced by maternal deprivation, and to explore whether miR-16 is involved in the pathological process of maternal deprivation-induced depression. Methods: Newborn SD rats were randomly divided into a maternal deprivation group ( $n=17$ ) and a control group ( $n=17$ ). Rats in the maternal deprivation group experienced maternal deprivation for 6 h per day from 1st to 14th postnatal day, while rats in the control group rats received no treatment. When the rats were 13 weeks old, depression-like behaviors were assessed by forced swimming test and sucrose consumption test, and the expression of hippocampal miR-16 in rats was detected by real-time RT-PCR. Results: Maternal-deprived rats exhibited significantly longer passive floating time and lower sucrose preference rate than rats in the control group ( $P < 0.05$ ). Maternal-deprivation rats expressed higher level of miR-16 in the hippocampus than rats in the control group, and the expression level of miR-16 was significantly associated with the passive floating time ( $r=0.65$ ,  $P < 0.05$ ) and the sucrose preference rate ( $r=-0.59$ ,  $P < 0.05$ ). Conclusion: Maternal deprivation can induce depressive behaviors in rats and increase the expression of miR-16 in the hippocampus in rats. MiR-16 may be involved in the pathological mechanism of the maternal deprivation-induced depression.

**Keywords:** maternal deprivation depression hippocampus miR-16

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