

## 5-溴脱氧尿苷抑制中国仓鼠核仁形成区活性的研究

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**摘要** 当培养基中BrdU浓度提高至9—30 $\mu$ g/ml时, 会使中国仓鼠二倍体细胞和细胞株Wg3h的银染NORs(Ag-NORs)总数明显减少。不同浓度的BrdU对中国仓鼠细胞NORs活性影响的研究表明, 中国仓鼠细胞NORs活性受抑制的程度随培养基中BrdU浓度的提高而加强, 还与BrdU处理的时间不密切的关系。这些细胞在无BrdU的培养基里继续生长30小时后, 它们的NORs活性可以得到恢复。BrdU对中国仓鼠细胞NORs活性的抑制作用很可能是一种毒性效应。本文还对BrdU抑制中国仓鼠细胞NORs活性的机制进行了初步的讨论。

**关键词**

**分类号**

## A Study on Suppression of Nucleolar Organizer Regions Activity of Chinese Hamster Cells Caused by 5-Bromodeoxyuridine

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### Abstract

In this article, we report that 5-bromodeoxyuridine (BrdU) can obviously suppress nucleolar organizer regions (NORs) activity of Chinese hamster cells ( $P < 0.001$ ). When the concentration of BrdU in culture medium rises, the total number of Ag-NORs is significantly reduced for both Chinese hamster diploid cells and cell line Wg3h ( $P < 0.001$ ), for which significantly declining of the number of the chromosomes bearing 2 Ag-NORs is a main cause. Our results indicate that degree of the BrdU suppression increases with the BrdU concentration in the culture medium, and there is a close relationship between the suppression degree and BrdU-treatment time, i.e., the longer the BrdU-treatment time, the stronger the suppression degree. When the BrdU-treated cells are transferred into BrdU-free medium for another 30 hrs, the NORs activity can recover. The suppression of BrdU may, therefore, be due to BrdU toxicity. We also compare characteristics of Ag-NORs distribution on the chromosomes between the hamster diploid cells and the cell line after BrdU influence. The mechanism by which the NORs activity of the hamster cells is suppressed by BrdU added into the medium is discussed in this paper.

### Key words

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### 扩展功能

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