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## Wnt3a诱导小鼠肝前体细胞上皮-间质转化(PDF)分享到

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**Title:** Wnt3a induces epithelial-mesenchymal transition in mouse hepatic progenitor cells

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**关键词:** [Wnt3a](#); [小鼠肝前体细胞](#); [上皮-间质转化](#)

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**摘要:** 目的 探讨Wnt3a对小鼠肝前体细胞发生上皮-间质转化的影响。 方法 将表达Wnt3a的腺病毒Ad-GFP-Wnt3a转入小鼠肝前体细胞中,与空白对照组相比,观察其形态变化。细胞划痕实验和细胞迁移实验观察其对小鼠肝前体细胞迁移能力的影响。实时荧光定量Real-time PCR和Western blot分别检测小鼠肝前体细胞中上皮标志物和间质标志物的表达改变。 结果 镜下观察,高表达Wnt3a的小鼠肝前体细胞由不规则多边形变为长梭形。细胞划痕实验结果显示,Ad-Wnt3a组细胞48h迁移距离为(0.53±0.05)mm,Ad-GFP组细胞48h迁移距离为(0.33±0.02)mm,相对对照组,其迁移距离增加,差异具有统计学意义(P<0.05)。细胞迁移实验结果显示,Ad-GFP组24h穿过小孔的细胞为(10.33±2.08)个,而Ad-Wnt3a组穿过的细胞为(62.00±3.60)个,相对对照组,其穿过小孔的细胞数量增加,差异具有统计学意义(P<0.01)。RT-PCR和Western blot结果显示,间质标志物N-cadherin、vimentin和snail的mRNA和蛋白水平表达上调,相反上皮标志物E-cadherin和CK-18的mRNA水平和蛋白水平表达下调,差异具有统计学意义(P<0.05)。 结论 Wnt3a能够促使小鼠肝前体细胞发生上皮-间质转化,提示其可能参与了肝纤维化的发展进程。

**Abstract:** Objective To determine the effect of Wnt3a on epithelial mesenchymal transition in mouse hepatic progenitor cells. Methods The mouse hepatic progenitor cells were infected with Ad-GFP-Wnt3a virus. Light

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microscopy was used to observe the morphology of mouse hepatic progenitor cells compared with blank cells. The metastatic capacity of cells was observed by wound healing assay and Transwell assay. The expression of epithelial and mesenchymal markers at mRNA and protein levels was detected by real-time PCR and Western blotting. Results The mouse hepatic progenitor cells were highly infected by Ad-GFP-Wnt3a virus. Mouse hepatic progenitor cells had morphological changes from epithelial to a spindle-like shape. Wound-healing assay showed the migration distance of were  $0.53 \pm 0.05$  and  $0.33 \pm 0.02$  mm, respectively for Ad-Wnt3a cells and Ad-GFP cells ( $P < 0.05$ ). Transwell assay showed the cells permeating the Transwell membrane were  $62.00 \pm 3.60$  and  $10.33 \pm 2.08$  respectively for Ad-Wnt3a cells and Ad-GFP cells ( $P < 0.01$ ). Real-time PCR and Western blotting showed the mRNA and protein levels of epithelial markers N-cadherin, vimentin and snail were increased significantly, but, those of mesenchymal markers E-cadherin and CK-18 were decreased significantly ( $P < 0.05$ ). Conclusion Wnt3a can induce epithelial mesenchymal transition in mouse hepatic progenitor cells indicating that Wnt3a might be involved in the progress of liver fibrosis.

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