

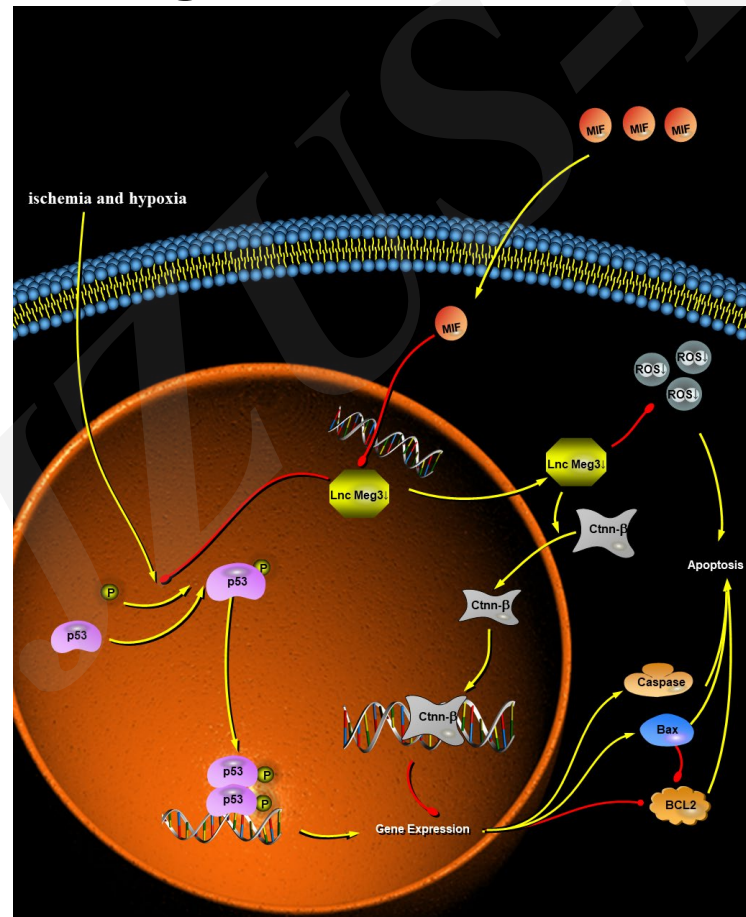
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# **Macrophage migration inhibitory factor protects bone marrow mesenchymal stem cells from hypoxia/ischemia-induced apoptosis by regulating lncRNA MEG3**

**Key words:** Macrophage migration inhibitory factor, lncRNA MEG3, BMSCs,  $\beta$ -catenin, Apoptosis

# Research Summary

This research revealed that MIF protected BMSCs from H/I-induced apoptosis by downregulating the lncRNA MEG3/p53 signaling pathway, activating the Wnt/ $\beta$ -catenin signaling pathway and decreasing ROS levels.



# ***Innovation points***

- **We reported for the first time that MIF can inhibit H/I-induced apoptosis of BMSCs by inhibiting lncRNA MEG3/p53, activating Wnt/ $\beta$ -catenin and decreasing intracellular ROS**
- **We revealed that lncRNA MEG3 may be a potential target to inhibit apoptosis in transplanted BMSCs and improve the efficacy of regenerative treatments in patients with ONFH.**