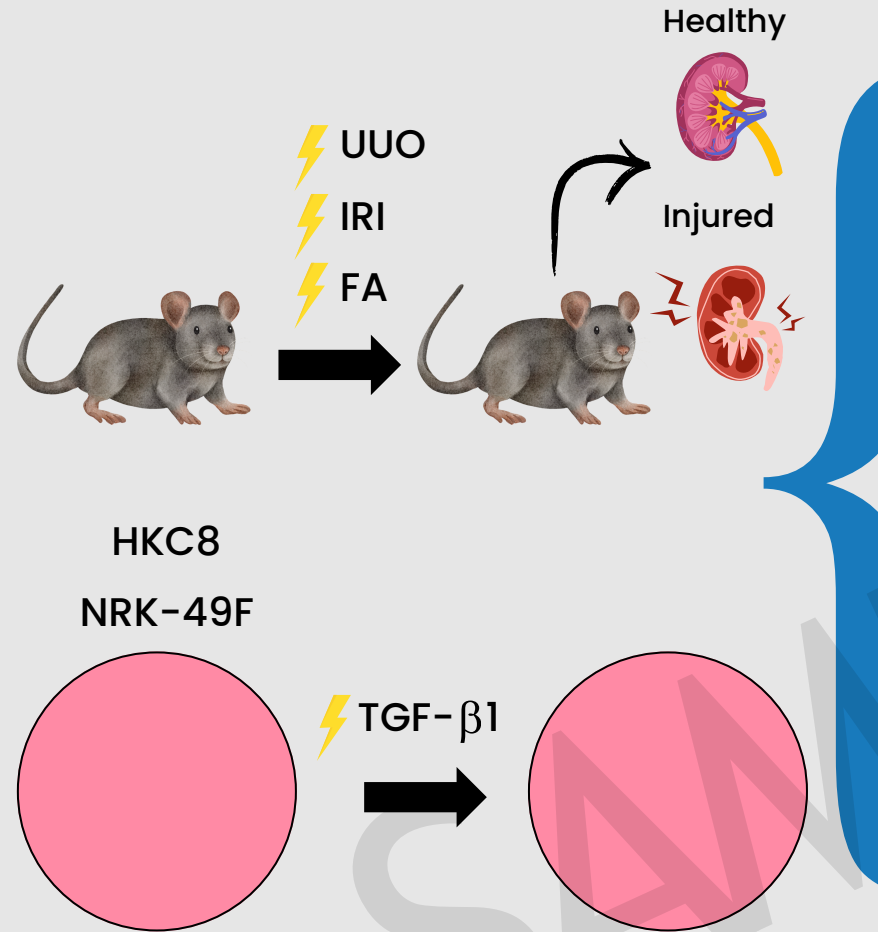


# GRAPHICAL ABSTRACT SAMPLE WORK

**Critical role of transcription factor SOX4 in tubular epithelial cell dedifferentiation and fibroblast activation during kidney fibrosis**

# Critical role of transcription factor SOX4 in tubular epithelial cell dedifferentiation and fibroblast activation during kidney fibrosis



In vivo: Global SOX4 deficiency significantly alleviates kidney fibrosis via inhibiting tubular epithelial dedifferentiation and fibroblast activation in all three CKD models. Specific knockout of SOX4 in either tubular epithelial cells or fibroblasts also confers protective effects against kidney fibrosis.

In vitro: Knockdown SOX4 in HKC8 cells suppresses tubular epithelial dedifferentiation. Knockdown SOX4 in NRK-49F cells inhibits fibroblast activation.

SOX4 regulates TGF- $\beta$ 1-Smad3 signaling pathway via facilitating Smad3 phosphorylation and nuclear translocation.

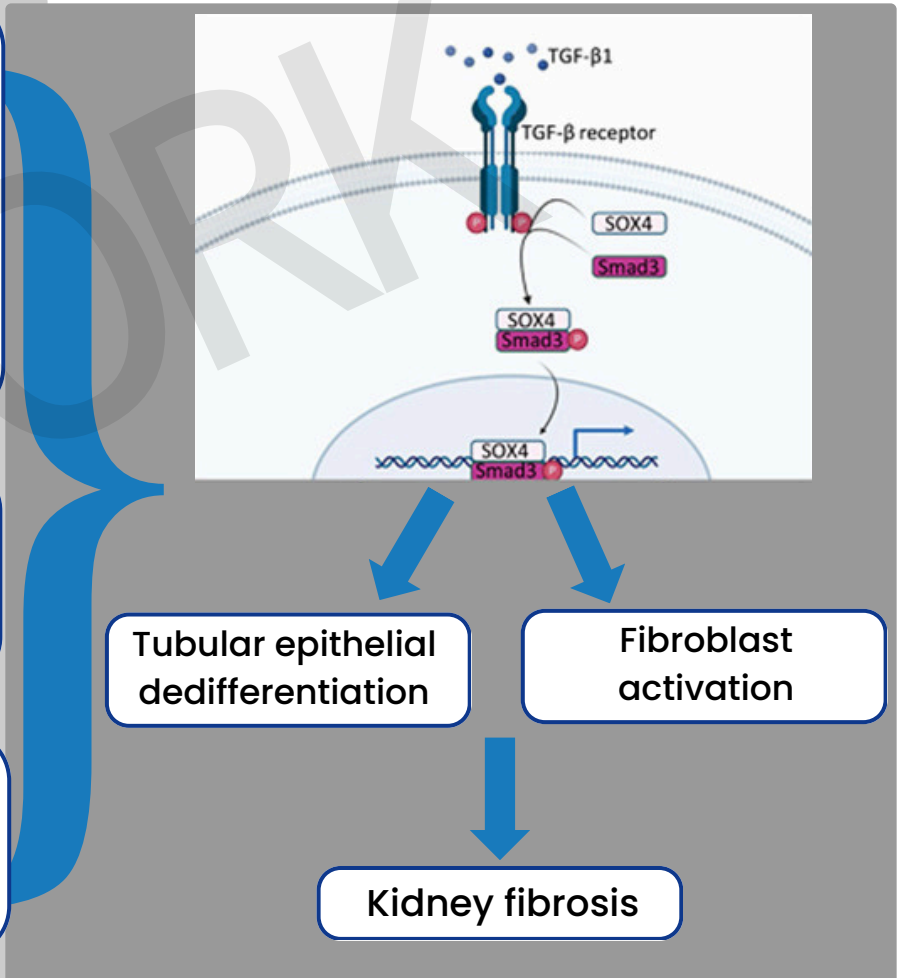


Image Adapted From Du, H., Jiao, B., Xing, J., Yang, D., Tran, M., Wang, P., Hu, Z., Lefebvre, V., Zhou, D., & Wang, Y. (2025). Critical role of transcription factor SOX4 in tubular epithelial cell dedifferentiation and fibroblast activation during kidney fibrosis. *Kidney International*. <https://doi.org/10.1016/j.kint.2025.08.030>

**CONCLUSION: SOX4 promotes epithelial cell dedifferentiation and fibroblast activation in kidney fibrosis through TGF- $\beta$ 1-Smad3 signaling pathway.**