# INVOLVEMENT OF RELAXIN IN SALT-SENSITIVE HYPERTENSION

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Summary

Relaxin (RLX), belonging to the insulin family, has been known as a hormone of pregnancy. Although potent antifibrotic and vasodilatory properties of RLX are recently reported, the involvement in salt-sensitive hypertension has not been elucidated. In this study, we examined the expression of RLX in kidneys of Dahl salt-sensitive (DS) and salt-resistant (DR) rats and effects of RLX treatment in DS rats placed on an 8% NaCl diet. When examined immunohistochemically, RLX was localized in the distal tubules. DS rats showed a significantly decreased expression of RLX compared to DR rats. The administration of RLX (4 microg/h) to DS rats significantly reduced systolic blood pressure (227.0 vs. 166.7 mmHg, $p<0.004$) and urinary protein (228.0 vs. 87.5 mg/day, $p<0.05$). Histologic studies revealed the amelioration of tubulointerstitial fibrosis and arterial thickening in rats received RLX.

These results indicate that RLX deficiency may play a significant role in the development of salt-sensitive hypertension and suggest that RLX can be a potential therapeutic tool for salt-sensitive hypertension.