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Review Articles

The Expression of Neuronal Nitric Oxide Synthase in the Kidney and Its Role for Renal Functions

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The present work reviews the distribution of neuronal nitric oxide synthase in the kidney and its role in various renal functions. A review of the literature shows that most authors have focused on the endothelial isoform as the primary source of nitric oxide production in kidneys. Nowadays, there is convincing evidence that renal neuronal nitric oxide synthase plays a role in the control of the regulatory mechanisms of the kidney such as tubuloglomerular feedback mechanism and pressure natriuresis. It seems that the increased immunoreactivity of neuronal nitric oxide synthase in both renal cortex and medulla has renoprotective role under hypertension and weakens the development of target organ damage.

Key words: neuronal nitric oxide synthase (nNOS), kidney, spontaneously hypertensive rats (SHR), Wistar rats