Role of GABAB receptors in autonomic control of systemic blood pressure.


Source

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Abstract

GABA(B) receptors belong to family III G protein-coupled receptors (GPCRs) and are widely distributed in the peripheral and central nervous systems. The GABA(B) receptor is one of the most important therapeutic targets in the treatment for spasticity. GABA(B) agonists, such as baclofen, are used as muscle relaxants clinically and are effective for the treatment of anxiety, depression, epilepsy, and cognitive disorders (Caddick & Hosford, 1996; Dichter, 1997; Enna & Bowery, 1997). In addition, GABA(B) receptors regulate neurotransmitter release and neuronal excitability in the brain regions involved in the autonomic nervous system. Recent studies have led to a better understanding of the role of GABA(B) in the regulation of the autonomic nervous system, especially in disease conditions such as hypertension. Here, we provide an overview of the recent progress, a discussion of disparate and contradictory findings, and a description of theories used to explain various cardiovascular effects of GABA(B) receptor drugs. Particular emphasis is placed on the role of GABA(B) receptors in the neural plasticity of brain regions related to the control of sympathetic outflow in cardiovascular disorders.

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