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Neuropeptides in Chronic Airway Inflammation

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ABSTRACT Chronic airway inflammation is characterised by persistent infiltration of inflammatory cells that cause airway mucosal damage and remodelling. Recent studies have highlighted the important role of neuropeptides in regulating airway immune responses. This review aims to summarise the current knowledge of neuropeptides involved in chronic airway inflammation and their potential therapeutic significance. Neuropeptides such as substance P, neurokinin, calcitonin gene-related peptide, and vasoactive intestinal peptide participate in mucus secretion, smooth muscle contraction, and inflammatory cell recruitment. They interact with immune cells through specific receptors and signalling pathways, influencing the progression of airway inflammation. Understanding the mechanisms of neuropeptide-mediated neuro-immune regulation may provide new targets and strategies for preventing and treating chronic airway inflammatory diseases.