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A Review of B-Caryophyllene's Impact on Ahr-Mediated Obesity Mechanisms

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Abstract: *Obesity is a multifactorial metabolic disorder characterized by excessive fat accumulation, chronic inflammation, and dysregulated signaling pathways. The Aryl Hydrocarbon Receptor is increasingly recognized as a critical regulator of lipid metabolism and adipogenesis, contributing to obesity-associated pathophysiology. β-Caryophyllene, a naturally occurring sesquiterpene found in plants such as black pepper and cloves, exhibits anti-inflammatory, antioxidant, and metabolic modulatory effects. This review explores the therapeutic potential of BCP in modulating AHR-mediated obesity mechanisms, highlighting its molecular pathways, preclinical evidence, and prospective clinical applications.*

Keywords*:* β-Caryophyllene, Aryl Hydrocarbon Receptor, Obesity