Hydrogen sulfide and functional therapy: novel mechanisms from epigenetics

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Abstract

Hydrogen sulfide (H_2S) is a gasotransmitter with important physiological effects, including anti-inflammatory properties, regulation of oxidative stress, vasodilation, etc. Functional therapy involves the use of treatments that target the underlying cause of a disease, rather than simply treating symptoms. Epigenetics refer to changes in gene expression that occur through modifications to DNA, to the proteins that package DNA, or to non-coding RNA mechanisms. Recent research suggests that H_2S may play a role in epigenetic regulation by altering DNA methylation patterns and regulating histone deacetylases, enzymes that modify histone proteins, or modulating miRNA mechanisms. These findings suggest that H_2S may be a promising molecule for functional therapy in various diseases where epigenetic modifications are dysregulated.

Key words

Hydrogen sulfide; Epigenetics; Functional therapy.