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REVIEW ARTICLE

Oxadiazole: A highly versatile scaffold in drug discovery

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Abstract

As a pharmacologically important heterocycle, oxadiazole paved the way to combat the problem associated with the confluence of many commercially available drugs with different pharmacological profiles. The present review focuses on the potential applications of five-membered heterocyclic oxadiazole derivatives, especially 1,2,4-oxadiazole, 1,2,5-oxadiazole, and 1,3,4-oxadiazole, as therapeutic agents. Designing new hybrid molecules containing the oxadiazole moiety is a better solution for the development of new drug molecules. The designed molecules may accumulate a biological profile better than those of the drugs currently available on the market. The present review will guide the way for researchers in the field of medicinal chemistry to design new biologically active molecules based on the oxadiazole nucleus. Antitubercular, antimalarial, anti-inflammatory, anti-HIV, antibacterial, and anticancer activities of various oxadiazoles have been reviewed extensively here.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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