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Mini-Review Article

Thiadiazole and Thiazole **Derivatives as Potential Antimicrobial Agents**

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systems with thiadiazole and thiazole fragments in molecules as promising antimicrobial agents. Introduction: Thiadiazole and thiazole backbones are the most

Background: This review summarizes data on heterocyclic

favored and well-known heterocycles, a common and essential feature of various drugs. These scaffolds occupy a central position and are the main structural components of numerous drugs with a wide spectrum of action. These include antimicrobial, antituberculous, anti-inflammatory, analgesic, antiepileptic, antiviral, and anticancer agents. Method: The research is based on bibliosemantic and analytical

methods using bibliographic and abstract databases, as well as databases of chemical compounds. Result: This review reports on thiadiazole and thiazole derivatives,

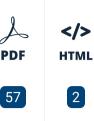
which have important pharmacological properties. We are reviewing the structural modifications of various thiadiazole and thiazole derivatives, more specifically, the antimicrobial activity reported over the last years, as we have taken this as our main research area. 80 compounds were illustrated, and various derivatives containing hydrazone bridged thiazole and pyrrole rings, 2-pyridine and 4-pyridine substituted thiazole derivatives, compounds containing di-, tri- and tetrathiazole moieties, spirosubstituted 4- thiazolidinone-imidazoline-pyridines were analyzed. Derivatives of 5-heteroarylidene-2,4-thiazolidinediones, fluoroquinolone-thiadiazole hybrids, and others. Conclusion: 1,3,4-thiadiazoles and thiazoles are valuable resource

in this area. Keywords: thiadiazole derivatives, thiazole derivatives, drug research, heterocycles, antimicrobial activity, antituberculous

for researchers engaged in rational drug design and development

activity.





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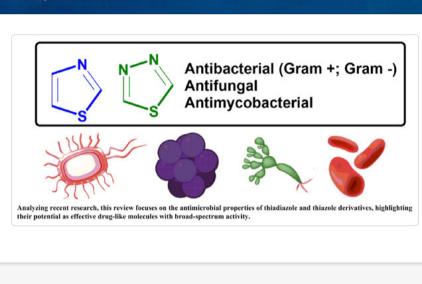
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