

Special Issue on
Pyrazole Derivatives in Medicinal Applications

CALL FOR PAPERS

Pyrazole derivatives have a long history of application in agrochemicals and pharmaceutical industry as herbicides and active pharmaceuticals. German Chemist Ludwig Knorr coined the term “pyrazole” in 1883 for the class of five membered heterocyclic compounds containing two nitrogen atoms in adjacent position and two endocyclic double bonds. In 1898, German Chemist Hans von Pechmann developed a method for the synthesis of pyrazole from acetylene and diazomethane. In 1959, the first natural pyrazole, 1-pyrazolyl-alanine, was isolated from seeds of watermelons.

Pyrazoles have attracted considerable attention in different fields of science since the mid of nineteenth century. Investigations of physical, chemical, and biological properties of pyrazoles have yielded promising information. Many substituted pyrazole derivatives are acknowledged to possess a wide range of bioactivities such as antitumor, antibacterial, antifungal, antiviral, antiparasitic, antitubercular, insecticidal, antioxidant, anti-inflammatory, analgesic bioactivities. The pyrazole template was extensively used in the design of anti-inflammatory compounds, resulting in molecules like lonazolac and trifezolac, and of drugs that directly targets COX-2 with celecoxib as leading drug. The aminopyrazoles proved to be a useful pharmacophore scaffold in the design of various protein kinase inhibitors, like the pan-Aurora kinase inhibitor tozasertib and crizotinib, a pyrazole derivative approved for the treatment of non-small-cell lung carcinoma. The pyrazole moiety is also used in fused bicyclic compounds with various pharmacological profiles. Zaleplon is a pyrazolopyrimidine marketed as a sedative-hypnotic, and etazolac, cartazolac, and trazolac are pyrazolopyridines exhibiting anxiolytic and anticonvulsant effects.

To facilitate the study of diverse biological activities of pyrazole derivatives, this special issue is aimed at collating the recent efforts made by researchers on pyrazole moiety for their various pharmacological activities.

We invite authors to contribute original research and review articles that will describe the role of diversely substituted pyrazoles in medicinal applications.

Potential topics include but are not limited to the following:

- ▶ Synthesis and biological evaluation of new pyrazole derivatives
- ▶ Recent developments in pyrazole chemistry
- ▶ Structure activity relationship study of pyrazole analogues.
- ▶ Molecular docking studies of pyrazole analogues

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ijmc/pdma/>.

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