

# A Study on Heterocyclic Compounds and Their Diverse Uses

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**Abstract:** *One of the most significant and expansive areas of research in organic chemistry is heterocyclic chemistry. Heterocycles are very relevant both medically and industrially, and they rate highly among the classic organic divisions of organic chemistry because to the uniqueness of their structural skeleton components. They may be present in many different compounds such as vitamins, hormones, antibiotics, nucleic acid, and many other places in nature. Their significance in the development of civilisation is more fascinating when seen from an industrial and biological standpoint. Heterocycles are also crucial for initiatives to improve human well-being and for our knowledge of life processes. This article often focuses on the many applications of heterocycles in the domains of electronics, biology, optics, pharmacology, and material sciences.*

**Keywords:** Heterocyclic Compounds, Ring Structures.

## REFERENCES

- [1]. Abbas Al-Mulla, Der Pharma Chemica, "A Review: Biological Importance of Heterocyclic Compounds", 2017,9(13):141-147
- [2]. Varun arora, H.S. Lamba and Deepak Wadhwa, "Importance of heterocyclic chemistry: A Review", IJPSR/ (2012), vol.3, issue 09
- [3]. Shodhganga, "A general introduction to heterocyclic chemistry".
- [4]. T. Singh and V. K. Verma, J. Tribol, "Tribological Studies on Bearing Balls of Different Composition Using Certain Heterocyclic Compounds as Potential E.P. Additives", 112(4), 614-617 (Oct 01, 1990)
- [5]. Sourav De, Niranjana Babu, and et al. "Review article on Importance of heterocyclic compounds", Mintage Journal of Pharmaceutical & Medical Sciences.
- [6]. Rajni Gupta, "Biological significance of nitrogen containing heterocyclic compounds a mini review", International Journal of Computer Applications, (0975 – 8887).
- [7]. Rajiv Dua, Suman Shrivastava, and et al., "Pharmacological Significance of Synthetic Heterocyclic Scaffold: A Review", Advances in Biological Research 5 (3): 120-144, 2011.
- [8]. Mohamad Yusuf, Payal Jain, "Synthesis and biological significances of 1,3,4-thiadiazolines and related heterocyclic compounds", Arabian Journal of Chemistry(2014) 7, 525–552.
- [9]. Pedro Martins, Joan Jesus, Sofia Santos, Luis R. Raposo, Catarina Roma-Rodrigues, Pedro Viana Baptista and Alexandra R. Fernandes, "Review on Heterocyclic anticancer compounds: recent advances and the paradigm shift towards the use of nanomedicine's tool box", Molecules, 2015, 20, 16852-16891.
- [10]. Aftab Ahmad, Asif Husain, Shah Alam Khan, Mohd. Mujeeb, Anil Bhandari, "Synthesis, antimicrobial and antitubercular activities of some novel pyrazoline derivatives", Journal of Saudi Chemical Society (2016) 20, 577–584.