

# Recent Methodologies for the Synthesis and Applications of Oxazine Compounds

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## ABSTRACT

In this short review we will concentrate on the newest methods for the synthesis of this type of important heterocyclic compounds. This type of compounds have proved to have valuable pharmaceutical and medical applications as drugs and co drugs for numerous types of diseases starting from microorganism screening to cancer cells treatments and have been succeeded in all types of these therapeutic and medical fields.

**Keywords:** Methodology; Synthesis; Oxazine; Recent

## Introduction

Oxazine compounds have been investigated by Chaitra G. and Rohini RM., They prepared these compounds from chalcone derivatives of pyridine and studied their screening effects towards inflammatory and as antioxidants [1]. Vashundhra Sharma and his coworkers have also studied the synthesis of these compounds and have proved that these compounds are very effective toward cancer cells killing [2]. During 1919 some researchers have tested the synthesized compounds 3,4-dihydro-2H-1,4-benzoxazin-3-one derivatives toward human DNA topoisomerase I, the study showed effective inhibitory activity which might serve as novel constructs for future anticancer agent designs [3]. Nabawey and his team have reviewed the synthesis of 3,4-Dihydro-2H-1,3benzoxazines by Mannich reaction and studied their biological actions [4]. Seyed Gholamhossein and his coworkers have investigated the synthesis of naphtha [1,2-e] [1,3] oxazines bearing an alsulfonamide moiety their investigation have revealed the remarkable activity against cancer cells and as anti-inflammatory agents [5].

## Results and Discussion

According to the above brief summary for the methods for preparation of this type of compounds which were proved their successful action towards wide spectrum of medical actions

encourage many researches to find new methodologies for their synthesis and also encouraged us to use new methods for the synthesis of different types of new oxazine compounds [6-10]. We also studied some of their biological effects towards microorganisms, our investigation revealed the promising results for most of the prepared compounds in which these compounds might find its way to be used as drugs [11]. That is our next study during our present program.

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