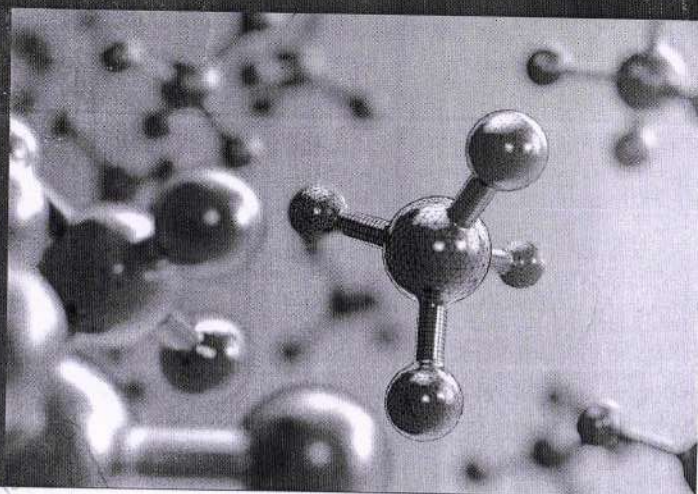


The book entitled "Synthesis of various oxo thiazolidin derivatives and study of their antimicrobial activity" is divided into two chapters Chapter 1 describe the synthesis and antimicrobial activities of N-substituted quinoline and benzo[h][1,6]naphthyridine analogues. The chapter is divided into two sections. Section I describes the synthesis of quinoline and benzo[h][1,6]naphthyridine derivatives and section II study antimicrobial activities. Chapter 2 deals with the synthesis and antimicrobial activity of novel benzo[h][1,6]naphthyridines. This chapter is divided into three sections. Section I describes the regioselective synthesis of benzo[h][1,6]naphthyridines using aromatic amines, alkoxides, azide and hydrazines. Section II study single crystal X-ray analysis of 5,7-dichloro-3-(2-chloroethyl)-4-methoxy-2-methylbenzo[h][1,6]naphthyridine and in Section III Study antimicrobial activities of benzo[h][1,6]naphthyridine derivatives.

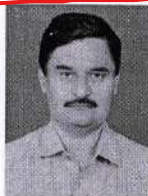
Synthesis of Benzo [H][1,6] Naphthyridine Derivatives



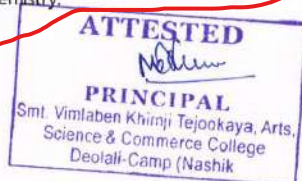
Balasaheb Pandharinath P.

## Synthesis of Benzo [H][1,6] Naphthyridine Derivatives

Synthesis of Naphthyridine Derivatives: Study of their Biological Activities



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## CHAPTER 1

### Synthesis of novel benzo[h][1,6]naphthyridine derivatives from 4-aminoquinoline

In this chapter, we are reporting the synthesis of 4-amino-2-chloroquinoline, 4-aminosubstituted quinoline and benzo[h][1,6]naphthyridines and study of their antimicrobial activities.

This chapter divided into two sections I and II

**Section I:** Synthesis of quinoline and benzo[h][1,6]naphthyridine derivatives

**Section II:** Study antimicrobial activities

**Section I:** Synthesis of quinoline and benzo[h][1,6]naphthyridine derivatives

#### 1.1 Introduction

Quinoline derivatives have been used for the treatment of malaria [1], beginning with quinine **1**. Systematic modifications of quinine led to the potent antimalarial chloroquine **2** drugs [2]. After worldwide development the chloroquine drug was resistance against malaria. Their fore chemist focused to synthesize other new compounds, the screening efforts produced by mefloquine **3**, quinaquine **4** and another several reports of new potent quinoline compounds showed good activity against malaria [3-6]. The quinoline ring system and aliphatic side chain is crucial for the mode of action of chloroquine [7-9]. 4-Aminoquinoline analogues and their platinum(II) complexes showed antileishmanial and antitubercular activities [10]. Quinolines are structurally diverse group of compounds present in numerous natural products and are also the object of extensive synthetic research. Quinoline derivatives have demonstrated antileishmanial activity, antibacterial, antifungal, anti HIV and antitumor activity [11-14]. Recently, 4-amino-7-chloro-

