# **DEPARTMENT OF CHEMISTRY**

# PACIFIC ACADEMY OF HIGHER EDUCATION AND RESEARCH UNIVERSITY, UDAIPUR

**Prof. RAMESHWAR AMETA** 

**Professor** 

# **CERTIFICATE**

It gives me immense pleasure in certifying that the thesis entitled "SYNTHESIS OF SOME NITROGEN CONTAINING HETEROCYCLIC COMPOUNDS AND THEIR ANTIMICROBIAL ACTIVITIES" submitted by DODIA PRAVINSINH BHUPATSINH is based on the research work carried out under my guidance. He has completed the following requirements as per Ph.D. regulations of the University;

- (i) Course work as per University rules.
- (ii) Residential requirements of the University.
- (iii) Regularly presented Half Yearly Progress Report as prescribed by the University.
- (iv) Published/ accepted minimum of two research papers in a refereed research journal.

I recommend the submission of thesis as prescribed/ notified by the University.

Date:

(Prof. RAMESHWAR AMETA)
Supervisor

# **DEPARTMENT OF CHEMISTRY**

# SHETH L. H. SCIENCE COLLEGE MANSA, GANDHINAGAR, GUJARAT

Prof.	<b>KAR</b>	ΓIK B.	<b>VYAS</b>
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Date:

(Prof. KARTIK B. VYAS)
Co-supervisor

# **DECLARATION**

I, DODIA PRAVINSINH BHUPATSINH S/o Mr. BHUPATSINH DODIA resident of Gujarat hereby declare that the research work incorporated in the present thesis entitled "SYNTHESIS OF SOME NITROGEN CONTAINING HETEROCYCLIC COMPOUNDS AND THEIR ANTIMICROBIAL ACTIVITIES" is my original work. This work (in part or in full) has not been submitted to any University for the award or a Degree or a Diploma. I have properly acknowledged the material collected from secondary sources wherever required. I solely own the responsibility for the originality of the entire content.

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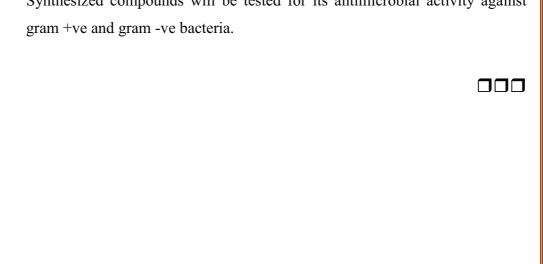
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# **PREFACE**

Nitrogen containing heterocycles have always played a major role in the pharmaceutical and agrochemical industries, because of their potent physiological properties, which have resulted in numerous applications. Pyrimidine and their derivatives are building block for around more than 150 naturally occurring alkaloids isolated from plant kingdom, microorganisms and animals. There has been an enormous increase in the interest among biologists and chemists in the synthesis and bioactivity of pyrimidine derivatives.

The present work planned has been in following manner.

- Detail literature survey will be carried out on research already done in Pyrimidine derivatives.
- Novel chalcones compounds by simple available starting materials will be synthesized.
- The scope of the novel protocol for synthesizing a good library of pyrimidine derivatives will be assessed.
- All the synthesized compounds will be characterized by <sup>1</sup>H NMR, <sup>13</sup>C, NMR, IR, and MASS spectroscopic techniques.
- Synthesized compounds will be tested for its antimicrobial activity against



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