ACKNOWLEDGEMENT

First and foremost I would like to thank GOD, for his love and blessings. He continued to look after me despite my flaws.

It gives me immense pleasure to express my sincere gratitude and respect to my worthy guide, Dr. Vipan Kumar, Assistant Professor, Department of Chemistry, Guru Nanak Dev University, Amritsar, for introducing me to the enthralling field of “Organic-Medicinal Chemistry.” Above all and the most needed, he provided me unflinching encouragement and support in various ways. His truly scientific intuition has made him a constant oasis of ideas and passions in science, which exceptionally inspire and enrich my growth as a student, a researcher and a scientist to be. I am indebted to him more than he knows.

I gratefully acknowledge Professor M.P. Mahajan, FNASc, Emeritus Scientist & Director, Apeejay Stya Research Foundation, Gurgaon, for his advice and crucial contribution, which made him a backbone of this research and so to this thesis.

I take this opportunity to thank to Dr. B.S. Randhawa, Head, Department of Chemistry, Guru Nanak Dev University, Amritsar, for providing me necessary research and laboratory facilities.

The precious suggestions and encouraging words from my past lab mates Dr. Gaurav Bhargava, Dr. Amit Anand and Dr. Pardeep Singh are sincerely acknowledged. I wish to thank to my present lab mates Mr. Vishu Mehra (SRF), Mr. Kewal Kumar (SRF), Ms. Nisha (SRF) and Mr. Sumit Sharma (JRF); project student Ms. Vaishali Sharma, Mr. Vikas, Ms. Gurpreet Kaur and Ms. Rajbir Kaur for their co-operation, care, help and constant motivation given to me. I wish to convey my sincere thanks to all non-teaching staff of the department for their valuable co-operation.

The financial support provided by DST and BRNS as Research Fellowships is gratefully acknowledged.

I soulfully express my unbound thanks to my dearest friend, Ms. Anu Saini who stood by my side whenever and wherever the need arose during my research work. I also acknowledge to my best friends Mr. Raghav Chawla, Mr. Vishu Mehra and Mr.
Harmanpreet Singh for their constant reassurance and assistance even in odd times and enabled me to achieve my goals complacently.

My special thanks are reserved for my brother and sister. They have been a pillar of strength and always lent a shoulder of support whenever I felt lost and dazed. Finally, I bow my head to my parents for their constant encouragement, generous support, invaluable blessings and selfless, but untold sacrifices for my better and bright carrier. It is the untiring efforts and blessings of my parents, whatever I have achieved.

(Raghu Raj)