ACKNOWLEDGEMENT

In the name of Allah, the Most Gracious and the Most Merciful

Alhamdulillah, all praises to Allah for the strengths and His blessing in completing this thesis.

This thesis has been kept on track and been seen through to completion with the support and encouragement of numerous people including my well wishers, my friends, colleagues and various institutions. At the end of my thesis I would like to thank all those people who made this thesis possible and an unforgettable experience for me. To express my thanks to all those who contributed in many ways to the success of this study and made it an unforgettable experience for me.

First of all I pay my gratitude to my guide, Prof. Tasneem Fatma for providing necessary infrastructure and resources to accomplish my research work. This work would not have been possible without her guidance, support and encouragement. Under her guidance I successfully overcame many difficulties and learned a lot. I can’t forget her hard work. Despite of her ill health, she used to review my thesis progress, give her valuable suggestions and made my corrections. Her unflinching courage and conviction will always inspire me.

I am also thankful to the Prof. Luqman A. Khan, Head of Department, Prof. Seemi Farhat Basir, Dr. Aman Jairajpuri, Department of Biosciences, Jamia Millia Islamia, New Delhi. Dr. Hifzul Kabir, De Department of Ilmul Advia, Faculty of Medicine (U), Jamia Hamdard, New Delhi.

I would also like to thanks to University Grants Commission, AYUSH (CCRUM) Government of India, New Delhi, for providing financial assistance in the form of Junior Research Fellowship which buttressed me to perform my work comfortably.

I am really grateful to all my lab members and colleagues Dr. Hemlata, Dr. Sunaina Zutshi, Dr. Fatma Zahra, Dr. Saman Mushir, Khalid Habib, Naveen Bharat,
Mahendra, Shaheen, Sumbul, Tabinda, Kashif, Nazia, Sabbir, Belal and Saad for their advice and their willingness to share their bright thoughts with me, for shaping up my research.

At this Juncture I think of my parents whose selfless sacrificial life and their great efforts with pain and tears and unceasing prayers has enabled me to reach the present position in life.

I should not forget to acknowledge brother and sisters for their continuous love, support, understanding and good wishes whenever I needed.

Last but not least, I want to express my deepest gratitude to my friend Fareha and Saima for their love, understanding and their support.

Finally, I thank all those who have helped me directly or indirectly in the successful completion of my thesis. Anyone missed in this acknowledgement are also thanked. If I did not mention someone’s name here, it does not mean that I do not acknowledge your support and help. Again, I would like to thank everyone who supported and helped me during my Ph.D. study.

Razique Anwer