Acknowledgements

My vocabulary fails to express my heartfelt gratitude to my supervisor, Dr. Absar-ul Hasnain, without whose perception, technical expertise, advice, generous material help and moral support this work would never attain this form. Blessings of my mother, father Mr. Syed M. Atyab, my uncle Mr. Syed M. Musaiyab and phupi were the spiritual force behind this achievement.

I am obliged to the former Chairperson Prof. Jamil A. Khan for unfailing support and sincere advice during his tenure and to Prof. A. K. Jafri, the present Chairman of the Department for the departmental facilities and material help that was always available to me. Kind permission by Prof. (Mrs.) Durdana S. Jairajpuri to use the tools and equipment of Parasitology Research Laboratory is also thankfully acknowledged.

Thanks are also due to my esteemed former teacher Dr. Tariq M. Haqqi who in spite of being a busy person as the Director of Research in Rheumatology at Case Western Reserve University, Cleveland (USA) always took keen interest and gave valuable advices during his short visits when the available time was so scarce. Without his material support several of the experiments would not have been satisfactorily completed.

I will fail in my duty if I do not fondly recall my favourite teacher, (Late) Prof. Wajih A. Nizami who always inspired me as a researcher and guided and helped me at the hour of need.

Sincere thanks are also due to my reputed teachers Prof. Asif Ali Khan and Dr. Iqbal Perwez who also made their laboratory facilities available and gave valuable suggestions. Constructive advices suggestions of Dr. Kamal A. Rizvi, Prof. Absar M. Khan, Dr. M. Afzal, Dr. Niamat Ali, Dr. Asim Azfer, Dr. Gul Ahmad, and Dr. Khalid Saifullah have helped me a lot.

I have to recall the help by Dr. Abbas A. Abidi with a sense of gratitude.

Gratitude is due to my laboratory colleagues Dr. (Mrs.) Nikhat Nabi, Mr. R. B. Pandey, Ms. Mumtaz Jabeen and Mr. Riaz Ahmad. Their sincerity has been an asset throughout this work. The tracing of difference spectra was possible due to the kind permission by Dr. Javed Musarrat of the Faculty of Agriculture to allow the use of facilities there. Mr. Fazlur Rehman Khan and Dr. Qamar Ahmad helped in spectroscopy and in developing western blots. I shall remember their contribution with sincere thanks.

Lastly, I wish to express my thank Dr. Ammar Ibne Anwar whose help was available at very critical moments as well as to my senior colleagues Dr. (Miss) Anjum Nasreen and Dr. (Miss) Fauzia Sherwani. Ms. Kavita Singh and Mr. Abul Farah were always helpful in experimental work that I acknowledge with great appreciation.

Laboratory work always needed the help of Mr. Shakir Ali and Mr. Zheer Ahmad and lab. hygiene was taken care of by Mr. Ramesh, which I wish to mention with thanks.

(Syed Hasan Arif)