ACKNOWLEDGEMENT

My journey through the road of learning that led to the degree of Doctor of Philosophy was an exciting and life-changing journey. As an organic chemistry student my desire to acquire knowledge in the field led me to pursue a higher degree in this field.

My most sincere gratitude is extended to Dr. Anil. K Mishra, for providing me with the opportunity to peruse my research interest in radiotracer development and molecular imaging and for teaching me the key traits of a true leader.

I want to thank Prof. Shrikant Kukreti for having accepted me as his Ph.D. student. He has been a fantastic example of professionalism, creativity, and dedication to science. He has been a great mentor and tremendous role model.

I am extremely grateful to Dr. Harish Chandra, for his guidance, advice, and always keeping our work interesting and exciting. He applied the “open-door” office policy, enabling easy access for questions and discussions. His strong feeling for physical concepts was compulsory for achieving my thesis.

I would also like to thank my thesis advisory committee, Prof. Gurmeet Singh and Prof. Diwan S Rawat for their insightful comments.

I wish to thank Dr. Puja Panwar for her continuous support and guidance throughout my research. It is truly a rare gift to have the opportunity to work with such an exceptional researcher who still remembers what it is like to be a research scholar.

I would like to thank the Prof. S.M.S. Chauhan, Head, Department of Chemistry, University of Delhi and Dr. R.P. Tripathi, Director, INMAS for providing me a chance to work as a research scholar in their departments and avail the facilities therein.

I wish to express my deepest reverence to Dr. Anupama, Dr. Rashi, Dr. Dipti, Dr. A.K Tiwari, Mrs. Aruna, Dr. Sveta, Dr. Raunak, Mrs. Shubhra, Mrs. Puja, Mrs. Krishna Chuttani, Ms. Ankur Kaul and Mr. A.K Babbar for the valuable guidance and generous help given to me.
Thanks and appreciation to my worthy labmates, Swati, Savita, Mohan, Priyanka, Swati Chaudhary and Saami Ahmed for their help and support. Especially, Ms. Anju Singh who has been a tremendous support throughout my time in lab.

I am thankful to all the administrative and technical staff members of Institute of Nuclear Medicine and Allied Sciences and Department of Chemistry for their help and cooperation.

A special thanks is reserved to my friends, Harleen, Surbhi, Virendra, Narmada, Nisha and Ambika. Their delicate and personal support through the struggles of not only Ph.D., but also of the life in general. An additional measure of thanks is also due to Swarndeeep, Kanchan, Anupriya, R. Sandhya, Ganesh, Swati, Pooja, Nidhi, Vikas, Shweta and Swastika.

Lastly, but most importantly, I thank my family who has endured great difficulties for the sake of my education and career. My parent-in-laws, Mr. V.B Singh and Mrs. Geeta who took care of my daughters during my Ph.D. and supported me morally. I also thank my sister-in-law and brother-in-law Mrs. Kasum and Mr. Vinay for their support. My thanks are extended to my brother-in-law Dr. Hare Ram Singh for the fruitful discussions we had on brain anatomy. I behold my father Mr. Mahanand Singh and my mother Mrs. Girija for their blessing and their encouragement. Just by being there beside me, they made me sure that this long journey was a smooth and lightening experience.

In last I also offer my deep gratitude to my husband, Hare Krishna Singh who endured the hardships of the last three years of my Ph.D. with me. This dissertation would not have been possible without his patience and support. He always stood with me for being my source of strength. This acknowledgement would not be complete without thanking my dear sister Pankaj, My jiju Mr. S.P Singh and my two brothers Santosh and Manoj.

Finally I don’t have enough words for my loving daughters Aakriti and Ananya who are the whole world to me.

My prayers and thanks to God Almighty for helping me succeed in this voyage and for the health and happiness He has provided me.

(Niraj Singh)