ACKNOWLEDGMENT

An eminent guide is any student’s dream. It is a pleasure to record my indebtedness to my guide Prof. M.A. Vijayalakshmi, Director, Centre for Bioseparation Technology, VIT University, Vellore. Her commitment and enthusiasm in research has inspired me and will have a lasting influence in my career.

It is indeed a privilege to acknowledge my gratitude to my doctoral committee members, Dr. Akilesh Pandey, Professor, Institute of Genetic Medicine, Johns Hopkins School of Medicine, Baltimore, MD, USA and Dr. R. Sowdhamini, Scientist, National Centre for Biological Sciences, Bangalore, India who have been a tremendous source of inspiration for me and for their valuable suggestions.

My heartfelt thanks are due to Waters India Pvt. Ltd., Bangalore, India and Agilent Technologies India Pvt. Ltd., Bangalore, India for helping me with the mass spectrometric analysis and to BIA Separations, d.o.o., Slovenia, for their generous gift of monolithic disks, which helped in successful completion of my work.

It would be incomplete without expressing my gratitude to Department of Science and Technology (DST), Govt. of India, India for the financial support and Council of Scientific and Industrial Research (CSIR), Govt. of India, India for providing my research fellowship.

It is with pleasure I thank Dr. A. S. Kamalanathan, Scientist, Centre for Bioseparation Technology (CBST), VIT University for his keen interest in my work and also for his constant support and help in times of need.

I also thank all my friends and colleagues and some who were both- for all the help (moral, material and such other kinds as might exist) that they have given with pursuance and helping in the completion of this thesis.

I record my profound thanks to my supportive parents and my brother for their love, support, understanding and sacrifice all these years.

Finally, I must thank my wife for being by my side every step of the way and for her constant encouragement, which made it possible for me to complete this journey. Thank you Remya.

Place: Vellore

Signature of the Candidate

Date: