ACKNOWLEDGEMENTS

It’s true that “Life is what happens” when you are completing a dissertation. Life doesn’t stand still, nor wait until you are finished and have time to manage it. Much as happened and changed in the time and I’ve been involved with SVIMS on the foot step of Lord Venkateswara for these successful years. I am grateful to all who have contributed in some way or other for shaping this doctoral dissertation. I could not have succeeded without the invaluable support of several. Without these supporters, especially the select few I’m about to mention, I may not have gotten to where I am today, at least not sanely.

I would like to begin with special gratitude to, Dr. A. Umamaheswari, Associate Professor & Head, Department of Bioinformatics, Coordinator of BIF, SVIMS Bioinformatics Centre, SVIMS University, Tirupati, who guided us with commendable teachings in my M.Sc. I’m invariably lucky to register my Ph.D under her esteemed guide-ship. Her flexibility and sincerity in scheduling, encouragement, motivation, sense of humor and scolding made a good working environment comfortably as well as made us to learn many and many more things other than the subject also. She scolds me as much as possible, just because to correct me as much as possible she can. I can’t forget the kind and advisory gesture she shown to me in my happy moments, downfalls, heartfelt sadness...every time she showed me and made me to prove me what I’m really. As we in our lab always believes in a single line mantra “your guidance is our future” madam. Thank you so much madam for making to turn to right way with your esteemed guidance.

I extend my thanks to my co-guide Dr. B.Vengamma, Former Director-cum-Vice Chancellor, Sr. Professor and Head, Department of Neurology, SVIMS and Tirupati for her support, valuable inputs and encouragement.

I convey my gratitude to Dr. P.V.L.N. Srinivasa Rao, Head, Dept. of Biochemistry, Executive committee member, BIF and Ph.D coordinator, for his constant encouragements. I also wish my sincere thanks to Dr. Aparna R. Bitla, Associative Professor, Coordinator of BT & BI, Department of Biochemistry, Vice-Principal (SPMCW) for her inspiring words and support during my Ph.D. research. I also wish my sincere thanks to Dr. MM. Suchitra Associative Professor, Department of Biochemistry, for her inspiring words and support during my Ph.D. research.

I am highly thankful to Dr. T. S. Ravi Kumar, Director-cum-Vice Chancellor, SVIMS, Dr. B.C.M Prasad, Dean, SVIMS & Dr. Kalawat, Registrar, SVIMS for providing me excellent scientific atmosphere and extraordinary facilities to conduct my research work in SVIMS Bioinformatics Centre.
My heartfelt thanks to external expert Dr D.V.R. Saigopal, Professor, Dean & Head, Dept. of Virology, SV University for his expert inputs and insights in my PhD work. I express my special thanks to Dr. M. Hemanth Kumar, Professor, Acharya N.G. Ranga Agricultural University, Tirupati, for rendering valuable inputs in thesis preparation. I wish my sincere thanks to Dr. P.V.G.K. Sarma, Head, Department of Biotechnology for the encouragement and support.

I sincerely thanks to Dr. H. Narendra, Controller of Examinations, SVIMS & Mrs. V. Sasikala, Assistant Director, Examinations for their academic support. I also wish my sincere thanks to Deputy Registrar, Mr. M. Yerrama Reddy and Librarian for their academic support. I am thankful to all academic staff members and CE section staff of SVIMS for timely processing of the official documents.

I express my sincere thanks to Dr. D. Rajasekhar, former Dean, SVIMS; Dr. D.V.R. Anjaneyulu, former Registrar, SVIMS; Dr. D. Vijaya Kumari and Dr. V. Subhadra Devi, former Controller of Examinations, Mr. L. Sateesh, former Assistant Director (CE section), SVIMS for their encouragements.

I would like to thank my real guru garu Dr. Raman Reddy sir, Correspondent Vijayakrishana Jr College, Tirupati, the one who shaped me to be a human being.

Special thanks to my savior Dr. S.S.L.V. Prasad Rao sir, who rescued me in every simple and major health issues until now and I hope he will continue this to me. Thanking you sir.

I wanna sincerely submit my gratitude and thanks to my Mentor’s Dr. Dibyabhaba Pradhan Sir, Scientist-II, Biomedical informatics centre, National Institute of Pathology (ICMR), New Delhi; Dr. Manne Muni Kumar Sir, Scientist-II, NIN (ICMR), Hyderabad; Dr. PRV. Shabareesh (Shabbu), Research Associate, MBU, IISC, Bangalore.

I always wanna thank all my colleagues in our lab, especially Dr. Sandeep Swargam, though we had a long term of association in opposite ends, he stayed true to me unlike others even in his betrayal he stood in straight. We had so many number of clashes and happiest moments to cherish for lifetime. He also made me strong in many things, I always be thankful to him to the gesture she had and showed to me in my sadness.

Hema Kanipakam, DST-INSPIRE, one of my colleague. But she made me more than her brother and a family member in their family. Even though, she is my jr. we both started our PhD carrier together and almost we shared both the happiness and sadness in
our carrier together. The more I can say will be always less, but I always be thankful to her to the gesture she had and showed to me in my sadness. Even we were destined to share similar despondencies to finish our PhD’s.

Katari Sudheer kumar, DBT-SRF, more than my Jr, brother (bro) in our lab. The help and works he did for me in crucial times were not compressible in a single word thanks. I mean a lot to him personally also.

Pasala Chiranjeevi, ICMR-SRF and Ravina Madhulitha, Teaching assistant both were good colleagues. Though we shared lot of discrepancies among us, it’s all about situation made and the way they showed their gesture to me in my down fall was thankful.

Dr. Vani Priyadarshini madam, I owe my respect and gratitude to her, as our senior and our special teaching assistant for our M.Sc batch. Thank you madam.

I would like to thank my fellow PhD scholars Ajay Pullaiyah, Saravri, Srikanth, Naresh, Santosh, Dr. U.V.Prasad sir, Dr. Venkatesh katari, Dr. Vasu sir. My favourite Jr’s Ganesh (Kabab), Siva Krishna, Sarath Chandra, Roopesh…. Every one with special thanks.

I wanna thank my dear friends, Johnson (nanbaen da), Ashok. A.B (thala), Bala machan, Nishar, Pramod, Hari, Suresh, Pavithra, Pavani, Jasmi Jose, Anusha (bold roy), Dr. Sindhu, Dr. Siva parvathy, Dr. Swetha, Dr. Kalpana, Dr. Guru Sharma, Dr. Pallavi Mohanty, Viveck…

Special thanks to my special persons, Mr. Prasanna Kumar& Family, Sarala Prasanna kumar, Sireesha Maydugollam, Vaishali Senthil (Soya), Princy (PP), Benita, Anjali who stood for me, with me in all my ups and downs upto this moment and I’m sure, they will stay with me for my long life.

Special thanks to Prakash (left), Surya (kudigaran), Rajsekhar (kadangaran), Saravana, Prem (kulla), Shyam (hero), Sanjan, Jestwin (dustbin) for their support and ironical motivation to me which will stay with me forever.

I will be thankfull to my brother, Praveen Anna, Kiruthika anni… and our own Cavin… Prasath anna.. the one who, stays with me for me in every single and earthly things may go around. Thank you bro’s (Praveen & Prasath), without you two people I can’t be in this place.

Denoted lastly, but without my parents I’m not what, who I’m right now. They are the only god and goddesses came from heaven for our family. I had Natarajan—the best father in the world, who taught me to learn, to help, to read, to enrich and more over he
taught to be a human being. Amma-Annapurani, yen deivam neeyae thaaivae...
yeppavum soldradhu dhan.. ippovaom soldraen “thai ku apparam dhan mattha
naaiyellam”. Ne illa na nan indha bhoomi liyae illama...

I am highly acknowledged to ICMR SRF, for sanctioning Senior research
fellowship (BIC/11(04)/2014). I am thankful to DBT, Ministry of Science and Technology,
Govt. of India for supporting research at BTISnet BIF-BTBI program (No.

Above all, with the pride of being first to submit doctoral thesis among our family
members, I would like to thank those who said no to me, because of them I did it on my
own and thanks to those who supported to me by serving helping hands. Thank you one
and all with heart and soul.

(Natarajan Pradeep)