ACKNOWLEDGEMENT

It is my immense pleasure to express my heartfelt gratitude and reverence to my guide and mentor, Dr. Subhash Chandra Parja, for his constant encouragement, meticulous guidance and valuable counseling that helped me in the successful completion of the project. I thank him for giving me the privilege to work under his guidance.

I'm grateful to Dr. R. Sambasiva Rao, former Director of JIPMER, Dr. K.S.V.K. Subba Rao, Director, Dr. A.K. Das, Medical Superintendent and Dr. K.S. Reddy, Dean, JIPMER for providing institutional facilities for undertaking this study.

I sincerely acknowledge my doctoral committee advisors Professor S. Jayachandran, Dean, School of Life Sciences, Pondicherry University and Dr. Jachariah Bobby, Assistant Professor, Department of Biochemistry, JIPMER, Pondicherry for their critical evaluation of the proceedings, valuable suggestions and guidance during every stage of this study. I'm indebted for their inspiration as well as the affectionate dealings.

I express my hearty thanks to Professor Upendra Goud, Hyderabad, for his kind help in collection of hydatid cyst isolates. His constant support and help is the backbone of this study.

I'm grateful to Professor Renaud Piarrass and Dr. Jean-Mathieu Bart, Parasitology Department, SERF Unit, Besancon, France, and Dr. D'Souza, Head, Department of Parasitology, Veterinary College, Hebbal, Bangalore, for providing the control strains.

I'm thankful to Professor B.N Harish and Professor S. Sujatha, Department of Microbiology for their affection, caring and suggestions. I appreciate their constant encouragement and inspiration during the study.

I'm highly obliged and thankful to Dr. Jachariah Bobby, Assistant Professor, Professor M.G. Sridhar, Professor B. C. Konar and Dr. Selvaraj, Department of Biochemistry, JIPMER, for their unconditional help, kind guidance and cooperation during the entire period of my study and beyond.

I sincerely express my feelings of obligation to Professor Ananthakrishnan, Department of Surgery, Professor Elangovan, Department of Radiology, JIPMER, for their valuable suggestions for patient classification and selection of appropriate control subjects.

I'm grateful to my senior Dr. (Mrs.) Swarna for her kind guidance and cooperation during the study. I'm thankful to her for her sisterly affection and consistent help till date. Also I'm grateful to Mr. Boopathy for his brotherly affection and consistent help till date.

I'm grateful to my seniors Dr. Soumyaranjan Sahu, Dr. Narasimha Rao, Dr. Vittal Prakash, Dr. J. Muraliswar Rao, Dr. Parasappa, and Dr. Thangadurai, for their kind guidance and cooperation during the study. I'm thankful to them for their brotherly affection and consistent help starting from the date of joining this programme till date.

I'm grateful to Dr. R. Thangadurai and Mr. Damodar, Vector Control Research Centre, Pondicherry, for their guidance in the genetic analysis employed in my study. I'm thankful to Dr. S.L. Hoti, Dr. K.D. Ramaiah, Vector Control Research Centre, Pondicherry, for their constant encouragement and inspiration during the study.
I'm highly obliged and thankful to Mr. Vinayagamoorthi, Mr. Ratandas, Ms. Sathyapriya, Ms. Nivedita, other PhD scholars, Residents and technical staff, Department of Biochemistry, JIPMER, for their kind cooperation during the entire period of my study.

I feel personally obliged and take the opportunity to thank my graduate friends Vallab Ganesh, Bolla Srinivas, Phanindra, Ramakrishna and Mr. Sri Ram and his family, whose wishes have helped in completion of this journey.

I'm grateful to Mr. Natarajan, Mr. Palani and Mr. Shaktivel for their timely help and encouragement during my study. I'm thankful to Mr. Antony Miranda, store keeper, Ms. Carolyn, Mrs. Anusuya, Mr. Jeyashankar, Mr. Sivakumar, Mrs. Sivakami, Mr. Kannan, Mr. Muthaiyan, Mr. Veolu, Mr. Ganesan, and other technical and supporting staff of the Department of Microbiology and animal house, JIPMER, for their cooperation during my study.

A note of thanks to the present and former residents and PhD scholars in my department Dr. Rahul, Hema, Rakhi, Sheela, Annie, Prabhakar, Venkatesh, Sooriya, Muralidhar, Sangeetha, Uma, Atul, Jaya, Srinivas, Chaya, Manisha, Noyal, Sadia, Apurba, Smitha, Krishna, Godfred and Parveen, for the friendly environment and help in their own way. A special note of appreciation and thanks to Mrs. Smitha Shetakkar Benjimen for her help and cooperation in the study.

I acknowledge the timely help I've got from the Medical Record Division, the Hospital Informatics System, Medical Illustration Division, Central Workshop and CSSD, JIPMER, Scientific suppliers, and the slaughterhouse people in Pondicherry and Bangalore.

I would like to acknowledge the Central Library, JIPMER and National Medical Library, New Delhi for the literature survey and information needed time to time during the study period.

I would like to acknowledge all the patients and control subjects included in this study without whose cooperation, this study would not have completed. I'm grateful to all of them.

I express my gratefulness and reverence to my teachers Dr. Arunkumar, Dr. P.G. Shivananda, Kasthurba Medical College, Manipal, for initiating me into this fascinating field of research. Nevertheless, I'm grateful to all my teachers during my graduate studies who have taught me the fundamentals of biology.

I sincerely acknowledge the inspiration, constant encouragement and love I've got from my parents, brother, sister-in-law and Shashank, which has brought me to this stage today. This thesis is dedicated to my parents, brother, sister-in-law and Shashank.

Chandrasekhar Sudireddy
PhD Scholar
Department of Microbiology
JIPMER, Pondicherry.