Acknowledgement

At the outset, I would like to register my deepest gratitude for my research guide, Dr P Venkatachalam, without whose mentoring and encouragement, this work would not have been the same. He is an inspiring teacher who leads by example. I have always been in awe of his exceptional discipline and earnest professionalism. In addition to human genetics research and scrupulous research conduct, I have acquired a number of life skills from him. I have made and will continue to make the effort to imbibe his honorable qualities.

I am thankful to my HOD, Dr Solomon FD Paul, for believing in me and inducting me into his project on idiopathic intellectual disability. He always inspires me to think out of the box. His attention to detail and friendly approach have helped me aim higher.

I am grateful to my Research Advisory Committee members, Dr Kalpana Gowrishankar and Dr Chandra R Samuel, for patiently evaluating my work at regular intervals and providing me with valuable inputs and encouragement towards accomplishing my research objectives.

I am indebted to my teachers, Ms Teena Koshy and Dr Vettriselvi V, who have been two pillars of strength and support throughout the course of my PhD, inspiring me and always engaging my curiosity with positive responses. But for them, I may not have started my PhD at the right time.

I am grateful to the management and authorities at Sri Ramachandra University for the opportunity to carry out my work in this esteemed University. I am especially thankful to Dr SP Thyagarajan, Professor of Eminence & Dean, SRU, for granting me permission to utilize the Central Research Facility.

I am thankful to the Indian Council of Medical Research for sanctioning the research grant that funded a part of my PhD work.
During the course of my work, I had the prospect of interacting with a number of exemplary clinicians, who have helped me with clinical evaluation and sample collection from the study subjects. My sincere thanks go to Dr Sheela Nampoothiri (AIMS, Kochi), Dr Kalpana Gowrishankar (KKCTH, Chennai), Dr Dhanya Yesodharan (AIMS, Kochi), Dr Padmalochani (MNC, Chennai), Dr Latha Ravichandran (SRU, Chennai), Dr Venkataraman (SRU, Chennai), and Dr Padmasani (SRU, Chennai) for providing me with clinical data and clarifications whenever sought. I was especially fortunate to interact with Dr Ashwin Dalal (CDFD, Hyderabad), who has always promptly responded to my queries with kindness and patience. I am indebted to him for his continued support throughout the molecular work for my PhD.

I am also thankful to the Heads of Departments of Pediatrics, Speech, Language & Hearing Sciences, Clinical Psychology at Sri Ramachandra University for their support. I am especially thankful to Ms Krupa Murugesan (SLHS, SRU) and Mr RC Perumal (SLHS, SRU) for their timely referrals for samples.

My heartfelt thanks go to all the faculty and staff at the special schools, Vidya Sudha, Vasantham and Madhuram Narayanan Centre for Exceptional Children. I am particularly grateful to Ms Meena Chandrasekar and Ms Deepa (Vidya Sudha, SRU), Ms Alli Murugesan, Ms Valarmathi and Ms Senthamarai (Vasantham, Chennai), and Ms Jaya Krishnamurthy, Mr Krishnan and Ms Priya Rajkumar (MNC, Chennai) for their valuable time and help.

I am grateful to Dr Jeevan Kumar (KKCTH, Chennai) for assisting me with the sample collection, Dr N Venkateswaran (NUS, Singapore) and Ms Mohanpriya CD (V Clin Bio, Chennai) for helping me with the fragment analysis and qPCR work, and Ms Raheema Beevi for assistance with cytogenetic work. I am also thankful to Dr Ganesh Venkataraman (SRU, Chennai), Dr Suresh Rayala (IIT, Chennai) and Ms Shwetha (IIT, Chennai) for supporting me for qPCR work.

I thank all the faculty members, Dr M Ravi, Dr Vijayalakshmi J, Dr Harpreet Kaur,
Ms Andrea Mary, Ms R Selvi, Ms Deepa Parvathy and Ms Nandhini B, and staff, Ms Sujikumari, Ms Lalitha and Ms Saraladevi, at my department for their help and support through the course of my PhD.

I thank all my fellow research scholars at the Department of Human Genetics, especially Ms Ganga Baskar, Ms Priyanka V, Ms Safa Basheer, Ms Mathangi Ravi, Mr Vankateswarlu Raavi for the many intellectual and fun exchanges, and Ms Sofi Beula W, Mr Karthik K, Mr Tamizh Selvan G, Ms Bhavani M, Ms Gowri M, Ms Akila K, Mr Karthikeyan VR and Mr Anbarasan S for making my time in the department memorable.

My research work has also given me the opportunity to interact with special children and their parents/caregivers, who, in my opinion, are the epitome of love and patience. It has been a learning experience to me, not just from the scientific perspective. I am forever thankful to all the participants and their caregivers for their cooperation.

I am indebted to my family and friends for ensuring my physical and emotional well-being through the course of my PhD. I particularly owe it to my husband for introducing me to the crazy yet beautiful world of \LaTeX\ typesetting.