ACKNOWLEDGEMENTS

The current thesis is a result of years of assorted effort and guidance and support by a number of people who deserve special mention.

My sincere gratitude to Dr.(Mrs.) Anuradha V. Khadilkar, my guide and mentor for her supervision, advice and guidance from the very early stage of this endeavour. I am equally thankful to Dr.(Mrs.) Shashi A. Chiplonkar, my co-guide, for sharing with me her experiences and supporting me throughout. I am indebted to them more than I can express.

I would like to thank Dr. Anita Kar, Director, Interdisciplinary School of Health Sciences, University of Pune for her encouragement and support.

Most of the work has been carried out at Hirabai Cowasji Jehangir Medical Research Institute (HCJMRI), Jehangir Hospital, Pune. I am extremely grateful to Dr. Uma P. Divate, Director, HCJMRI, for her support.

I am thankful to all the staff members of HCJMRI, especially Mrs. Shamim Momin, Ms. Deepa Pilay and Ms. Jyoti Thorat for their support during data collection. I would like to thank the staff at Jehangir Clinical Development Center (JCDC) especially Dr. Shashikant for their support during data collection. I must also thank the Ethical Committee of HCJMRI and JCDC for ethical approval of the study. I would like to thank Mrs. Deepa Pandit, Ms. Chaitra Khole and Ms. Pooja Dhomkar for their help with data collection.

I would like to express my sincere gratitude to Dr. Vaman V. Khadilkar, HCJMRI for his support during data collection and guidance for analysis and interpretation of the data.

I am also grateful to Dr. M. Zulf Mughal, Royal Manchester Children's Hospital, Manchester, UK for his mentorship and expert opinion on the subject.

I would like to thank Dr. Nikhil Phadake and Dr. Kavita Khatod, Causeway Healthcare Pvt. Ltd. who introduced me to genetics and helped me with a better understanding of the field.

I would also like to express my sincere thanks to the staff at Ira Clinic who have been extremely supportive, especially Ms. Varsha Tope.
I am also grateful to Dr. Ravinder Goswami, Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi, India for providing me with controls for genotype for this study.

I would like to express my gratitude to Dr. Chitra Dandge and Dr. Deepa Kshirsagar from Agharkar Research Institute, Pune for their guidance on fatty acid estimation.

Mr. Krishna Agarwal and Mrs. Padmalata Ravikumar also provided invaluable help with the study.

Special acknowledgement to Mr. Nanadkumar Variar and Yunehing Industrial Group Limited, Hong Kong for providing me with prebiotic Yunehing G-FOS for the study.

I would like to thank Department of Science and Technology, Government of India as the funds provided under the INSPIRE Fellowship programme have been a remarkable token of support and motivation.

I would like to thank principals of various schools and colleges who have been kind enough to allow me to conduct my research. I would be failing in my duty if I did not thank the children who participated in the study as without them this research work would not have been possible. I would also like to thank, the parents of these children who have been equally supportive in giving their consent for the study.

My parents, my brother and my sister-in-law have played an important part in making this effort possible and I can never thank them enough. As I give all the credit to people who have been directly involved with my work, I should not fail to acknowledge the involvement of my roommates especially Ms. Pragya Goenka, Ms. Kheya Furtado, Ms. Soumya Ravikumar, Ms. Vagisha Ravi, Ms. Roshni Rao and friends especially Mrs. Nidhi Kadam, Mrs. Veena Ekbote, Mrs. Neha Kajale, Dr. Rama Tupe, Dr. Vaishakhi Rustagi, Mr. Prashant Tibrewal and Mr. Udit Poddar who have been there for me while I worked on the entire project.

And finally I would like to dedicate this project to my father Mr. Jagdishkumar Sanwalka who not only supported me but also took keen interest in a field that was unrelated to his ken just to ensure that I remained motivated through the entire duration of my PhD project.