SHRI HARI

ACKNOWLEDGEMENT

The essential ingredients of successfully completing a research work involves passionately doing a detailed scan of technical documents, analyzing the voluminous data collected, and inferring the pattern towards recommending solutions. Several individuals, both from professional front and personal front, have been instrumental in transforming my much cherished goal of successfully completing this research program and submitting doctoral thesis. I am indebted to each one of them and wish to express my sincere thanks for their support and good will which has enabled me to achieve this most important milestone of my lifetime.

At the outset I would like to express my sincere gratitude to our Chancellor Thiru. V. R. Venkataachalam for providing an excellent academic ambience for pursuing my doctoral program.

I would like to profusely thank the management for the support and encouragement provided by Pro Chancellor Dr. T. K. Parthasarathy, Pro chancellor (Research) Dr. S. P. Thyagarajan, Vice Chancellor Dr. S. Rangaswami, Dean of Faculties Dr. K.V. Somasundaram, Director, Academic Administration Dr. D. Gnanaprakasam, Dean Medical College Dr. Anandan, Controller of Examination Dr. Vijayalakshmi Thanasekaraan and Registrar Mr. Natarajan.

I would like to profusely thank my Guide Dr (Mrs.) Kalpana Balakrishnan, Professor and Head, Department of Environmental Health Engineering and also Director, WHO collaborating center for Occupational and
Environmental Health. Her professional guidance, mentoring and thought leadership in every step of my doctoral program has enormously helped in successfully completing this thesis.

I would like to thank my Co-Guide Dr. S. Rajasekaran, National Consultant (ART-Quality Management), NACO and Research Advisor Dr. B. W. C Sathiyasekaran, Professor of Community Medicine for providing much required technical insights and guiding me through the completion of this research program.

I would like to thank the faculty and research team of Department of Environmental Health Engineering for their active support during the entire tenure of my doctoral program. In particular, I would like to thank Dr. S. Sankar for helping in data collection, logistics support and technical inputs, Mr. Santu Ghosh for data analysis and providing statistical inference, Dr. Vidya Venugopal for her support and encouragement and Mr. Venkatesan D for helping me with the final formatting and printing of my thesis.

Teaching Faculty, Post Graduate Students and Non-teaching Faculty of Department of Physiology have been a constant pillar of strength for pursuing research. I would like to sincerely thank Prof. Dr. A. S. Subhashini for providing continuous encouragement and Dr. Priscilla Johnson for owning up responsibilities all through the research journey, actively supporting the tasks with great passion and thereby helping me complete the thesis.

Liaising with several international collaborators provided me with the additional support and technical advice in completing this study. Dr. Kirk
Smith, Dr. Michael Bates, Dr. Jack Colford, Dr. Benjamin Arnold, Dr. Ranjiv Khush and Dr. Alicia Gray have all been instrumental in shaping my study.

I am deeply indebted to the women and children of several villages of Tiruvallur and Trichy district of Tamilnadu, India for their enthusiastic participation as subjects and their excellent cooperation for providing valuable and reliable data.

A research program of this magnitude cannot be completed successfully without the required financial and administrative support. My thanks are due to Fogarty International Center of the National Institute of Health, USA, Open Square Foundation and Sri Ramachandra University for funding this project. I would like to thank Directorate of Public Health Office, Village Administrative Office, Tiruvallur DOTS Center, Tiruvallur General Hospital, Census Office and Block Development Office for extending their valuable infrastructural support and providing necessary permissions.

I would not be successful in this endeavor without the continuous encouragement and support of my parents, sister, husband, parents-in-law and children. The constant love and understanding from my dear and near has made my PhD journey a pleasant and enjoyable experience.

Above all I am deeply thankful to Almighty and my Guruji Maharanyam Sri Sri Sri Muralidhara Swamiji for their abundance grace and blessings.