ACKNOWLEDGEMENTS

During the course of research work at the Zoology Department there have been a host of people who supported, inspired and helped me at different times.

First and foremost, I would like to express my deep sense of gratitude to my guiding teacher, Dr. (Ms.) N.J. Chinoy, Professor and Head, Department of Zoology, Director, School of Sciences, Gujarat University, Ahmedabad, for giving me the opportunity to undertake this course under her supervision and for introducing me to the field of research. My interest in research has been boosted by her experienced guidance, and her unique method of guidance has helped my confidence grow. I will remain deeply indebted to her, for her continuous encouragement, support suggestions and inspiration throughout the tenure of this work.

I am extremely thankful to Prof. V.C. Shah, Emeritus Scientist (CSIR), Retd. Vice Chancellor of M.S. University, Baroda and Bhavnagar University, Bhavnagar for his continuous help, encouragement and valuable suggestions. I also take this opportunity to sincerely thank Dr. (Ms.) Hyacinth Highland for her ever willingness to solve my problems and helping me in every possible way. I also thank all the other teaching staff and non teaching staff members for their help in various ways.

I owe the most to all the patients and their parents who have been the "heart and soul" of this project. I also acknowledge the help of the numerous doctors and pediatricians in referring the patients to our Departmental Clinic for Cytogenetic analysis. I am especially grateful to Dr. G.J. Banker, Consultant Pediatrician in the Clinic, for his valuable guidance on the patients during clinical examination and blood collection. Thanks are also due to Dr. Girish Shah (Gynaecologist) and Dr. N.G. Shah (Radiologist) associated with the clinic for all their help. Sincere thanks are due to
Ms. Naina, Ms. Leena and Ms. Bindu for their valuable help in the clinic.

I am grateful to the Head, Department of Cell Biology, University of Texas, Houston for his suggestion to work on telomeric associations in the Down Syndrome patients.

I am particularly grateful to Dr. Asha Multani, Houston, USA, for taking keen interest in my research work. Her valuable help, encouragement and support helped me in gaining knowledge in this field. Sincere thanks are due to my senior Dr. Prabhakara, Bangalore for his valuable suggestions regarding my research work.

It is a pleasure to acknowledge with thanks, the unfailing help and support of my friend and research colleague, Ms. Nivedita Chakravarty throughout the tenure of this work. Warmest thanks are extended to Ms. Trupti Patel and Mr. Rafiq Memon for helping me in a number of ways.

I also acknowledge the help rendered by Mr. K.R. Nambiar for computer work and Mr. Prashant Dholakia for the photography work.

Council for Scientific and Industrial Research, Government of India, New Delhi is gratefully acknowledged for providing me with financial support under Junior Research Fellowship (NET) for the first two years and Senior Research Fellowship for the next three years. I extend my acknowledgements to one and all who have helped me directly or indirectly during the tenure of this work.

Finally, I owe a great deal to all my family members for their loving support, keen interest and patient understanding throughout the course of this work.

(Divya Singh)