

F O R E W O R D

The thesis entitled "Biochemical studies on fatty acid binding proteins during human embryogenesis" is submitted for the degree of Doctor of Philosophy (Science) of the University of Calcutta. In this dissertation a modest biochemical approach has been made to purify and characterize fatty acid binding proteins from developing human placenta and fetal liver as well as to elucidate their roles in regulating glucose-6-phosphate dehydrogenase, the key enzyme of hexose monophosphate shunt pathway. Relationships between human placental and fetal liver fatty acid binding proteins have also been studied.

It is a privilege on my part to express a deep sense of gratitude to my revered teacher Dr.(Mrs.) Manju Mukherjea, Reader, Department of Biochemistry, University of Calcutta, for her generous help, constant guidance and keen interest throughout this investigation. It was a great pleasure to work under her guidance and I owe much to her for her critical review and meticulous editing of the manuscript.

I am deeply indebted to Prof. A.B. Banerjee, Head, Department of Biochemistry, University of Calcutta, and Profs. I.B. Chatterjee, G.C. Chatterjee and J.J. Ghosh, former Heads of the Department of Biochemistry, University of Calcutta, for providing me with all possible facilities in carrying out the research work in the department.

I would like to extend my grateful thanks to :

Prof. R.N. Mukherjea, Department of Chemical Engineering, University of Jadavpur, for his kind suggestions leading to improvement in exposition of the thesis.

Prof. F. Spener, University of Münster, West Germany, for kindly initiating my interest in this field of research.

Prof. A.K. Ghosh, Department of Obstetrics and Gynecology, National Medical College and Hospital, Calcutta, for helping me to collect the clinical materials.

Dr. A.G. Dutta, Indian Institute of Chemical Biology, Calcutta; Dr. J. Dutta, Bose Institute, Calcutta; Dr. S.K. Das, Central Drug Research Institute, Calcutta and Mr. S. Das, Indian Statistical Institute, Calcutta for their numerous helps during this study.

Dr. D. Sengupta, Reader, Department of Biochemistry, University of Calcutta, and Dr. A.C. Banerjee, Department of Biochemistry, University of Calcutta, for stimulating discussions during the course of this investigation.

Dr. I. Chaudhury, Dr. J. Kushari, Dr. A.S. Chakraborti, Dr. D. Chaudhuri, Dr. A. Chaudhuri (Nag), Mr. S. Misra, Dr. C. Chaudhuri, and Mrs. T. Das Choudhury for their elderly advice and encouragement at different stages of the work.

Mr. G. Sa, my colleague in the laboratory, for his sincere help and co-operation, so abundantly given whenever asked for, but for which this work might not have got the present form.

My junior colleagues Mr. T. Hazra and Mr. P. Ghosh for smilingly attending to all my demands, however small, every now and then !

My friends and youngers, Mr. I.S. Singh, Mr. S. Goswami, Mrs. K. Neogi, Mrs. M. Singh, Mr. A.K. Dey, Mr. C. Mukherjee and many others for gladly rendering assistance in all possible ways for completion of the work.

Mr. T. Ghosh for excellent typing of the manuscript and Mr. R. Giri for technical help.

University Grants Commission, New Delhi, for providing a research fellowship during the period of this research work.

Dr. Nityananda Sarkar, my husband, for his usual enthusiastic efforts in helping me achieve my goal, which, however, should merit no special mentioning.

Mr. Sayan Das, my brother, for his cheerful company and occasional reminders that I ought to finish my work in time !

And above all, my little daughter Irene, who made it all so worthwhile for me by cheerfully sacrificing many precious moments of her life.

Dated at Calcutta 700 019
the 22nd March, 1988
Department of Biochemistry
University of Calcutta
35, Ballygunge Circular Road
Calcutta 700 019
I N D I A

Tanya Das
(Tanya Das)