ACKNOWLEDGEMENTS

It is no ritual for me to acknowledge the help received from different sources in the preparation of this Thesis. The very magnitude of literature and diversity of fields of investigation on this front, needs domains of cooperation. It represents the diligent efforts of many capable and supportive individuals.

To begin with, I acknowledge my supervisor Prof. H.N. Singh, whose vision and only he knows what ingenuity and patience it took, before this thesis finally took a shape. I have indubitably benefited from his perspicacity and impeccable expertise in the subject which helped me relate bits of data and an array of information in the present work.

As apparent from my work, it would be a great injustice on my part if I do not acknowledge my petite and pragmatic cyanobacterial friend—Nostoc muscorum, into whose diaphanous physiology I had interloped.

I thank Prof. A.R. Reddy, Head, Department of Plant Sciences and Dean, School of Life Sciences for providing facilities in the School.

I owe a special debt of gratitude and appraisal to Prof. R.p. Sharma and Prof. P.R.K. Reddy for extending their unstinted cooperation during the course of the present work. I am grateful for the academic support given by other faculty members of the School of Life Sciences as well, in particular, Prof. Ch.R.K. Murthy, Dr. A.S. Raghavendra, Dr. Aparna Dutta Gupta, Dr. K.V.A. Ramaiah and Dr. M. Ramanadham.
This work would have been impossible but for the financial assistance from the University Grants Commission (UGC) in the form of Junior and Senior Research Fellowships.

I am extremely indebted to Dr. A.K. Singh, whose enthusiastic approach and constant source of encouragement prevailed over me to a larger extent of my career. Having the fringe benefit of being his associate, I naturally shaped myself towards the necessary fortitude and patience that a research career usually demands.


I had the good fortune to be associated with the following (arranged alphabetically) Anju, Chakri, George, Giridhar, Gouri, Hari Rao, Janaki, Kashyap, Katta, Kiran, Kishore, K.L.N. Reddy, Korada, Kranthi, Krishna, Leela, Mahadev, Moshe, Movva, Nagesh, Radhamohan, Raj, Rajasekhar, Ramachandra Reddy, Ramaiah, Ramkumar, Sailesh, Sambasiva Rao, Seshu, Shyamala, Sirisha, Srikanth Reddy, Surekha, Vegaraju, Vepa and of course the never ending list of acquaintances that are more hard to recollect at this moment. Their loving support and encouragement during the course of the present work is gratefully acknowledged.

I am indebted to the authors of many excellent publications which provided useful ideas and information cited by me. I am conscious of the shortcomings and mistakes which may be found in this thesis. These are largely the result of my own
limitations in understanding and interpreting the available information and partly to the fact that a few of the publications could not be consulted in original.

I owe my a deepest sense of appreciation and gratitude to my friend Raj(Gopalan) for patiently and carefully going through the many iterations, offering his directions and moral support during the difficult periods of final writing, reviewing and editing of this Thesis.

I convey my sincere thanks to Mr. P. Srinivas for typing the thesis, to Sri E.V.S.N. Murty for his valuable secretarial assistance, to Sri Ananta Rao for drawing the figures and to M/s Amrutam Book Binding Works for bring out this thesis in style.

In a more general vein, I should like to thank my parents and sister Aparna, for having encouraged my interest in biology right from my childhood and for their great capacity of tolerance towards my endeavour in continuing my research career. Their love has been manifested in so many ways but particularly, their moral, social and material support and unstinting patience and understanding which allowed me to see a dream through fruition. I consider it as my good fortune that I had found a long-term friend and an exemplary companion for a life's-term in Miss Adi Lakshmi during the closing stages of Ph.D. career. Her sincere support during this period has been rich with beneficence.

And finally coming to my friend Korada, I had specifically delineated him from the rest. He has been my most bosom friend whose sage guidance at every step (beginning from my Masters Programme) is unfathomable and words completely fail me here. He has been my most convivial buddy, a long-time friend within and outside the lab, an infallible guide and a humane preceptor. We share a love that is urbane and yet of a sentimental nature. I have a tremendous respect and admiration
acknowledgements

for what he has done and and in strict sense I owe a lot more. But for my earlier commitments to a vow in the name of God, I would have dedicated this thesis as a mark of friendship between us. A testimony to a truth that is stranger than fiction.

Thank you all, I hope this work reflects your best hopes for me and the future of mankind.

Chakravarthy Devulapalli