**Book Review**


In the post-genomics era, cyanobacterial and algal research has gained exceptional heights. Number of scholarly articles devoted to algae and cyanobacteria has magnanimously increased and this growth is keeping pace with articles describing other life forms. Unfortunately, few protocol-based books in the concerned subject have come to the readers desks. The present book is a comprehensive yet concise compilation of state-of-the-art and ready-to-use protocols that can be applied to explore and unravel facts about algae and cyanobacteria.

In this book twenty three chapters contributed by eminent experts and active researchers of international repute from India, Europe, USA, Brazil, Turkey and Russia are categorized in four sections. The book has an authoritative foreword note, and is appended with useful annotation of culture collection centers. The chapters in the book provide a scan of wide-range of aspects of cyanobacteria and algae, as diverse as photosynthesis—primary photochemical reactions, light harvesting complex, photosystem mechanistic and CO₂ fixation; proteomics and identification of atypical proteins; chemical and toxicological analyses of hepato-and neurotoxins and bioactive peptides; value-added products-platelet aggregating lipids and lipid-derivatives and algal pigments; transport of ammonia, phosphate, nitrate, calcium, potassium, chromium, fluoride and other solutes and water including adaptive responses; sensing and sequestration of anthropogenic compounds heavy metals etc; and a host of supportive physiological, biochemical and enzymatic processes. To make headway, the latest techniques of electron microscopy, chromatography, spectrometry and photometry, electrophoresis, immunology (including blotting) and molecular biology have been elaborately presented. The editors have taken care of the issues like procurement of source material and quality benchmark, handling of hazardous and radioactive material, each and every step in reagent preparation (working stocks to final increments), and precise steps of experimentation with likely results and troubleshooting. Concise notes have been provided to justify the experiments and analyze the results. The essence of the articles is that protocols are formulated from outcome of in-house experimentation detailing even those “fine tricks and tactics” that are deliberately avoided in published work. The chapters are written in coherent manner with minimum errors and supported with adequate and up-to-date bibliography. The book shall attract not only the algologists and cyanobacteriologists of diverse interest, but also the plant biologists, veterinary scientists, aquatic biologists, health professionals and analytical chemists as also the undergraduates and postgraduates students. The book is certainly a valuable addition, given the eminence of contributions, relevance to the context and quality of publication (hardbound and colour illustrations), that too at affordable price.

There are some minor points which the reviewer would like to see in the future editions: a) articles on brown, red algae and Prochlorococcales and other unclassified cyanobacteria, and b) application of gene knock-out, RNAi, gene over/under-expression, microarrays, transcriptome tagging for gene manipulation and comparison. About 99 cyanobacterial and 42 algal genomes have been completely or partially sequenced, and a chapter on application of bioinformatic tools would be a good idea.

The editors and the contributors deserve a congratulatory remark for bringing this relevant edition, and let this be a beginning of a series of volumes to come which would hopefully cover the entire spectrum of algal and cyanobacterial biology and biotechnology.

Dr. K Padmasree  
Department of Biotechnology,  
School of Life Sciences  
University of Hyderabad  
Hyderabad 500 046, India