

Phycobiliprotein : Potential Microalgae derived pharmaceutical and biological reagent

Phycobiliproteins – Phycoerythrin, Phycocyanin , Allophycocyanin are brilliantly coloured, highly fluorescent protein-pigment complexes known for antioxidant properties. These high-value natural products have potential applications in biomedical research (immunoassays, flow cytometry and fluorescent markers and dyes) nutraceuticals, food colorants , pharmaceuticals, cosmetic industries. Microalgae are capable of producing metabolites in large amounts over short periods of time under simple growing conditions. Red algae and cyanobacteria have natural innate ability to produce phycobilins and this can be exploited with a bioprocessing approach. The prime focus of research is on identification of potent strains, development of strategies to enhance biomass productivity, yield and improve protein extraction and purification efficiency.