

## **DNA BARCODING OF VISVA-BHARATI CULTURE COLLECTION OF ALGAE (VBCCA), WDCM931**

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### **Abstract:**

Microalgae are the highly diverse group of unicellular organisms comprising the eukaryotic protists and the prokaryotic cyanobacteria or blue-green algae. The microalgae have a unique environmental status; being virtually ubiquitous in euphotic aquatic niches, they can occupy extreme habitats ranging from tropical coral reefs to the polar regions, and contribute to half of the globe's photosynthetic activity. The Visva-Bharati Culture collection of algae (VBCCA) was established in Department of Botany and is affiliated to World Federation for Culture Collections (WFCC) and having accession no WDCM931. The isolates are from fresh water as well marine habitats, soil crust, rice field soils and biofilm from subaerial habitats and presently holding 130 species/strains. Many of the strains having similar in morphology and often confusion in identification. Some of the species even when collected from nature are different in morphology but while in culture having similar morphology. We are interested in applying DNA barcoding to algal strains of our culture collection. Though cytochrome c oxidase 1 has been shown to be a useful tool for differentiating some groups of marine macro algae, its wide application in the micro algae has yet to be studied. We have just started the project and wish to collaborate with the International network like Canadian Barcode of Life Network to complete successfully the project. Many of the strains of our culture collection is of biotechnological importance and many industries shown their interest in our culture collection. However authenticity of the strains is of prime importance for them. DNA barcoding is a powerfull tool and we have started to tag our strains. During the conference we will present about our culture collection and our plan for DNA barcoding of strains of our culture collection.

**Key words:** VBCCA, Cyanobacteria, DNA barcoding