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Overexpression and Purification of Zur from *Prochlorococcus marinus*

Marine phytoplankton are responsible for roughly half of global oxygen production. Of particular interest are the marine cyanobacteria *Prochlorococcus marinus*, the smallest and most abundant photosynthetic prokaryotes that exist. Studying the lifestyles of these major photosynthetic organisms is crucial to understanding marine trace metal biogeochemical cycling, the carbon cycle, and climate change. In order to help elucidate mechanisms of metal uptake, regulation, and homeostasis, the zinc uptake regulatory protein (Zur) from *Prochlorococcus* is being investigated. Genes for this protein were cloned into *E. coli*, and the protein was overexpressed. Protein purification is currently underway.