PB-7

PROTEOME ANALYSIS OF THE CYANOBACTERIUM *SYNECHOCYSTIS* SP. PCC 6803: QUANTITATIVE ANALYSIS IN HIGH LIGHT CONDITION

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Light is an important role in cyanobacterial growth not only as a energy source but also a stimulus. Studies on gene expression profile during acclimation from low to high light intensity was done using DNA microarrays by Hihara et al. Two dimensional gel electrophoresis (2-DE) was performed to investigate proteins related with acclimation against high light in *Synechocystis* sp. PCC 6803. Wild-type cells were exposed to high light (350 umol/m2/s) condition for 24 hrs. For 2-DE, samples were prepared in various time intervals 15 min, 1 hr, 6 hrs, 12 hrs, and 24 hrs. More than 1,000 proteins were displayed on the SDS-gels stained with silver nitrate. For quantitative analysis, Progenesis software was used. Several proteins showing different expression levels under high light conditions were identified with MALDI-TOF mass spectrometer. In this study more than 110 proteins were identified and classified into distinct groups. Our results may help to elucidate the photo-acclimation mechanism of Syn6803.