A-10

PROTEOMIC ANALYSIS OF LIGHT INDUCED PROTEIN PHOSPHORYLATION IN *ARABIDOPSIS THALIANA*

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The light signal transduction pathway involved in phytochrome/ cryptochrome system in *Arabidopsis thaliana* was investigated. Two-dimensional electrophoresis was performed to separate cytosolic proteins after treatment of various light condition(quality and quantity). Phosphorylated protein in response to light treatment were detected by phosphotyrosine/ serine/ threonine antibodies. Proteins were subjected to in-gel digestion with trypsin followed by MALDI-TOF mass spectrometry. We have observed proteins as putative glucosyltransferase and protein synthesis initiation factor elF2 beta subunit with no previously known function in light signal transduction pathway. Proteomic approach have shown to be suitable for the identification of novel proteins involved in light signal transduction pathways.