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Transgenic approach towards the enhancement of cyanidase production by *Chlamydomonas* sp algae

Noha El-Sharkawi, Y M El-Ayouty, Rashad Kebeish and M Gomaa
Plant Biotechnology Lab., Faculty of Science, Zagazig University

Cyanide is a nitrile, an organic compound that contains a triple-bonded carbon and nitrogen functional group. Most of these compounds are highly toxic, carcinogenic, and mutagenic. The toxicity of cyanide is quite high due to its ability to poison the respiratory system by inhibiting the final transport electrons from cytochrome C oxidase to oxygen, and finally preventing production of ATP. Although chemical and physical treatments provide more rapid detoxification and are less susceptible to environmental upsets biological alternatives are more economical and good for ecological balance. The aim of the present study is to detoxify the toxicity of cyanide to algae through the transformation of some related gene (cyanidase) to *Chlamydomonas reinhardtii*. Via *Agrobacterium tumefaciens*.. Restriction enzymes, gel-electrophoresis and RT-PCR techniques indicate that *Chlamydomonas reinhardtii* is transgenic and has well overexpression of cyanidase and can be used for bioremediation of nitrile compounds.

Keywords: *Chlamydomonas*, *Agrobacterium*, *P. stutzeri* AK61, cyanidase gene

Biography

Noha El-sharkawi is currently a biology teacher at el Awael private school, Zagazig, Egypt. She has pre-MSc in Botany (Microbiology) 2012. She has experience in scientific research. She has a good knowledge in Writing Scientific Thesis. She has a good experience in computer science. She has MCPD, MCTS from IBM training courses, courses of Human Recourses (Dale Carnegie Training), Toefel in English.

sunsetno2006@yahoo.com

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