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**Assessment of Gene Expressions for Metals Toxicity Testing with the Nematode *Caenorhabditis elegans* : Potential Biomarkers for Environmental Risk Assessment**

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*Caenorhabditis elegans*, a free living nematode that lives mainly in the liquid phase of soils, has been used in a variety of ecotoxicology study. In this study, stress related genes expressions were assessed as effects of metals exposure (cadmium chloride and lead nitrate) on *C. elegans*. Heat shock protein, metallothionein, vitellogenin and CYP gene expressions showed increase in most of treated worms compared to control groups. The results suggest that stress related gene expressions in *C. elegans* seem to have considerable potentials as sensitive biomarkers for environmental risk assessment.

**Keyword:** *Caenorhabditis elegans*, gene expression, biomarker, environmental risk assessment