

ABSTRACT

The heavy metal resistant ciliates, *Euplotes*, *Tetrahymena* and *Paramecium* were isolated from industrial wastewater has been shown to be potential bioremediator of contaminated wastewater.

The *Euplotes* showed tolerance against Cd^{2+} upto $22\mu\text{g/ml}$. The cadmium ions slowed down the growth of ciliate as compared with the culture grown without metal stress. The cadmium metallothionein gene of *Paramecium* sp. was isolated and sequenced. It was consisting of 200 aminoacids, 26 cysteine residues, and TAG and TAA encoding of glutamine. It was identified on the basis of homology with the previously identified metallothionein gene of *Paramecium* sp. The metallothionein (MT) like proteins play some role during stress conditions because of their potent metal binding and redox capabilities.