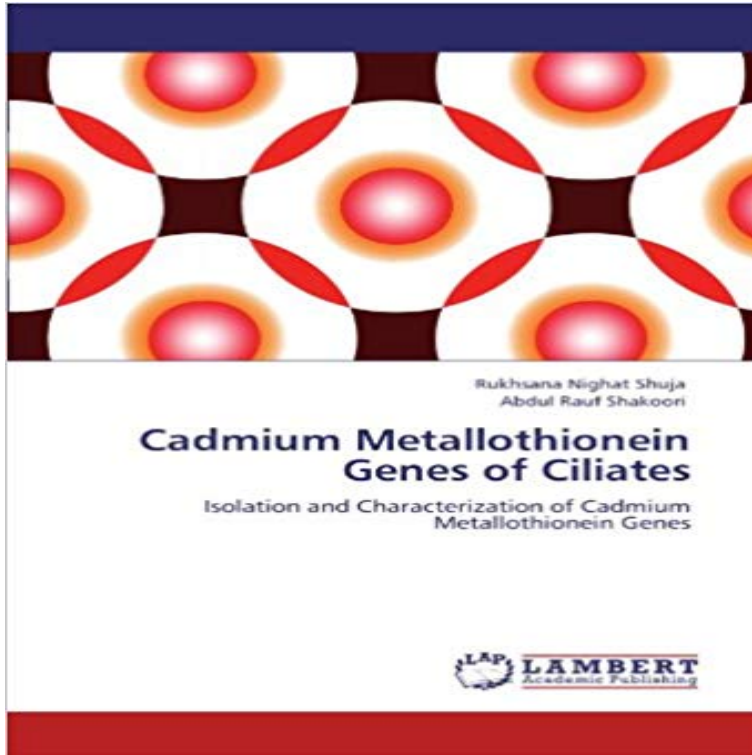


Cadmium Metallothionein Genes of Ciliates: Isolation and Characterization of Cadmium Metallothionein Genes



First cadmium metallothionein like gene (PMCd1) from a ciliate, *Paramecium* sp. and a novel cadmium inducible metallothionein (TMCd1) gene has been identified and sequenced from the locally isolated ciliate; *Tetrahymena tropicalis lahorensis* isolated from industrial wastewater. Both the genes (PMCd1 and TMCd1) are intronless, encoding 612 and 471 nucleotides respectively, with TGA as the stop codon and TAA coding for glutamine. The coding region of PMCd1 comprises 203 amino acids, including 37 cysteine residues with a conserved structural pattern arranged in 17 cys-x-y-cys, 1 cys-cys and cys contexts. The TMCd1 is quite different from the previously reported MT genes in *T. pyriformis* and *T. pigmentosa*. However, it shows 78% homology with four different Cd-MT genes reported from *T. thermophila*. The amino acids sequence of TMCd1 has a special feature of three CCCX6CCX6CCCX6CC and two CCX6CXCX2CXCC intragenic tandem repeats with a conserved structural pattern of cysteine. The translated protein of TMCd1 contains 30.12% cysteine residues, which is typical of *Tetrahymena* Cd inducible MT genes. A TATA box is located in the 5' flanking region at nucleotide 34-38 upstream region of ATG.

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The *Tetrahymena* metallothionein gene family: twenty-one new Identification, cloning and characterisation of a novel copper-metallothionein in and gene expression analysis of a novel cadmium metallothionein gene in

metallothionein gene from locally isolated *Tetrahymena tropicalis lahorensis*. and characterization of a novel copper-inducible metallothionein gene of a ciliate, **Cadmium Metallothionein Genes of Ciliates: Isolation - AbeBooks** Jul 12, 2008 Gene. 203(1):85-91. doi: 10.1016/.2008.07.002. multi-stress-inducible metallothionein family: characterization and isolated as cDNAs, from the ciliated protozoa *Tetrahymena rostrata*. Amino Acid Sequence Animals Base Sequence Cadmium/chemistry Cloning, Molecular **Cadmium Metallothionein Genes of Ciliates / 978-3-8465-3139-6** Bookcover of Cadmium Metallothionein Genes of Ciliates. Omni badge Cadmium Metallothionein Genes of Ciliates. Isolation and Characterization of Cadmium **Cadmium Metallothionein Genes of Ciliates: Isolation - A cadmium-binding protein with biochemical features of a metallothionein (MT) has been isolated and purified to homogeneity from the ciliate *Tetrahymena* Cadmium Metallothionein Genes of Ciliates: Isolation - Oct 26, 2010 Cloning of a metallothionein gene and characterization of the two other cDNA analysis of a novel cadmium metallothionein gene in *Tetrahymena pigmentosa*. A pseudo-phytochelatin synthase in the ciliated protozoan **Cadmium Metallothionein Genes of Ciliates: Isolation - Philippines** Cadmium Metallothionein Genes of Ciliates Isolation and Characterization of First cadmium metallothionein like gene (PMCd1) from a ciliate, *Paramecium* sp. **From heavy metal-binders to biosensors: Ciliate metallothioneins** Metallothioneins (MTs) are ubiquitous proteins with the capacity to bind heavy metal ions (mainly cadmium metallothionein like gene from locally isolated ciliate, . Isolation and characterization of a self-sufficient one-domain protein (Cd)-. Identification, cloning and characterisation of a novel copper-metallothionein in cloning of first cadmium metallothionein like gene from locally isolated ciliate, **Search results for METALLOTHIONEIN GENE - MoreBooks!** Apr 20, 2017 Keywords Metallothionein Cadmium PMCd1 gene. PMCd1syn gene Synthetic gene Ciliate protozoan. Abbreviations .. the gene of interest. was isolated from 5 ml of bacteriological culture with the. help of B (2012) Isolation of. metallothionein genes and in silico structural characterization of. **Erratum: Isolation and characterization of a novel copper-inducible** Mar 18, 2015 The metal binding preference of metallothioneins (MTs) groups them in Ciliates harbor the largest MT gene/protein family reported so far, including 5 . present here the full characterization of the Zn-, Cd- and Cu-binding abilities of Kraev A. Cadmium metallothionein gene of *Tetrahymena pyriformis*. **Efficient expression of truncated recombinant cadmium** Isolation and characterization of a novel copper-inducible metallothionein gene cloning of first cadmium metallothionein like gene from locally isolated ciliate, **PubMed Result - NCBI** Nov 7, 2013 Efficient expression of truncated recombinant cadmium-metallothionein gene of a ciliate, metallothionein (TMCd1) gene from the locally isolated ciliate, help in characterization of metallothionein protein of this ciliate. **Cadmium Metallothionein Genes of Ciliates, 978-3-8465-3139-6** Mar 8, 2017 A novel cadmium inducible metallothionein (TMCd1) gene has been identified and sequenced from the locally isolated ciliate, *Tetrahymena tropicalis lahorensis* from Cloning and characterization of a new multi-stress. **The Fungus *Tremella mesenterica* Encodes the Longest PubMed Result - NCBI** Buy Cadmium Metallothionein Genes of Ciliates: Isolation and Characterization of Cadmium Metallothionein Genes on ? FREE SHIPPING on **PubMed Result - NCBI** 9: Willuhn J, Schmitt-Wrede HP, Greven H, Wunderlich F. Cadmium-induced expression, and characterization of cadmium-induced metallothionein-2 from the cloning of first cadmium metallothionein like gene from locally isolated ciliate, **Biochemical characterization and quantitative gene expression** TMCd1 is a cadmium inducible metallothionein (MT) gene. In the present study . gene which was. previously isolated from a ciliate *Tetrahymena tropicalis lahorensis* gene in *E. coli* and characterization of the recombinant protein. Eur J. **Evaluation of physiological importance of metallothionein protein** May 10, 2016 Ciliate metallothioneins (MTs) are included in family 7 of the MT superfamily. into two main subfamilies: 7a or cadmium-binding MTs (CdMTs) and 7b or and characterization of 21 new MT genes (cDNAs) isolated from five **Identification, cloning and sequencing of a novel stress inducible** Oct 15, 2011 : Cadmium Metallothionein Genes of Ciliates: Isolation and Characterization of Cadmium Metallothionein Genes **Molecular Characterization of a Copper Metallothionein Gene From** Isolation and characterization of a novel copper-inducible metallothionein gene cloning of first cadmium metallothionein like gene from locally isolated ciliate, **A synthetic cadmium metallothionein gene (PMCd1syn) of** W. Cloning, characterization, and gene expression analysis of a novel cadmium metallothionein gene in *Tetrahymena pigmentosa*. Gene. Isolation and characterization of a novel copper-inducible metallothionein gene of Identification and cloning of first cadmium metallothionein like gene from locally isolated ciliate, **Two new members of the *Tetrahymena* multi-stress-inducible - NCBI** May 22, 2008 A novel cadmium-inducible metallothionein (MT) gene (Tpig-MT1) was cloned and sequenced from the ciliate Identification, Cloning and Sequencing of a Novel Stress Inducible Metallothionein Gene From Locally Isolated **PubMed Result - NCBI** Jul 12, 2008 Gene. 203(1):85-91. doi: 10.1016/.2008.07.002. multi-stress-inducible metallothionein family: characterization**

and isolated as cDNAs, from the ciliated protozoa *Tetrahymena rostrata*. Amino Acid Sequence Animals Base Sequence Cadmium/chemistry Cloning, Molecular **Isolation and Characterization of a Novel Copper-Inducible** Jan 4, 2016 A new copper metallothionein (TfCuMT) gene has been identified from a locally isolated ciliate. Subfamily 7a contains cadmium/zinc binding ciliate MTs Genomic DNA was isolated from rapidly growing log phase. **PubMed Result - NCBI** MTT2, a copper-inducible metallothionein gene from *Tetrahymena thermophila*. W. Cloning, characterization, and gene expression analysis of a novel cadmium and binary mixtures of cadmium, zinc and copper on populations of the ciliated Isolation and characterization of a novel copper-inducible metallothionein **Two new members of the *Tetrahymena* multi-stress-inducible** - **NCBI** Oct 15, 2011 Isolation and Characterization of Cadmium Metallothionein Genes First cadmium metallothionein like gene (PMCd1) from a ciliate,