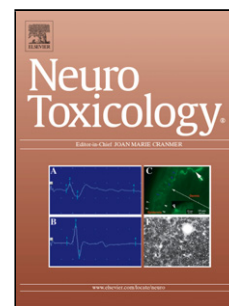


Accepted Manuscript

Title: Metabolic effects of manganese in the nematode *Caenorhabditis elegans* through DAergic pathway and transcription factors activation

Authors: Priscila Gubert, Bruna Puntel, Tassia Lehmen, Joshua P. Fessel, Pan Cheng, Julia Bornhorst, Lucas Siqueira Trindade, Daiana S. Avila, Michael Aschner, Felix A.A. Soares



PII: S0161-813X(18)30111-6
DOI: <https://doi.org/10.1016/j.neuro.2018.04.008>
Reference: NEUTOX 2325

To appear in: *NEUTOX*

Received date: 17-10-2017
Revised date: 27-3-2018
Accepted date: 8-4-2018

Please cite this article as: Gubert P, Puntel B, Lehmen T, Fessel JP, Cheng P, Bornhorst J, Trindade LS, Avila DS, Aschner M, Soares FAA, Metabolic effects of manganese in the nematode *Caenorhabditis elegans* through DAergic pathway and transcription factors activation, *Neurotoxicology* (2010), <https://doi.org/10.1016/j.neuro.2018.04.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Metabolic effects of manganese in the nematode *Caenorhabditis elegans* through DAergic pathway and transcription factors activation.

Priscila Gubert ¹, Bruna Puntel ¹, Tassia Lehmen ¹, Joshua P. Fessel ², Pan Cheng², Julia Bornhorst ³, Lucas Siqueira Trindade ⁴, Daiana S. Avila ⁵, Michael Aschner ⁶, Felix A. A. Soares ¹

1 Departamento de Química, Centro de Ciências Naturais e Exatas, Universidade Federal de Santa Maria, Santa Maria, RS, Brazil.

2 Division of Allergy, Pulmonary and Critical Care Medicine Vanderbilt University Medical Center, Nashville, TN, USA.

3 Institute of Nutritional Sciences, University of Potsdam, Arthur-Scheunert-Allee 114-166, 14558 Nuthetal, Germany.

4 Department of Biological Sciences, Tokyo Metropolitan University, 1-1 Hachioji, Tokyo, 192-0397 Japan.

5 Laboratório do Grupo de Pesquisa em Bioquímica e Toxicologia em *Caenorhabditis elegans* (GBToxCe), Universidade Federal do Pampa - UNIPAMPA, Uruguaiana, RS, Brazil.

6 Department of Molecular Pharmacology, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461, USA.

*Corresponding author:

Félix Alexandre Antunes Soares-Departamento de Bioquímica e Biologia Molecular-CCNE Universidade Federal de Santa Maria-97105-900-Santa Maria-RS-Brazil.

Phone: +55-55-3220-9522. Fax: +55-55-3220-8978. E-mail: felix@ufsm.br

Highlights Mn increased fat storage in *Caenorhabditis elegans*.

- The oxygen consumption was decreased by Mn.
- Mn did not caused death in dopaminergic neurons in L4 larval stage.
- Mn changed the expression of fat storage regulator genes *sbp-1* and *let-363*.

Abstract

Manganese (Mn) is an essential trace element for physiological functions since it acts as an enzymatic co-factor. Nevertheless, overexposure to Mn has been associated

Download English Version:

<https://daneshyari.com/en/article/8550077>

Download Persian Version:

<https://daneshyari.com/article/8550077>

[Daneshyari.com](https://daneshyari.com)