



Cite this: *Biomater. Sci.*, 2020, **8**, 4640

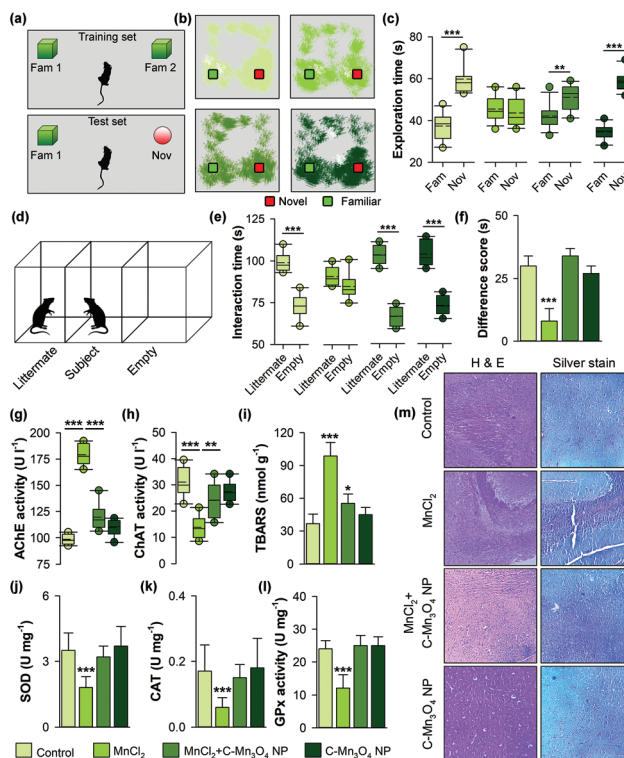
## Correction: Manganese neurotoxicity: nano-oxide compensates for ion-damage in mammals

Aniruddha Adhikari,<sup>a</sup> Monojit Das,<sup>b</sup> Susmita Mondal,<sup>a</sup> Soumendra Darbar,<sup>c</sup> Anjan Kumar Das,<sup>d</sup> Siddhartha Sankar Bhattacharya,<sup>b</sup> Debasish Pal<sup>b</sup> and Samir Kumar Pal<sup>\*a,b</sup>

DOI: 10.1039/d0bm90070b  
rsc.li/biomaterials-science

Correction for 'Manganese neurotoxicity: nano-oxide compensates for ion-damage in mammals' by Aniruddha Adhikari *et al.*, *Biomater. Sci.*, 2019, **7**, 4491–4502, DOI: 10.1039/C9BM01039D.

The authors regret that there were errors in Fig. 3 and ESI Fig. S2 in the original manuscript. The authors apologise for these errors and any consequent inconvenience to the readers.



**Fig. 3** Effect of C-Mn<sub>3</sub>O<sub>4</sub> NPs on memory and oxidative parameters of brain. (a) Representation of novel object recognition test. (b) Trace of movement in novel object recognition test. (c) Exploration time. (d) Representative diagram for sociability test. (e) Interaction time with littermate and time spent in empty space over 5 minutes of test (f) difference scores. (g and h) Acetylcholine esterase and choline acetyltransferase activity in brain. (i–l) Effect of C-Mn<sub>3</sub>O<sub>4</sub> NPs on brain antioxidant defense system. (m) Histological sections of the brain. Data are expressed as mean ± SD. N = 10. \*, \*\*, \*\*\* Values differ significantly from control group (without treatment) (\*\*\*p < 0.001; \*\*p < 0.01; \*p < 0.05).

<sup>a</sup>Department of Chemical, Biological and Macromolecular Sciences, SN Bose National Centre for Basic Sciences, Block JD, Sector 3, Salt Lake, Kolkata-700106, India. E-mail: skpal@bose.res.in

<sup>b</sup>Department of Zoology, Uluberia College, University of Calcutta, Uluberia, Howrah 711315, India

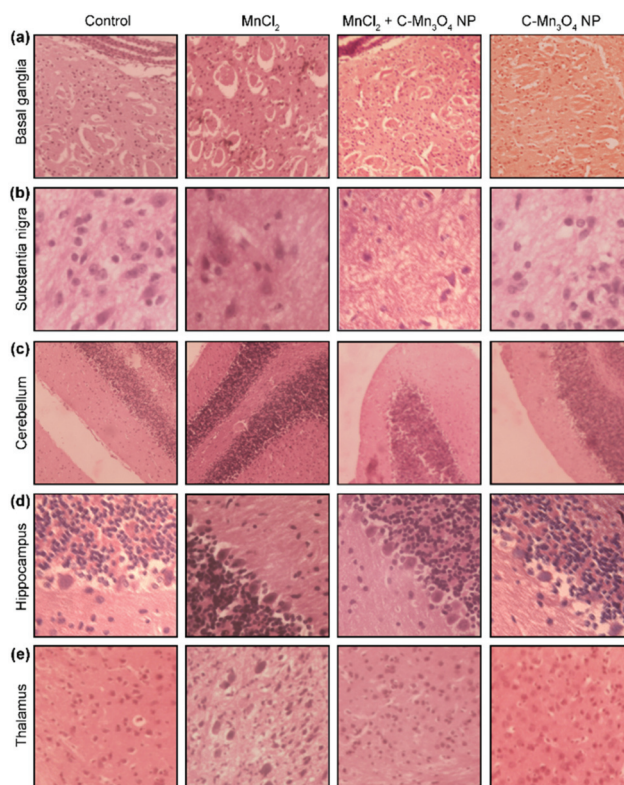
<sup>c</sup>Research & Development Division, Dey's Medical Stores (Mfg.) Ltd, 62, Bondel Road, Ballygunge, Kolkata-700019, India

<sup>d</sup>Department of Pathology, Calcutta National Medical College and Hospital, 32, Gorachand Rd, Beniapukur, Kolkata-700014, India



The haematoxylin and eosin stained brain section of “Control” group in Fig. 3m was inadvertently duplicated as “C-Mn<sub>3</sub>O<sub>4</sub> NP” group in Fig. 3m. The correct Fig. 3 is presented here.

The haematoxylin and eosin stained brain section (Basal ganglia) of “MnCl<sub>2</sub> + C-Mn<sub>3</sub>O<sub>4</sub> NP” group in ESI Fig. 2 was inadvertently duplicated as “C-Mn<sub>3</sub>O<sub>4</sub> NP” group (Basal ganglia) in ESI Fig. 2. The correct ESI Fig. 2 is presented here.



**ESI Fig. S2.** Effect of C-Mn<sub>3</sub>O<sub>4</sub> NPs on histological changes at different brain regions caused by MnCl<sub>2</sub>. Control and C-Mn<sub>3</sub>O<sub>4</sub> NP treated groups showed normal cellular architecture. MnCl<sub>2</sub> treated sections (particularly the basal ganglia region) showed marked apoptosis with degenerated and pyknotic nuclei. Sections from the cerebellum region shows cortical atrophy, degeneration of Purkinje neurones and small shrunken cells. Co-treatment with C-Mn<sub>3</sub>O<sub>4</sub> NPs ameliorated the changes. All sections are stained with haematoxylin and eosin.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

