

Correction

# Correction: Mahmoud et al. Neurotoxic Effect of Fipronil in Male Wistar Rats: Ameliorative Effect of L-Arginine and L-Carnitine. *Biology* 2021, 10, 682

Yasmina K. Mahmoud <sup>1</sup>, Ahmed A. Ali <sup>2</sup>, Heba M. A. Abdelrazek <sup>3,\*</sup> , Tahany Saleh Aldayel <sup>4</sup> , Mohamed M. Abdel-Daim <sup>5</sup>  and Menna Allah I. El-Menyawy <sup>6</sup>

- <sup>1</sup> Department of Biochemistry, Faculty of Veterinary Medicine, Suez Canal University, Ismailia 41522, Egypt; yasmina\_aziz@vet.suez.edu.eg
  - <sup>2</sup> Hygiene, Zoonosis and Animal Behavior Department, Faculty of Veterinary Medicine, Suez Canal University, Ismailia 41522, Egypt; ahmedabdelatif@vet.suez.edu.eg
  - <sup>3</sup> Department of Physiology, Faculty of Veterinary Medicine, Suez Canal University, Ismailia 41522, Egypt
  - <sup>4</sup> Nutrition and Food Science, Department of Physical Sport Sciences, Princess Nourah Bint Abdulrahman University, Riyadh 11671, Saudi Arabia; tsaldayel@pnu.edu.sa
  - <sup>5</sup> Department of Pharmacology, Faculty of Veterinary Medicine, Suez Canal University, Ismailia 41522, Egypt; abdeldaim.m@vet.suez.edu.eg
  - <sup>6</sup> Department of Physiology, Faculty of Medicine, Suez Canal University, Ismailia 41522, Egypt; mennaelmenyawi@med.suez.edu.eg
- \* Correspondence: heba\_abdelrazek@vet.suez.edu.eg; Tel.: +2-012-23399477; Fax: +2-064-32070521

## Figure Legend

In the original publication [1], there was a missing part in the legend for Figure 5. The correct legend appears below.

**Figure 5. (A)** Immunohistochemical staining of the cerebral cortex, CA region and dentate gyrus with Iba-1. Negative and non-observed immunostaining were seen in control, L-arginine (LA) and L-carnitine (LC) groups. Fipronil (FPN) group showed positive brownish Iba-1 immunoreactive microglia with numerous fine branching processes nuclei. Reduced immunoreactivity of microglia in FPN + LA and FPN + LC treated groups was seen [Anti-Iba-1  $\times$  400]. **(B)** Immunoreactive parts percentage (IRP%) of Iba-1 protein expressed as mean  $\pm$  SE. Symbols \*\*, \*\*\* indicates significant  $p$  value  $<$  0.01 and 0.001, respectively. The symbol  $a \times b$  means  $a$  was statistically more varied than  $b$ ;  $a \times c$  means  $a$  was statistically more varied than  $c$ ; and  $b \times c$  means  $b$  was more statistically varied than  $c$ .

In addition, there was a mistake in the legend for Figure 6. The name of the immunohistochemical marker was mistyped as Iba-1; however, the correct one is DCX. The correct legend appears below.

**Figure 6. (A)** Immunohistochemical staining of the cerebral cortex, CA region and dentate gyrus with DCX. Weak perinuclear membrane reaction was seen in control, L-arginine (LA) and L-carnitine (LC) groups. The Fipronil (FPN) group showed intense positive brownish immunoreactive neurons in the subgranular and granular cell layers. Reduced immunoreactivity of microglia in FPN + LA and FPN + LC-treated groups was seen (Anti-DCX 400 $\times$ ). **(B)** Immunoreactive parts percentage (IRP%) of DCX protein expressed as mean  $\pm$  SE. Symbol  $a \times b$  means  $a$  was statistically more varied than  $b$ ;  $a \times c$  means  $a$  was statistically more varied than  $c$ ; and  $b \times c$  means  $b$  was statistically more varied than  $c$ . Symbols \*\*, \*\*\* indicate significant  $p$  values  $<$  0.01 and 0.001, respectively.



**Citation:** Mahmoud, Y.K.; Ali, A.A.; Abdelrazek, H.M.A.; Aldayel, T.S.; Abdel-Daim, M.M.; El-Menyawy, M.A.I. Correction: Mahmoud et al. Neurotoxic Effect of Fipronil in Male Wistar Rats: Ameliorative Effect of L-Arginine and L-Carnitine. *Biology* 2021, 10, 682. *Biology* 2023, 12, 904. <https://doi.org/10.3390/biology12070904>

Received: 5 May 2023

Revised: 9 May 2023

Accepted: 17 May 2023

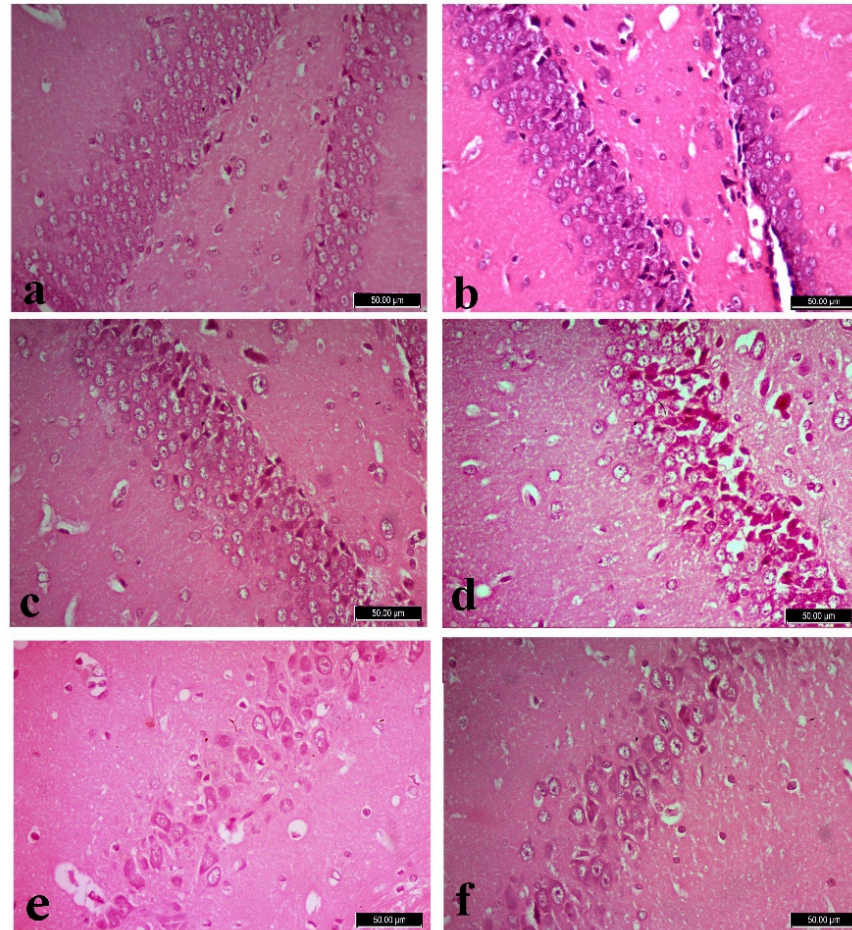
Published: 25 June 2023



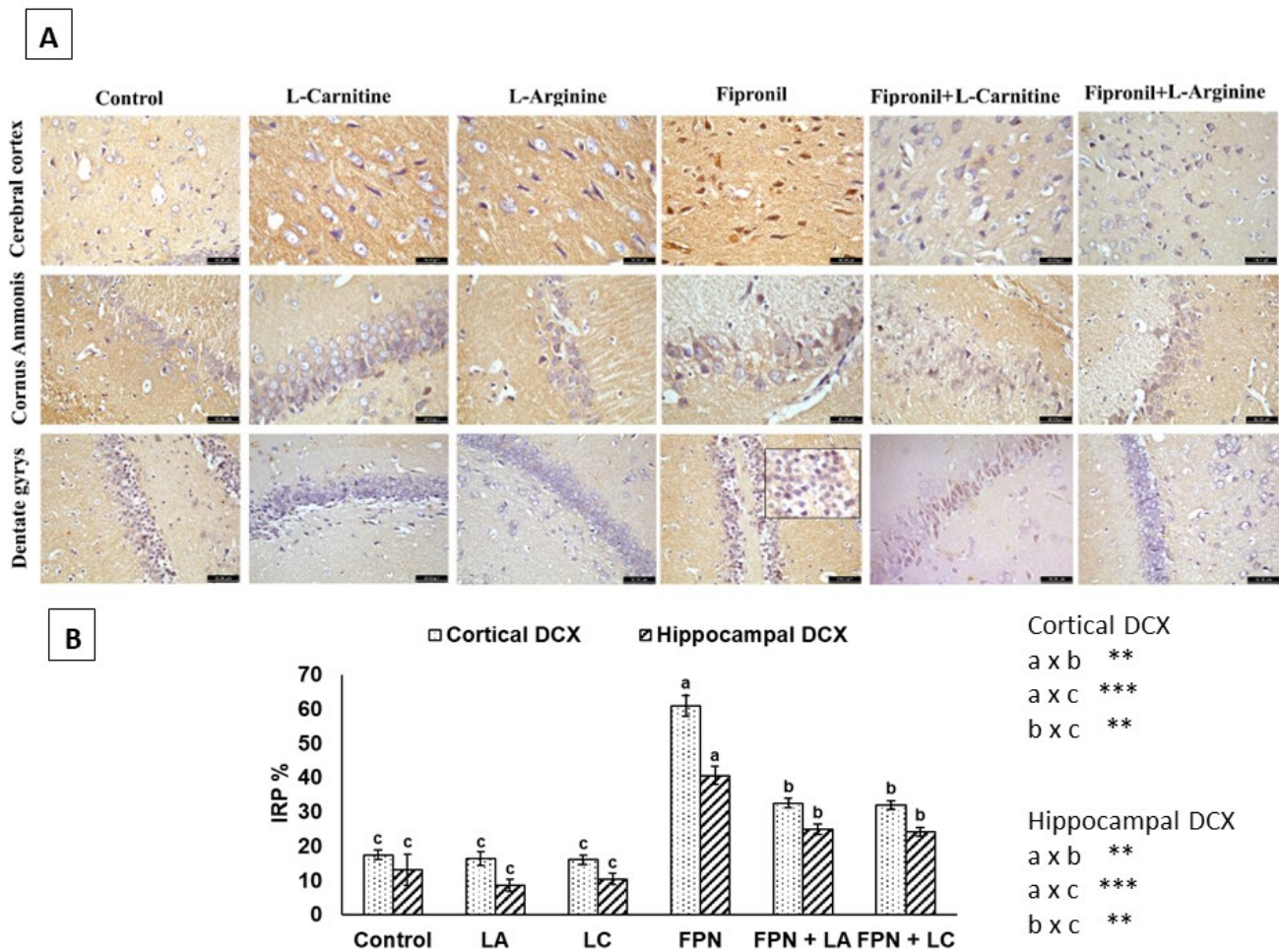
**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

### Error in Figure

In the original publication [1], there was a mistake in Figures 4 and 6 as published. Figure 4e was misdragged, and the dentate gyrus of the fipronil +L-carnitine group was misdragged in Figure 6 for DCX immunohistochemistry. The corrected Figures 4 and 6 appear below.



**Figure 4.** Dentate gyrus of control (a), L-arginine (b), L-carnitine (c) and fipronil (FPN)-treated rats (d). FPN-treated rat (d) showed shrunken, darkly stained granule cells with cytoplasmic vacuolations among few nearly normal granules cells with large vesicular nuclei. Improvements were observed in FPN + L-arginine and FPN + L-carnitine-treated groups (e,f). Stain: Hematoxylin and Eosin (H&E), magnification 400×.



**Figure 6.** (A) Immunohistochemical staining of the cerebral cortex, CA region and dentate gyrus with DCX. Weak perinuclear membrane reaction was seen in control, L-arginine (LA) and L-carnitine (LC) groups. The Fipronil (FPN) group showed intense positive brownish immunoreactive neurons in the subgranular and granular cell layers. Reduced immunoreactivity of microglia in FPN + LA and FPN + LC-treated groups was seen (Anti-DCX 400×). (B) Immunoreactive parts percentage (IRP%) of DCX protein expressed as mean ± SE. Symbol a × b means a was statistically more varied than b; a × c means a was statistically more varied than c; and b × c means b was statistically more varied than c. Symbols \*\*, \*\*\* indicate significant *p* values < 0.01 and 0.001, respectively.

The authors state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

**Reference**

1. Mahmoud, Y.K.; Ali, A.A.; Abdelrazek, H.M.A.; Aldayel, T.S.; Abdel-Daim, M.M.; El-Menyawy, M.A.I. Neurotoxic Effect of Fipronil in Male Wistar Rats: Ameliorative Effect of L-Arginine and L-Carnitine. *Biology* **2021**, *10*, 682. [[CrossRef](#)]

**Disclaimer/Publisher’s Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.