Check for updates

#### **OPEN ACCESS**

EDITED AND REVIEWED BY Walter Adriani, National Institute of Health (ISS), Italy

\*CORRESPONDENCE Indrikis A. Krams ⊠ indrikis.krams@ut.ee

RECEIVED 26 February 2024 ACCEPTED 06 March 2024 PUBLISHED 22 March 2024

#### CITATION

Krama T, Munkevics M, Krams R, Grigorjeva T, Trakimas G, Jõers P, Popovs S, Zants K, Elferts D, Rantala MJ, Sledevskis E, Contreras-Garduño J, de Bivort BL and Krams IA (2024) Corrigendum: Development under predation risk increases serotonin-signaling, variability of turning behavior and survival in adult fruit flies *Drosophila melanogaster. Front. Behav. Neurosci.* 18:1391782. doi: 10.3389/fnbeh.2024.1391782

#### COPYRIGHT

© 2024 Krama, Munkevics, Krams, Grigorjeva, Trakimas, Jöers, Popovs, Zants, Elferts, Rantala, Sledevskis, Contreras-Garduño, de Bivort and Krams. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

# Corrigendum: Development under predation risk increases serotonin-signaling, variability of turning behavior and survival in adult fruit flies *Drosophila melanogaster*

Tatjana Krama<sup>1,2</sup>, Māris Munkevics<sup>1,3</sup>, Ronalds Krams<sup>1,2</sup>, Tatjana Grigorjeva<sup>1</sup>, Giedrius Trakimas<sup>1,4</sup>, Priit Jõers<sup>5</sup>, Sergejs Popovs<sup>1</sup>, Krists Zants<sup>3</sup>, Didzis Elferts<sup>6</sup>, Markus J. Rantala<sup>7</sup>, Eriks Sledevskis<sup>8</sup>, Jorge Contreras-Garduño<sup>9,10</sup>, Benjamin L. de Bivort<sup>11</sup> and Indrikis A. Krams<sup>3,12,13,14\*</sup>

<sup>1</sup>Department of Biotechnology, Institute of Life Sciences and Technologies, Daugavpils University, Daugavpils, Latvia, <sup>2</sup>Chair of Plant Health, Estonian University of Life Sciences, Tartu, Estonia, <sup>3</sup>Department of Zoology and Animal Ecology, Faculty of Biology, University of Latvia, Riga, Latvia, <sup>4</sup>Institute of Biosciences, Vilnius University, Vilnius, Lithuania, <sup>5</sup>Institute of Molecular and Cell Biology, University of Tartu, Tartu, Estonia, <sup>6</sup>Department of Botany and Ecology, Faculty of Biology, University of Latvia, Riga, Latvia, <sup>7</sup>Department of Biology, Turku Brain and Mind Center, University of Turku, Turku, Finland, <sup>8</sup>Department of Technology, Institute of Life Sciences and Technologies, Daugavpils University, Daugavpils, Latvia, <sup>9</sup>Escuela Nacional de Estudios Superiores, Universidad Nacional Autónoma de México, Morelia, Mexico, <sup>10</sup>Institute for Evolution and Biodiversity, University, G Münster, Germany, <sup>11</sup>Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA, United States, <sup>12</sup>Latvian Biomedical Research and Study Centre, Riga, Latvia, <sup>13</sup>Institute of Ecology and Earth Sciences, University of Tartu, Tartu, Estonia, <sup>14</sup>Department of Psychology, University of Tennessee, Knoxville, Knoxville, TN, United States

#### KEYWORDS

Drosophila melanogaster, behavioral predictability, serotonin, survival under predation, turning behavior

### A corrigendum on

Development under predation risk increases serotonin-signaling, variability of turning behavior and survival in adult fruit flies *Drosophila melanogaster* 

by Krama, T., Munkevics, M., Krams, R., Grigorjeva, T., Trakimas, G., Jõers, P., Popovs, S., Zants, K., Elferts, D., Rantala, M. J., Sledevskis, E., Contreras-Garduño, J., de Bivort, B. L., and Krams, I. A. (2023). *Front. Behav. Neurosci.* 17:1189301. doi: 10.3389/fnbeh.2023.1189301

In the published article, there was an error: five sentences are missing.

A correction has been made to Materials and methods, "*Prey, predators, developmental speed, and the main treatment groups,*" the very end of the 4th paragraph. After this sentence: "The density of F1 first-instar larvae across the vials was similar, and we averaged the density to 120 larvae/vial by removing extra larvae with a squirrel brush (Krams et al., 2016)," there should be five more sentences.

The corrected paragraph appears below:

"We isolated fruit flies using carbon dioxide anesthesia within 6-7 h after eclosion. Ten F0 females and ten males were placed for 24 h in one vial (Flystuff polystyrene vials; Genesee Scientific, El Cajon, CA, USA, 24 mm inner diameter × 95 mm height) containing 6 ml of Cal Tech medium. After 24 h, the adults were removed, and the vials were placed horizontally on the floor of Plexiglas jars (10 cm height  $\times$  12 cm diameter). The density of F1 first-instar larvae across the vials was similar, and we averaged the density to 120 larvae/vial by removing extra larvae with a squirrel brush (Krams et al., 2016). Vials with Drosophila larvae were randomly divided into two groups: one that was exposed to spiders and one that was not. In the spider-treated group, a single P. apacheanus individual was also included in each Plexiglas jar. The vials did not have stoppers, giving the spider free access to the developing flies (as well as the fly media). Developing flies were also exposed to the odor of the spider throughout the container. Flies

for behavioral and survival assays were removed the day after they eclosed, without anesthesia, and transferred to drug-treated vials as described below."

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

## Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

## References

Krams, I., Inwood, S. E., Trakimas, G., Krams, R., Burghardt, G. M., Butler, D. M., et al. (2016). Short-term exposure to predation affects body elemental composition,

climbing speed and survival ability in Drosophila melanogaster. PeerJ 4:e2314. doi: 10.7717/peerj.2314