Check for updates

OPEN ACCESS

EDITED AND REVIEWED BY Luisa M. Sandalio, Spanish National Research Council (CSIC), Spain

*CORRESPONDENCE Peisen Su pssu2014@163.com Shangjing Guo guoshangjing@lcu.edu.cn Jun Yan xinsinian2006@163.com

RECEIVED 22 January 2025 ACCEPTED 20 February 2025 PUBLISHED 13 March 2025

CITATION

Su P, Sui C, Niu Y, Li J, Wang S, Sun F, Yan J and Guo S (2025) Corrigendum: Comparative transcriptomic analysis and functional characterization reveals that the class III peroxidase gene *TaPRX-2A* regulates drought stress tolerance in transgenic wheat. *Front. Plant Sci.* 16:1565141. doi: 10.3389/fpls.2025.1565141

COPYRIGHT

© 2025 Su, Sui, Niu, Li, Wang, Sun, Yan and Guo. 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: Comparative transcriptomic analysis and functional characterization reveals that the class III peroxidase gene *TaPRX-2A* regulates drought stress tolerance in transgenic wheat

Peisen Su^{1*}, Chao Sui¹, Yufei Niu¹, Jingyu Li¹, Shuhan Wang¹, Fanting Sun¹, Jun Yan^{2*} and Shangjing Guo^{1*}

¹College of Agronomy, Liaocheng University, Liaocheng, China, ²Key Laboratory of Huang-Huai-Hai Smart Agricultural Technology of the Ministry of Agriculture and Rural Affairs, College of Information Science and Engineering, Shandong Agricultural University, Tai'an, Shandong, China

KEYWORDS

transcriptomics, drought tolerance, class III peroxidase, TaPRX-2A, ROS

A Corrigendum on

Comparative transcriptomic analysis and functional characterization reveals that the class III peroxidase gene *TaPRX-2A* regulates drought stress tolerance in transgenic wheat

By Su P, Sui C, Niu Y, Li J, Wang S, Sun F, Yan J and Guo S (2023) *Front. Plant Sci.* 14:1119162. doi: 10.3389/fpls.2023.1119162

In the published article, there was an error in **Figure 6A**, **Figure 7C** as published. In **Figure 6A**, the representative photo of TaOE2 was duplicated and used as TaOE3 at 0 day. In **Figure 7C**, the representative photo of TaOE2 was duplicated and used as TaOE3. The corrected **Figure 6A** and its caption "**Figure 6** *TaPRX-2A* overexpression increased the drought tolerance. (A) Phenotype of *TaPRX-2A*-overexpressing transgenic and WT wheat (the cultivar "KN199") with drought treatment. (B) Survival rates of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (C) shoot length of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (D) Relative water content (RWC), and (E) root length. (F) MDA content of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (G) soluble sugar content of *TaPRX-2A*-overexpressing transgenic lines and WT

wheat. (H) proline content, and (I) soluble protein content of *TaPRX-2A*-overexpressing and WT plants. All experiments included three replicates and the data present the mean \pm SD. *P < 0.05 and **P < 0.01 indicate a significant difference compared with WT." and the corrected **Figure 7C** along with its caption "**Figure 7** Analysis of ROS scavenging capacity andantioxidant enzymes activity in transgenic wheat lines. (A) Detection of O₂⁻ generation by NBT staining and O₂⁻ content (B). (C) Detection of H₂O₂ accumulation by DAB staining and H₂O₂ content (D). (E) Detection of SOD activity in *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (F) Detection of CAT activity in *TaPRX-2A*-overexpressing transgenic lines and WT wheat. All experiments and WT wheat and WT wheat the at a present the data present and the data

the mean \pm SD. *P < 0.05 and **P < 0.01 indicate a significant difference compared with WT." appear 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.



FIGURE 6

TaPRX-2A overexpression increased the drought tolerance. (A) Phenotype of *TaPRX-2A*-overexpressing transgenic and WT wheat (the cultivar "KN199") with drought treatment. (B) Survival rates of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (C) shoot length of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (D) Relative water content (RWC), and (E) root length. (F) MDA content of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (G) soluble sugar content of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (G) soluble sugar content of *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (H) proline content, and (I) soluble protein content of *TaPRX-2A*-overexpressing and WT plants. All experiments included three replicates and the data present the mean \pm SD. *P < 0.05 and **P < 0.01 indicate a significant difference compared with WT. The "ns" presents "no differences".



FIGURE 7

Analysis of ROS scavenging capacity and antioxidant enzymes activity in transgenic wheat lines. (A) Detection of O_2^- generation by NBT staining and O_2^- content (B). (C) Detection of H₂O₂ accumulation by DAB staining and H₂O₂ content (D). (E) Detection of SOD activity in *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (F) Detection of CAT activity in *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (G) Detection of POD activity in *TaPRX-2A*-overexpressing transgenic lines and WT wheat. (G) Detection of POD activity in *TaPRX-2A*-overexpressing transgenic lines and the data present the mean \pm SD. *P < 0.05 and **P < 0.01 indicate a significant difference compared with WT. The "ns" presents "no differences".