## CORRECTION



# Correction: Ren-Shen-Bu-Qi decoction alleviates exercise fatigue through activating PI3K/AKT/Nrf2 pathway in mice



Yangyang Chen<sup>1</sup>, Tinghui Gao<sup>1</sup>, Jing Bai<sup>2</sup>, Wenjing Zhang<sup>2</sup>, Yutong Zhou<sup>2</sup>, Ruichang Zhao<sup>2</sup>, Youhui Deng<sup>3,4</sup>, Xiaogang Liu<sup>3,4</sup>, Zhangjun Huang<sup>3,4</sup>, Songtao Wang<sup>3,4</sup>, Caihong Shen<sup>3,4</sup>, Sijing Liu<sup>1,2\*</sup> and Jinlin Guo<sup>1,2\*</sup>

#### Correction: Chinese Medicine (2024) 19:154 https://doi.org/10.1186/s13020-024-01027-4

Following publication of the original article [1], the authors identified errors in Fig. 6G. In detail, the wrong

images were used in the p-PI3K in Fig. 6G. The errors were caused by a mistake in the layout and selection of representative images.

The correct abstract figure, Fig. 6 and supplementary figures in Supplementary file 5 have been provided in this Correction.

The original article can be found online at https://doi.org/10.1186/s13020-024-01027-4.

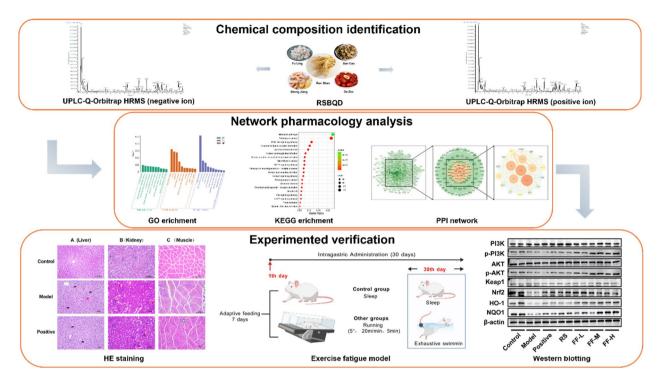
\*Correspondence: Sijing Liu liusijing@cdutcm.edu.cn Jinlin Guo guo596@cdutcm.edu.cn <sup>1</sup> State Key Laboratory of Southwestern Chinese Medicine Resources, College of Pharmacy, Chengdu University of Traditional Chinese Medicine, Chengdu 611137, China <sup>2</sup> College of Medical Technology, Chengdu University of Traditional Chinese Medicine, Chengdu 611137, China <sup>3</sup> Luzhou Laojiao Group Co. Ltd, Luzhou, People's Republic of China <sup>4</sup> National Engineering Research Center of Solid-State Brewing, Luzhou,

**BMC** 

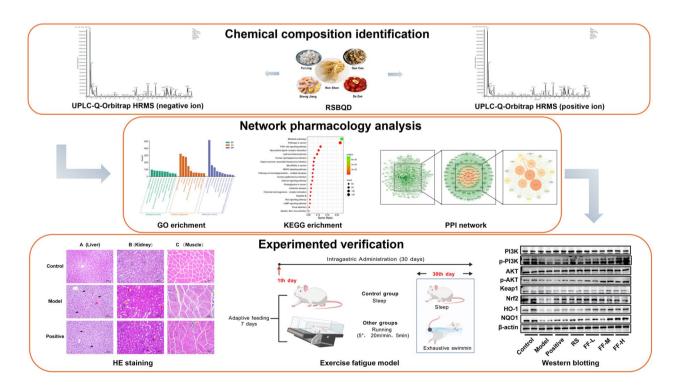
People's Republic of China

© The Author(s) 2025. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

## The incorrect Graphical Abstract is:



## The correct Graphical Abstract is:



The incorrect Fig. 6 is:

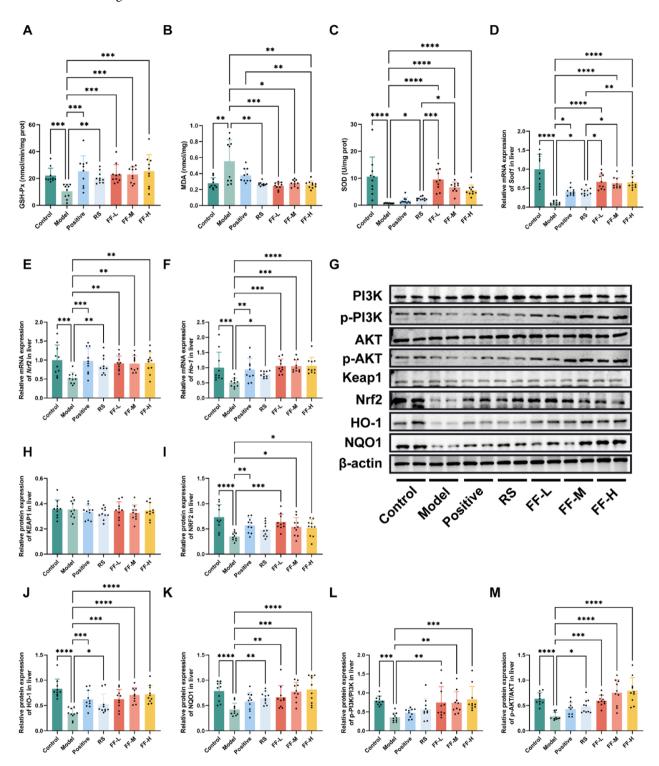


Fig. 6 RSBQD activated PI3K/AKT/Nrf2 signaling pathway in exercise fatigued mice (n = 10). A Hepatic GSH-Px activity. B Hepatic SOD activity. C Hepatic MDA content. D–F The relative mRNA levels of Sod1 (D), Nrf2 (E), and Ho-1 (F). G Representative images of Western blot. H–K Relative protein levels of KEAP1 (H), NRF2 (I), HO-1 (J), and NQO1 (K). (L, M) The ratio of p-PI3K/PI3K L and p-AKT/AKT M. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001, \*\*\*P < 0.001

The correct Fig. 6 is:

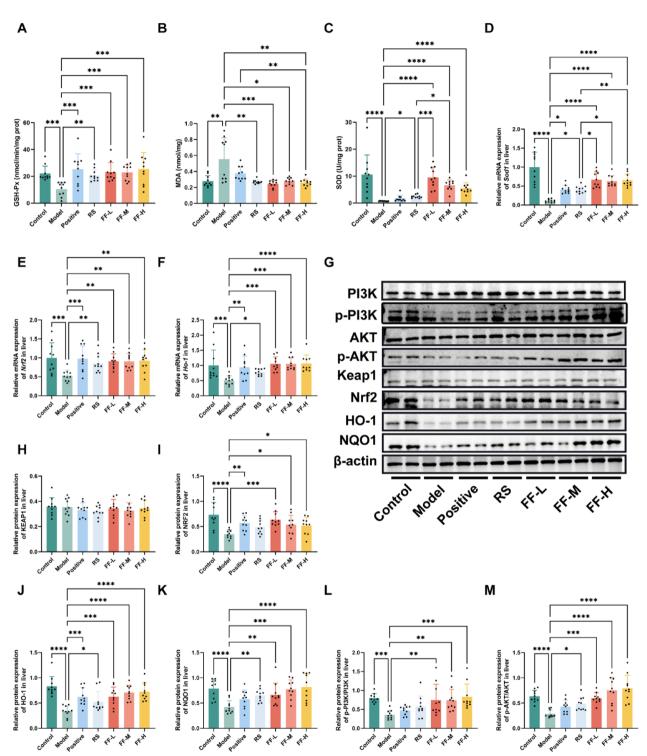


Fig. 6 RSBQD activated PI3K/AKT/Nrf2 signaling pathway in exercise fatigued mice (n = 10). A Hepatic GSH-Px activity. B Hepatic SOD activity. C Hepatic MDA content. D–F The relative mRNA levels of Sod1 (D), Nrf2 (E), and Ho-1 (F). G Representative images of Western blot. H–K Relative protein levels of KEAP1 (H), NRF2 (I), HO-1 (J), and NQO1 (K). (L, M) The ratio of p-PI3K/PI3K L and p-AKT/AKT M. \*P<0.05, \*\*P<0.01, \*\*\*P<0.001, \*\*\*\*P<0.001

The incorrect Supplementary file 5 is: Supplementary Figures

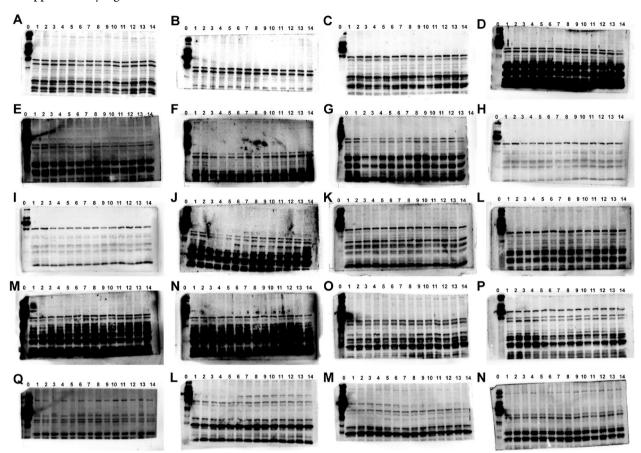
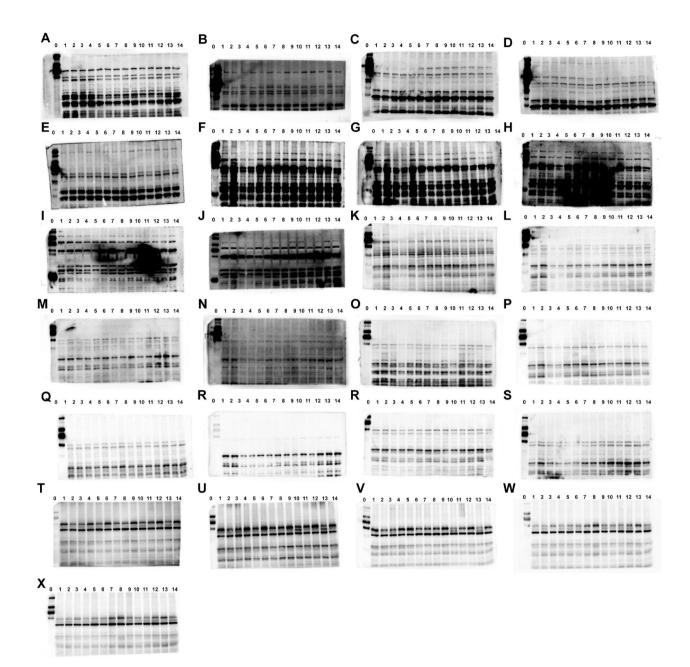


Fig. S1 Images of the Western blots in fatigued mice. The protein of PI3K (A-E), p-PI3K (F-J), AKT (K–O), and p-AKT (P-N). The protein in fatigued mice from control group (No.1–2), model group (No.3–4), positive group (No.5–6), ren shen group (No.7–8), RSBQD low dose group (No.9–10), RSBQD medium dose group (No.11–12), RSBQD high dose group (No.13–14), and the protein ladder (No.0)



**Fig. S2** Images of the Western blots in fatigued mice. The protein of KEAP1 (**A-E**), NRF2 (**F-J**), HO-1 (**K–O**), NQO1 (**P-S**) and β-actin(**T-X**). The protein in fatigued mice from control group (No.1–2), model group (No.3–4), positive group (No.5–6), ren shen group (No.7–8), RSBQD low dose group (No.9–10), RSBQD medium dose group (No.11–12), RSBQD high dose group (No.13–14), and the protein ladder (No.0)

The correct Supplementary file 5 is: Supplementary Fig.S1

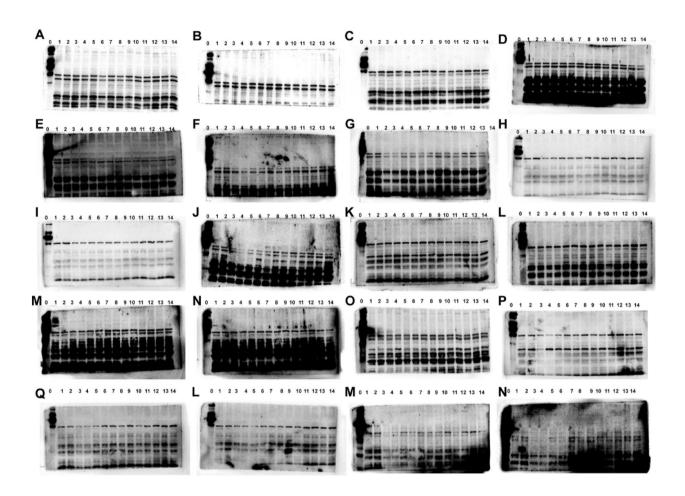
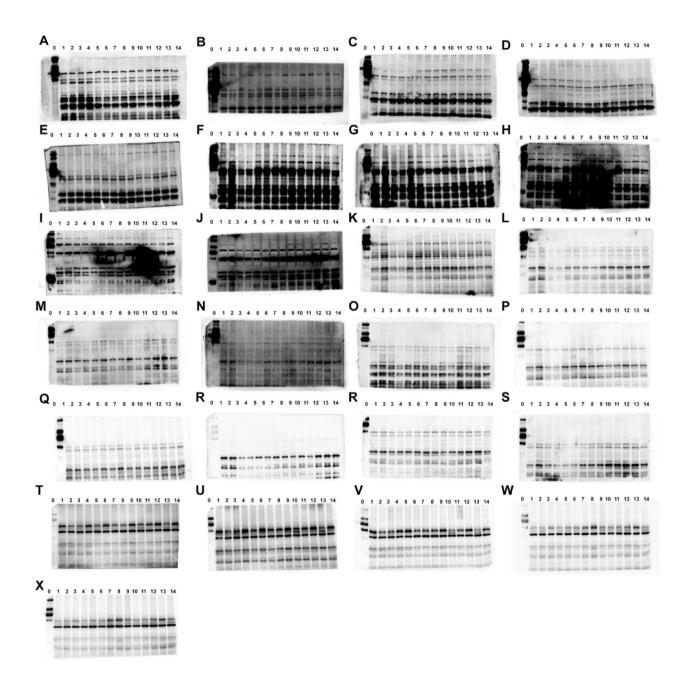


Fig. S1 Images of the Western blots in fatigued mice. The protein of PI3K (A-E), p-PI3K (F-J), AKT (K–O), and p-AKT (P-N). The protein in fatigued mice from control group (No.1–2), model group (No.3–4), positive group (No.5–6), ren shen group (No.7–8), RSBQD low dose group (No.9–10), RSBQD medium dose group (No.11–12), RSBQD high dose group (No.13–14), and the protein ladder (No.0)

#### Supplementary Fig.S2



**Fig. S2** Images of the Western blots in fatigued mice. The protein of KEAP1 (**A-E**), NRF2 (**F-J**), HO-1 (**K–O**), NQO1 (**P-S**) and  $\beta$ -actin(**T-X**). The protein in fatigued mice from control group (No.1–2), model group (No.3–4), positive group (No.5–6), ren shen group (No.7–8), RSBQD low dose group (No.9–10), RSBQD medium dose group (No.11–12), RSBQD high dose group (No.13–14), and the protein ladder (No.0)

The authors apologize for the errors and state that this does not change the results and the scientific conclusions of this study. The original article [1] has been corrected.

Published online: 17 April 2025

#### Reference

 Chen Y, Gao T, Bai J, Zhang W, Zhou Y, Zhao R, Deng Y, Liu X, Huang Z, Wang S, Shen C. Ren-Shen-Bu-Qi decoction alleviates exercise fatigue through activating PI3K/AKT/Nrf2 pathway in mice. Chin Med. 2024;19:154. https://doi.org/10.1186/s13020-024-01027-4.

#### **Publisher's Note**

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.