Microbiome

CORRECTION

Open Access

Correction: Dimethyl itaconate ameliorates cognitive impairment induced by a high-fat diet via the gut-brain axis in mice

Wei Pan[1†], Jinxiu Zhao[1†], Jiacheng Wu[1,2†], Daxiang Xu[1], Xianran Meng[1], Pengfei Jiang[1], Hongli Shi[1], Xing Ge[1], Xiaoying Yang[1], Minmin Hu[1], Peng Zhang[1], Renxian Tang[1], Nathan Nagaratnam[3], Kuiyang Zheng[1*], Xu-Feng Huang[1,3*] and Yinghua Yu[1*]

Correction: Microbiome 11, 30 (2023)
https://doi.org/10.1186/s40168-023-01471-8

Published online: 20 March 2023

Following the publication of the original article [1], the author reported that Fig. 4i is missing. The correct Fig. 4 is included here and the original article has been updated.

Reference

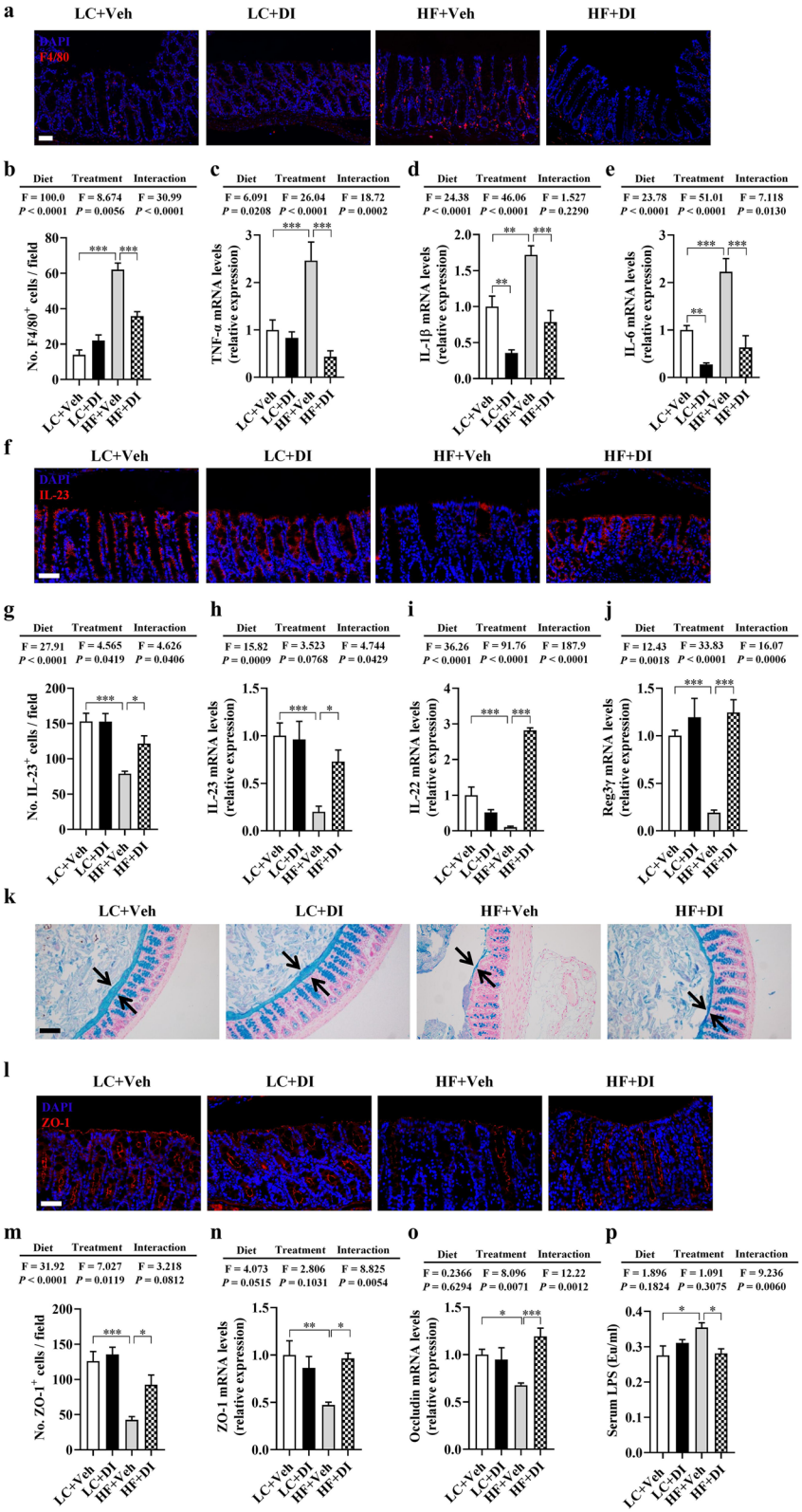
1. Pan W, Zhao J, Wu J, et al. Dimethyl itaconate ameliorates cognitive impairment induced by a high-fat diet via the gut-brain axis in mice. Microbiome. 2023;11:30. https://doi.org/10.1186/s40168-023-01471-8.

[†]Wei Pan, Jinxiu Zhao and Jiacheng Wu contributed equally to this work.

The original article can be found online at https://doi.org/10.1186/s40168-023-01471-8.

*Correspondence:
Kuiyang Zheng
zky02@163.com
Xu-Feng Huang
xhuang@uow.edu.au
Yinghua Yu
3292965589@qq.com; yinghua@uow.edu.au
[1] Jiangsu Key Laboratory of Immunity and Metabolism, Jiangsu International Laboratory of Immunity and Metabolism, Department of Pathogen Biology and Immunology, Xuzhou Medical University, Xuzhou 221004, Jiangsu, China
[2] The Second School of Clinical Medicine, Xuzhou Medical University, Xuzhou 221004, Jiangsu, China
[3] Illawarra Health and Medical Research Insti- tute (IHMRI) and School of Medicine, University of Wollongong, Wollongong, NSW 2522, Australia

© The Author(s) 2023. **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.


a
LC+Veh
LC+DI
HF+Veh
HF+DI
DAPI
F4/80
b
Diet Treatment Interaction
F = 100.0 F = 8.674 F = 30.99
P < 0.0001 P = 0.0056 P < 0.0001
No. F4/80+ cells / field
c
Diet Treatment Interaction
F = 6.091 F = 26.04 F = 18.72
P = 0.0208 P < 0.0001 P = 0.0002
TNF-α mRNA levels (relative expression)
d
Diet Treatment Interaction
F = 24.38 F = 46.06 F = 1.527
P < 0.0001 P < 0.0001 P = 0.2290
IL-1β mRNA levels (relative expression)
e
Diet Treatment Interaction
F = 23.78 F = 51.01 F = 7.118
P < 0.0001 P < 0.0001 P = 0.0130
IL-6 mRNA levels (relative expression)
f
LC+Veh
LC+DI
HF+Veh
HF+DI
DAPI
IL-23
g
Diet Treatment Interaction
F = 27.91 F = 4.565 F = 4.626
P < 0.0001 P = 0.0419 P = 0.0406
No. IL-23+ cells / field
h
Diet Treatment Interaction
F = 15.82 F = 3.523 F = 4.744
P = 0.0009 P = 0.0768 P = 0.0429
IL-23 mRNA levels (relative expression)
i
Diet Treatment Interaction
F = 36.26 F = 91.76 F = 187.9
P < 0.0001 P < 0.0001 P < 0.0001
IL-22 mRNA levels (relative expression)
j
Diet Treatment Interaction
F = 12.43 F = 33.83 F = 16.07
P = 0.0018 P < 0.0001 P = 0.0006
Reg3γ mRNA levels (relative expression)
k
LC+Veh
LC+DI
HF+Veh
HF+DI
l
LC+Veh
LC+DI
HF+Veh
HF+DI
DAPI
ZO-1
m
Diet Treatment Interaction
F = 31.92 F = 7.027 F = 3.218
P < 0.0001 P = 0.0119 P = 0.0812
No. ZO-1+ cells / field
n
Diet Treatment Interaction
F = 4.073 F = 2.806 F = 8.825
P = 0.0515 P = 0.1031 P = 0.0054
ZO-1 mRNA levels (relative expression)
o
Diet Treatment Interaction
F = 0.2366 F = 8.096 F = 12.22
P = 0.6294 P = 0.0071 P = 0.0012
Occludin mRNA levels (relative expression)
p
Diet Treatment Interaction
F = 1.896 F = 1.091 F = 9.236
P = 0.1824 P = 0.3075 P = 0.0060
Serum LPS (Eu/ml)
LC+Veh
LC+DI
HF+Veh
HF+DI