Correction to: Apolipoprotein E regulates lipid metabolism and α -synuclein pathology in human iPSC-derived cerebral organoids

Jing Zhao^{1,2} · Wenyan Lu^{1,2} · Yingxue Ren³ · Yuan Fu¹ · Yuka A. Martens^{1,2} · Francis Shue¹ · Mary D. Davis^{1,2} · Xue Wang³ · Kai Chen¹ · Fuyao Li¹ · Chia-Chen Liu¹ · Neill R. Graff-Radford⁴ · Zbigniew K. Wszolek⁴ · Steven G. Younkin¹ · David A. Brafman⁵ · Nilüfer Ertekin-Taner^{1,4} · Yan W. Asmann³ · Dennis W. Dickson¹ · Ziyang Xu⁶ · Meixia Pan⁶ · Xianlin Han^{6,7} · Takahisa Kanekiyo^{1,2} · Guojun Bu^{1,2}

Published online: 1 November 2021
© The Author(s) 2021

Correction to: Acta Neuropathologica (2021) 142:807–825
<https://doi.org/10.1007/s00401-021-02361-9>

The original publication of this article contained an error in a Western blot image of Fig. 4b. The positive control lane of LIMP1 was mistakenly cropped when preparing the figure.

The correct image with positive control is now placed in the updated Fig. 4b. This error did not affect the results nor conclusion.

The corrected Fig. 4 is given below.

The original article can be found online at <https://doi.org/10.1007/s00401-021-02361-9>.

✉ Guojun Bu
bu.guojun@mayo.edu

¹ Department of Neuroscience, Mayo Clinic, Jacksonville, FL 32224, USA

² Center for Regenerative Medicine, Neuroregeneration Laboratory, Mayo Clinic, Jacksonville, FL 32224, USA

³ Department of Health Sciences Research, Mayo Clinic, Jacksonville, FL 32224, USA

⁴ Department of Neurology, Mayo Clinic, Jacksonville, FL 32224, USA

⁵ School of Biological & Health Systems Engineering, Arizona State University, Tempe, AZ 85287, USA

⁶ Barshop Institute for Longevity and Aging Studies, University of Texas Health Science Center At San Antonio, San Antonio, TX 78229, USA

⁷ Department of Medicine, University of Texas Health Science Center At San Antonio, San Antonio, TX 78229, USA

Fig. 4 ApoE2 and apoE3, but not apoE4, partially rescue α -synuclein accumulation in apoE-deficient cerebral organoids. The *APOE*^{-/-} iPSC-derived cerebral organoids at Day 90 were treated with conditioned media of immortalized astrocytes from *APOE2*-target replacement (TR), *APOE3*-TR, or *APOE4*-TR mice for 5 days. Conditioned media from *ApoE*-KO astrocytes were used as a control. **a**, A schematic workflow of the rescue experiments. **b–i**, Amounts of EEA1 (**c**), LAMP1 (**d**), GCaase (**e**), LIMP1 (**f**), Plin2 (**g**), α Syn (**h**) and p- α Syn (**i**) in the RIPA fraction of the cerebral organoids after treatments were quantified by Western blotting. **j–l**, Amounts of total α Syn (**k**) and p- α Syn (**l**) in the SDS fraction of cerebral organoids after treatments were quantified by Western blotting. All data were normalized to β -actin levels. 3 cerebral organoids were pooled and analyzed as one sample. All data are expressed as mean $\pm$ SEM ($n=5$ samples/each). Experiments were repeated in three independent differentiation batches. One-way ANOVA was performed to determine statistical significance. ** $p < 0.01$, **** $p < 0.0001$, n.s., not significant

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