



# Correction to: Insulin-degrading enzyme ablation in mouse pancreatic alpha cells triggers cell proliferation, hyperplasia and glucagon secretion dysregulation

Beatriz Merino<sup>1</sup> · Elena Casanueva-Álvarez<sup>1</sup> · Iván Quesada<sup>2,3</sup> · Carlos M. González-Casimiro<sup>1</sup> · Cristina M. Fernández-Díaz<sup>4</sup> · Tamara Postigo-Casado<sup>1</sup> · Malcolm A. Leissring<sup>5</sup> · Klaus H. Kaestner<sup>6</sup> · Germán Perdomo<sup>1</sup> · Irene Cózar-Castellano<sup>1,3</sup>

Published online: 15 November 2023  
© The Author(s) 2023

**Correction to: Diabetologia**

<https://doi.org/10.1007/s00125-022-05729-y>

Unfortunately, in the BrdU staining of alpha-TC1.9 cells shown in Fig. 7e, the representative image used in the siRNA-*Ide* panel was a duplication of the image used for the control panel. The authors assert that this mistake had no impact on the data analysis, interpretation or conclusions drawn. Figure 7e in the original article has been corrected.

---

The original article can be found online at <https://doi.org/10.1007/s00125-022-05729-y>.

---

✉ Irene Cózar-Castellano  
irene.cozar@uva.es

<sup>1</sup> Unidad de Excelencia Instituto de Biología y Genética Molecular, University of Valladolid-CSIC, Valladolid, Spain

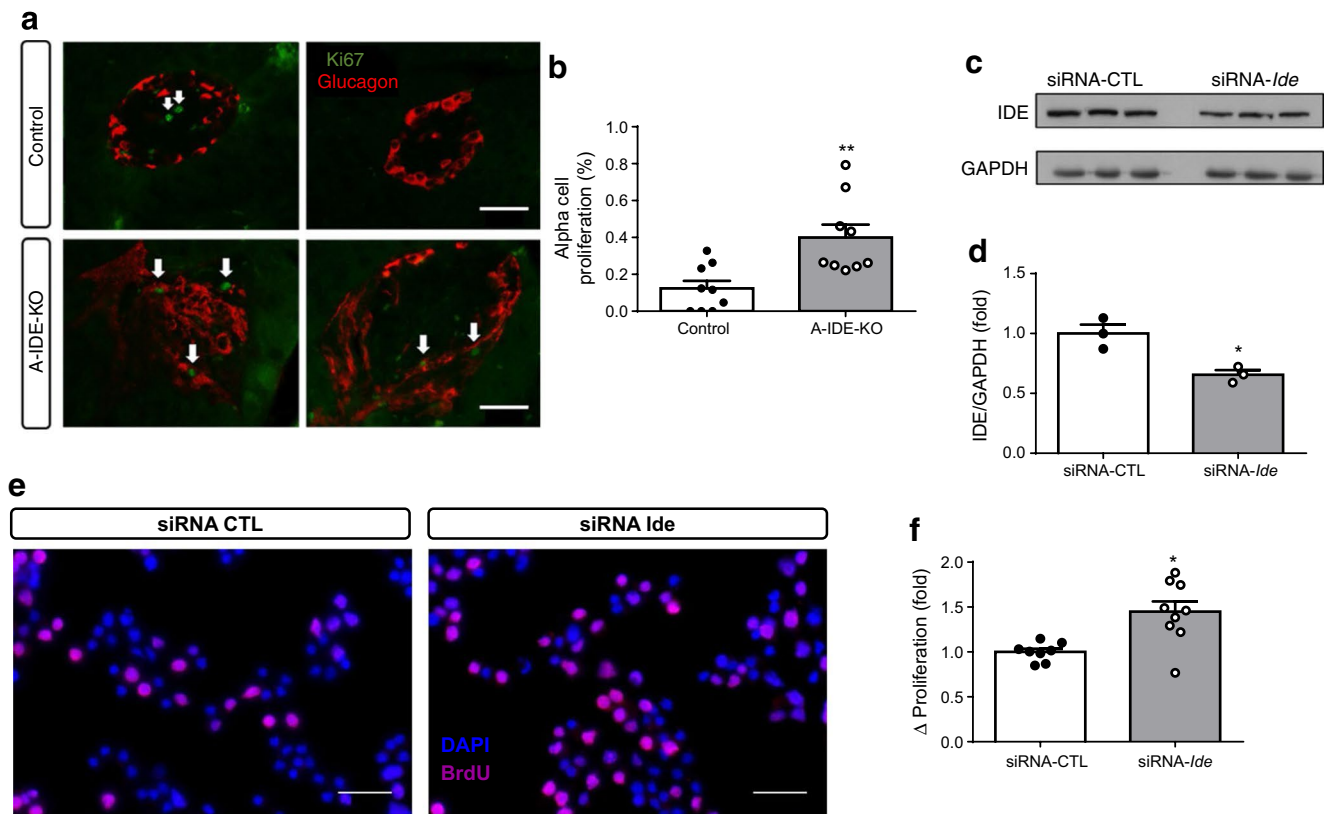
<sup>2</sup> Instituto de Investigación, Desarrollo e Innovación en Biotecnología Sanitaria de Elche (IDiBE), Universidad Miguel Hernández de Elche, Elche, Spain

<sup>3</sup> Centro de Investigación Biomédica en Red de Diabetes y Enfermedades Metabólicas Asociadas (CIBERDEM), Madrid, Spain

<sup>4</sup> IMDEA-Food Institute, CEI UAM+CSIC, Madrid, Spain

<sup>5</sup> Institute for Memory Impairments and Neurological Disorders, University of California, Irvine (UCI MIND), Irvine, CA, USA

<sup>6</sup> Department of Genetics and Institute for Diabetes, Obesity and Metabolism, University of Pennsylvania, Philadelphia, PA, USA



**Fig. 7** Deletion of IDE triggers alpha cell proliferation. **(a)** Representative images of Ki67 (green) and glucagon (red) staining in A-IDE-KO and control mouse pancreases. Scale bar, 40  $\mu$ m. Arrows point to proliferative/Ki67-positive cells. **(b)** Quantification of alpha cell proliferation by Ki67/glucagon cells per total number of glucagon cells ( $n = 9$ ). **(c, d)** IDE-knockdown in alpha-TC1.9 cells using

siRNA-*Ide* or siRNA-CTL (scrambled control), showing a ~40% decrease in IDE expression ( $n = 3$ ). **(e)** Representative images of BrdU staining in IDE-deficient and control alpha-TC1.9 cells. Scale bar, 100  $\mu$ m. **(f)** Quantification of proliferation by detection of BrdU-positive cells ( $n = 9$ ). Data are presented as means  $\pm$  SEM. \* $p < 0.05$  and \*\* $p < 0.01$  vs control mouse or vs siRNA-CTL treatment

**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/>.

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