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# Author Correction: Low oral dose of 4-methylumbelliferone reduces glial scar but is insufficient to induce functional recovery after spinal cord injury

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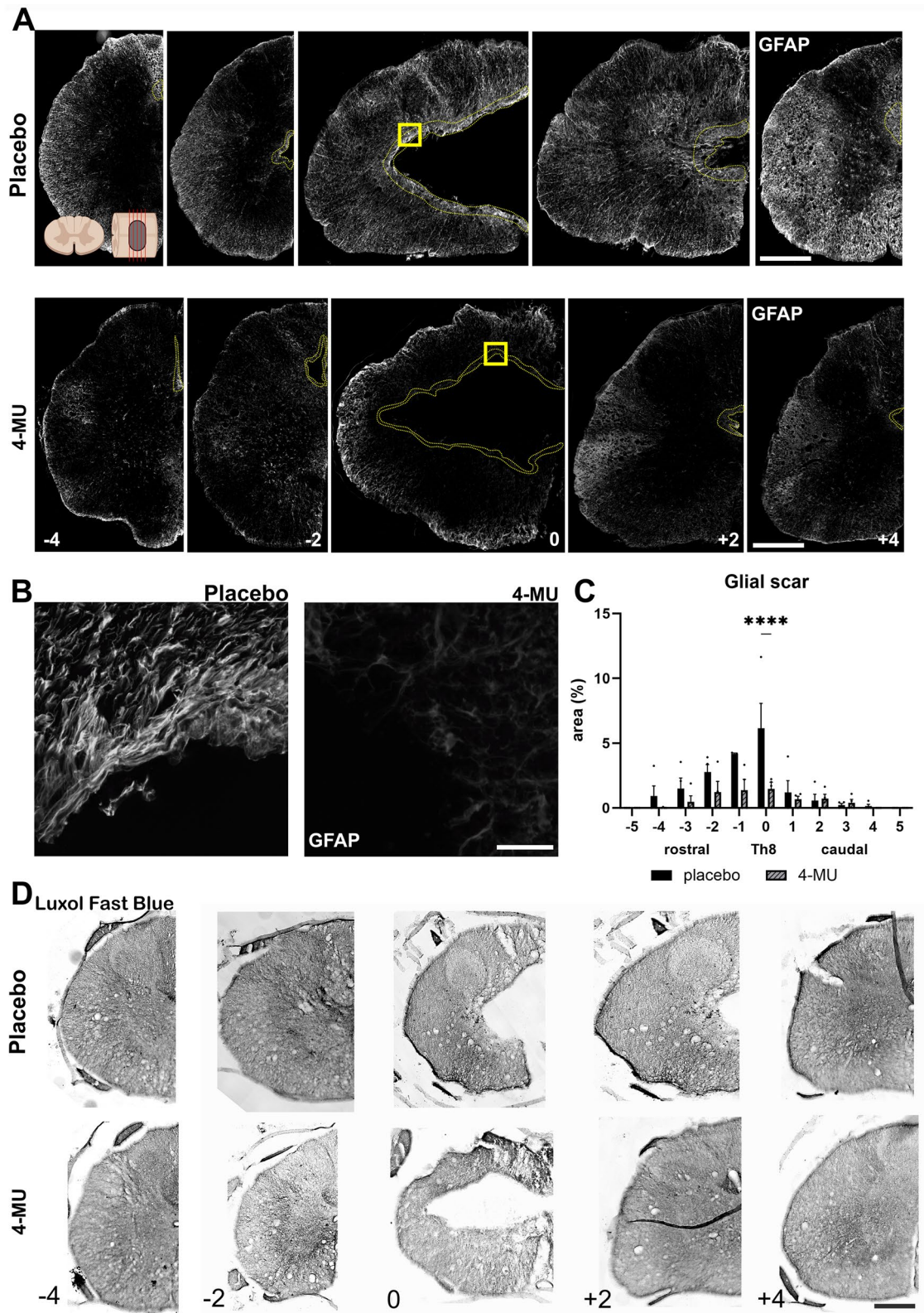
Correction to: *Scientific Reports* <https://doi.org/10.1038/s41598-023-46539-5>, published online 06 November 2023

The original version of this Article contained errors. As a result of incorrect figure assembly, in Figure 6D the image of Luxol Fast Blue staining for the +2 mm level was a duplication of the 0 mm level. Additionally, in Figure 7E the images were inadvertently switched for 'Placebo' and '4-MU'.

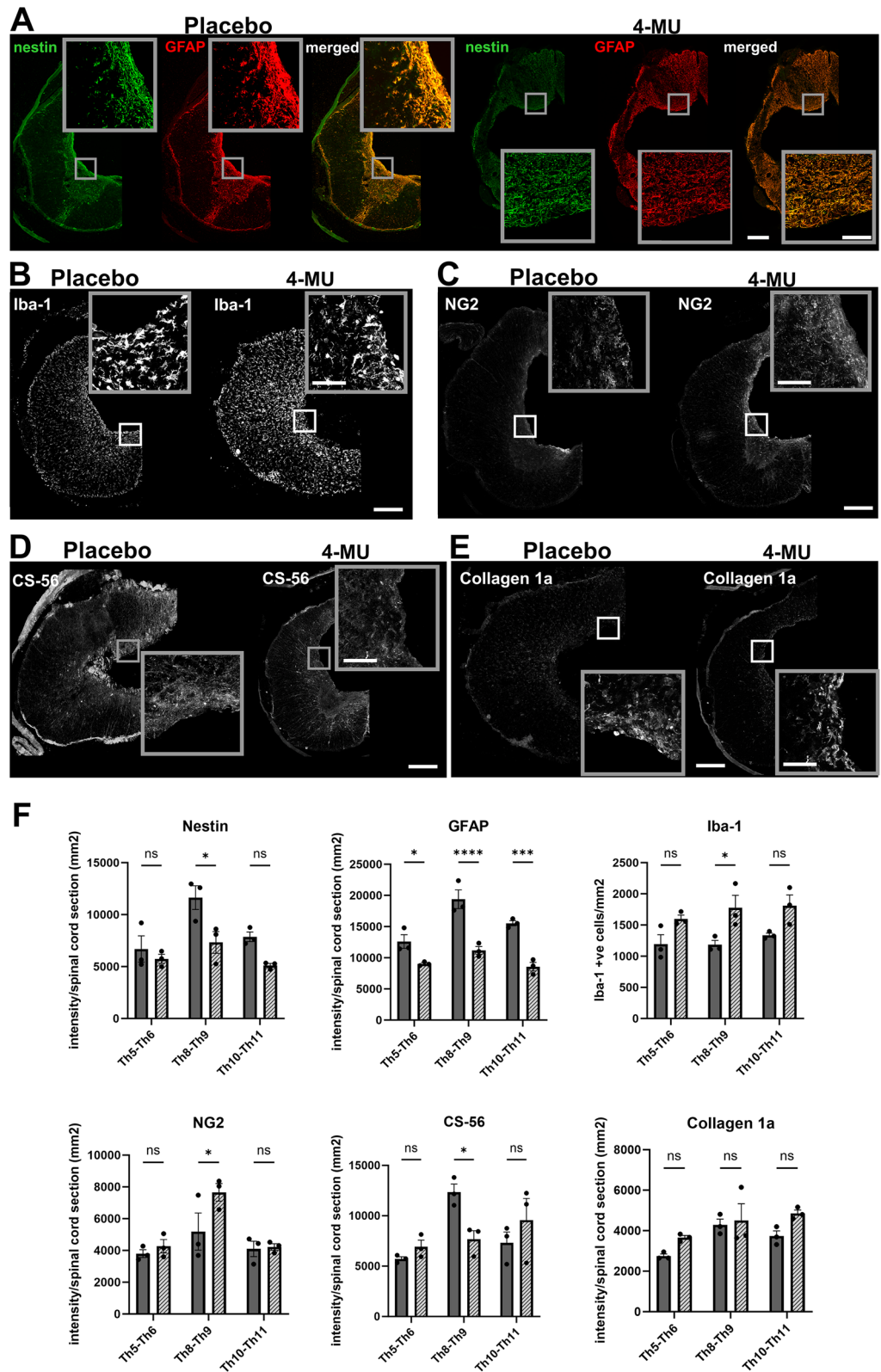
The original Figures 6 and 7 and their accompanying legends appear below.

The original Article has been corrected.

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**Figure 6.** 4-MU treatment reduced glial scar area surrounding the lesion site. **(A)** Representative fluorescent images showing lesion epicentre (0 mm), above (− 4, − 2 mm) and below (+ 2, + 4 mm) the lesion, stained for glial fibrillary acidic protein (GFAP) in placebo and 4-MU treated group with chronic spinal cord injury. Dotted lines show the border area of the lesion cavity in 4-MU treated group and GFAP positive area in placebo group. Scale bar: 200  $\mu$ m. Diagram of uninjured spinal cord at top left showing the direction of the cross section in **(A)**, created with BioRender.com; **(B)** magnified images (yellow square in **A**) showing structural change of the glial scar tissue after 4-MU treatment compared to placebo treated animals. Scale bar 30  $\mu$ m; **(C)** bar graph showing area of the glial scar around the central cavity performed in the GFAP stained histochemical images using ImageJ software. Values are plotted as mean  $\pm$  SEM; \*\*\*\* $p$  < 0.0001 by two-way ANOVA, Sidak *post-hoc* test. ( $n$  = 4 animals per group). **(D)** Representative images of Luxol Fast Blue staining showing the lesion extension in a rostral-caudal direction. Scale bar 200  $\mu$ m.



**Figure 7.** 4-MU treatment leads to changes of cell and ECM composition around the lesion scar (Th8-9), above (Th5-6) and below (Th10-11) lesion. (A–E) Representative confocal images showing the 4-MU-mediated effect on scar-forming cells and components using different markers—(A) nestin and GFAP were used to visualise scar-forming astrocytes. (B) Iba-1 to visualise microglia/macrophages. (C) NG2 to visualise oligodendrocyte progenitor cells (OPCs). (D) CS-56 to examine the changes in CS sulfations. (E) Collagen 1a to visualise meninges and fibroblasts. All insets show magnified views of the staining. Scale bar 200  $\mu$ m for the overview image and 50  $\mu$ m for the insets. (F) Quantification of (A–E). Bar graphs show intensities per section throughout the spinal cord, except for Iba-1 staining where the number of Iba-1 positive cells per mm was counted. Individual data are shown with their mean  $\pm$  SEM (n = 3 animals per group).  $p < 0.05$ ,  $**p < 0.01$ ,  $***p < 0.001$ ,  $****p < 0.0001$ , by two-way ANOVA, Sidak’s multiple comparison test.



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