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PUBLISHER'S NOTE

Expression of Concern: ADAD2 regulates heterochromatin in meiotic and post-meiotic male germ cells via translation of MDC1

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This Expression of Concern relates to *J. Cell Sci.* (2022) **135**, jcs259196 (doi:10.1242/jcs.259196).

Journal of Cell Science was contacted by a reader of the above article who alerted us to possible duplication of GAPDH western blot data in Fig. 1D and Fig. 3A to represent experimental groups at different developmental stages. This prompted us to examine the article figures for possible image duplications. Following examination of the figures, we were concerned about possible reuse of western blot images in Fig. 1D,E, Fig. 3A, Fig. S5B,D and Fig. S6A,D, as well as possible duplication of data in Fig. 1D.

We contacted the corresponding author, Dr Elizabeth M. Snyder, to request original data for the western blots in Figs 1, 3, S5 and S6. Dr Snyder provided the requested data and explained that the reuse of control GAPDH, ADAD2 and histone H3 western blots in multiple figures is consistent with the experimental design, whereby genotype and loading controls were run once for each of the tissue sample panels analysed in the blots. At this stage, Dr Snyder also brought to our attention that an incorrect GAPDH control blot had been used for the 21 dpp samples in Fig. S5B and provided a version of Fig. S5 with an updated 21 dpp GAPDH image in Fig. S5B.

After examination of the data provided by Dr Snyder, we had continued concerns about inconsistent reporting of developmental stage for the data in Fig. 3A, vertical inversion of ADAD2 blot data in Fig. 3A and Fig. S6D, the abovementioned use of incorrect GAPDH control data in Fig. S5B and its relationship to the 21 dpp GAPDH data in Fig. S5D, undeclared reuse of non-control eEF1G blot data in Fig. S5B and D, and the high degree of similarity in background features of the original blot data provided for adult and 21 dpp HP1β blots in Fig. 1D. We therefore invited Dr Snyder to provide further explanation of these issues.

In her response, Dr Snyder informed us that the western blots in Fig. 3A are incorrectly described in the figure legend as showing samples from adult mice, when they instead show samples taken at 21 dpp, as is indicated in the main text. Dr Snyder also confirmed that the ADAD2 images in Fig. 3A and Fig. S6D are vertically inverted. Dr Snyder provided further details about the GAPDH data in Fig. S5B and D, confirming that the GAPDH blot in Fig. S5B and the 21 dpp GAPDH blot in Fig. S5D both show incorrect data, and informing us that the incorrect GAPDH data were also used to prepare the quantification shown in Fig. S5C. Dr Snyder also clarified that the eEF1G blot images in Fig. S5B and D show the same data, stating that declaration of this data duplication was omitted from the article in error. The data provided by Dr Snyder show that the images used to prepare the adult and 21 dpp HP1β blot panels in Fig. 1D were acquired with a 1 minute interval. In her response, Dr Snyder explained that, as the result of a data management error, the data used for these images in Fig. 1D appear to have been acquired by incorrectly saving two images of a single western blot, which is consistent with the high degree of similarity between the images. Dr Snyder provided technical replicate HP1β blot data for both the adult and 21 dpp samples.

Dr Snyder also identified further issues in the figures while reviewing the data, which she has brought to our attention in the interests of transparency and ensuring an accurate public record. These include: (1) vertical inversion of the BRCA1 blot image in Fig. 3A; (2) vertical inversion of the KU80 blot image in Fig. S6D; (3) vertical inversion of the 21 dpp GAPDH blots in Fig. 1D, Fig. 3A and Fig. S6D; (4) incorrect cropping of the HP1α blot of samples from isolated cells in Fig. 1D, such that the figure does not show the HP1α band; and (5) incorrect cropping and horizontal inversion of the H3K9me3 blot of samples from isolated cells in Fig. 1E, such that incorrect lanes are shown for the different samples.

We are grateful for Dr Snyder's cooperation throughout the course of investigating these issues. However, due to the number and range of issues in figure preparation and data management that affect multiple figures, we have referred this matter to Dr Snyder's institute, Rutgers University, for further investigation. In the interim, Journal of Cell Science is publishing this Expression of Concern to make readers aware of these issues.