Withdrawal: Activation of the AMP-activated protein kinase by the anti-diabetic drug metformin in vivo: Role of mitochondrial reactive nitrogen species.

Ming-Hui Zou, Stacy S. Kirkpatrick, Bradley J. Davis, John S. Nelson, Walger G. Wiles IV, Uwe Schlattner, Dietbert Neumann, Michael Brownlee, Michael B. Freeman, and Mitch H. Goldman

This article has been withdrawn by the authors. The Journal raised questions that the AMPK immunoblot in Fig. 3C was reused in Fig. 4A as ACC, lanes 1 and 4 of the AMPK-P immunoblot in Fig. 4A were duplicated, and lanes 3 and 4 of the AMPK-P immunoblot in Fig. 4F were reused in Fig. 5A as ACC-P. Fifteen years after publication, the original data for these figures were not available for evaluation. The authors were able to provide to the Journal data from repeat experiments for Fig. 4A performed at the time of the original work, which they state confirm the results. The authors also provided the journal evidence that the duplications of Figs. 3C, 4F, and 5A occurred due to errors in the figure preparation. The authors offered to publish substitute figures based on the repeated experiments and corrected figures, alternatively, offered to repeat the experiments. However, the Journal declined both offers, a decision with which the authors respectfully disagree. Further, the authors state that the results of this article are confirmed by the results of complementary experiments presented in the article, and the principal conclusion was further confirmed in publications from other laboratories (Quintero, M. et al. (2006) Proc. Natl. Acad. Sci. U.S.A. 103, 5379–5384; Guilherme, L. et al. (2006) Diabetes Care 29, 1083–1089). The article, with confirmatory data supporting the results, can be obtained by contacting the authors. The authors stand by the experimental data and the conclusions of the article.