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RETRACTION

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Retraction: Hydroxychloroquine based chemical drug for combination therapy with 5-Fu for inhibiting the pathway of Akt/mTOR in autophagy process on colon cancer

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Retraction of 'Hydroxychloroquine based chemical drug for combination therapy with 5-Fu for inhibiting the pathway of Akt/mTOR in autophagy process on colon cancer' by Zhi Liao *et al.*, *J. Mater. Chem. B*, 2021, DOI: **https://doi.org/10.1039/d1tb00135c**.

The Royal Society of Chemistry hereby wholly retracts this *Journal of Material Chemistry B* article due to concerns with the reliability of the data.

The flow cytometric analysis plots presented in the 5-Fu panels in Fig. 6e and g are identical. After review, an independent expert that we consulted identified inconsistencies in the cytometry flow data and asked the authors to re-evaluate the data. In total the authors provided 3 separate sets of replacement cytometric flow plots, together with raw data, which were further reviewed by the expert. The expert found additional concerns with the replacement flow data, including further instances of duplicated cytometric flow plots and inaccuracies with the raw flow data meaning that the raw data sets provided were unlikely to be genuine.

In addition, the immunohistochemical staining images in the 5-Fu and AHQ panels in Fig. 9h are identical, as well as the images in the Vehicle and 5-Fu panels in Fig. 9j.

Given the significance of the concerns about the validity of both the data in the article and the raw data provided by the authors, the findings presented in this paper are not reliable.

Hongtao Xiao opposes the retraction. The other authors were contacted but did not respond.

Signed: Michaela Mühlberg, Executive Editor, *Journal of Materials Chemistry B*

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