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## Retraction: An MSN-PEG-IP drug delivery system and IL13R $\alpha$ 2 as targeted therapy for glioma

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Retraction of 'An MSN-PEG-IP drug delivery system and IL13R $\alpha$ 2 as targeted therapy for glioma' by Jinlong Shi *et al.*, *Nanoscale*, 2017, **9**, 8970–8981, <https://doi.org/10.1039/C6NR08786H>.

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

The fluorescence microscopy data in Fig. 2 and 3, the immunofluorescence data in Fig. 4a and the image data in Fig. 7e and Fig. 7g contain fully or partially overlapping panels.

In Fig. 2 there are overlapping sections between the panels for U87-shIL13R $\alpha$ 2 DAPI MP/D, U87-shIL13R $\alpha$ 2 DAPI MPI/D, C6-IL13 $\alpha$ 2 DAPI MP/D, and C6-shIL13R $\alpha$ 2 DAPI MP/D. There are overlapping sections between the panels for U87-shIL13R $\alpha$ 2 DOX MP/D, U87-shIL13R $\alpha$ 2 DOX MPI/D, C6-IL13 $\alpha$ 2 DOX MP/D, and C6-shIL13R $\alpha$ 2 DOX MP/D.

In Fig. 3a the panel for Liver M/D DOX has partial overlap with the panel for Liver MPI/D DOX. The panel for Liver M/D DAPI has partial overlap with the panel for Liver MPI/D DAPI. The panel for Spleen M/D DAPI has partial overlap with the panel for Spleen MPI/D DAPI. The panel for Lung M/D DAPI has partial overlap with the panel for Lung MPI/D DAPI. The panel for Spleen MPI/D DOX has partial overlap with the panel for Spleen M/D DOX. The authors have stated that the panel for Brain MPI/D DAPI is incorrect.

In Fig. 4a the panel for C6-IL13 $\alpha$ 2 Caspase-3 M/D has partial overlap with the panel for C6-IL13 $\alpha$ 2 Caspase MPI.

In Fig. 7e the panel for MPI U87 has partial overlap with the panel for MPI U87-shIL13R $\alpha$ 2.

In Fig. 7g the panel for U87 48 h IL13 is identical to the panels for U87 48 h IL13 + MPI and U87-shIL13R $\alpha$ 2 0 h MPI. The panel for U87 48 h Control is identical to the panels for U87-shIL13R $\alpha$ 2 48 h IL13 + MPI and U87-shIL13R $\alpha$ 2 48 h IL13. The panel for U87 48 h MPI is identical to the panel for U87-shIL13R $\alpha$ 2 48 h MPI. The panel for U87-shIL13R $\alpha$ 2 0 h IL13 is identical to the panel for U87-shIL13R $\alpha$ 2 0 h IL13 + MPI.

Given the multiple pieces of overlapping data, the findings presented in this paper are no longer reliable.

The authors were informed about the retraction of the article. Jian Chen and Jinlong Shi have not agreed with the decision. The other authors were contacted but have not responded.

Signed: Heather Montgomery, Managing Editor, *Nanoscale*

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