Supplementary Materials

Graphene Oxide Nanoplatforms to Enhance Cisplatin-Based Drug Delivery in Anticancer Therapy

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AFM analysis.

The image and height profile of GO flakes in stock solution (Fig S1A and S1B, respectively) and GO flakes in supernatant (Fig S1C and S1D, respectively) were determined using AFM. The size of the flakes in the supernatant was significantly reduced compared to the stock solution.AFM was also used to analyze the number of GO flakes in 1 mL of supernatant. A 5 μL sample was spotted on a 0.5 cm radius mica substrate and after the sample dried, 10 random spots of 50x50 μm were scanned. The obtained images were firstly edited using Gwyddion software and then evaluated using ImageJ software. Based on the data obtained by analyzing all the obtained images, the number of GO flakes in 1 ml of supernatant was calculated and a size distribution graph was constructed (Fig S2). Data of 2142 GO flakes present in 10 scans were used for the evaluation. As mentioned 85% of the GO flakes were up to 130 nm in size, the remaining 15% of the flakes were in the size range of 131-1000 nm.

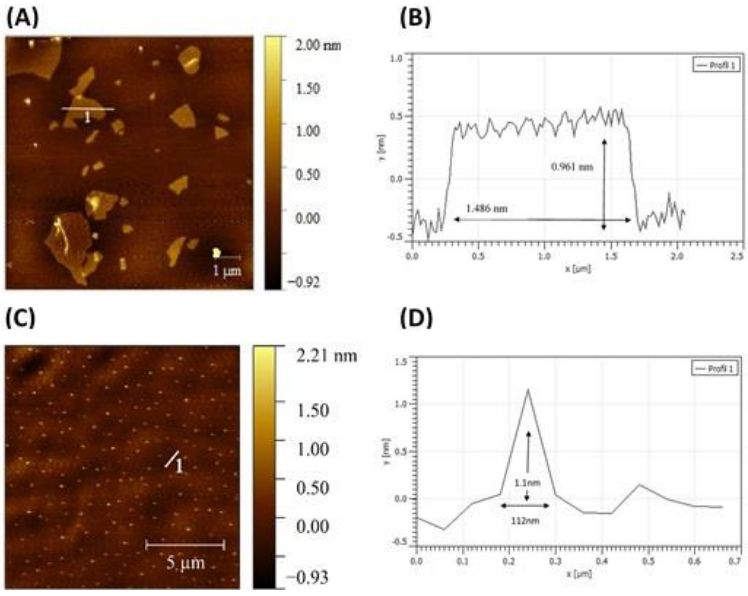

Figure S1. (**A**) The AFM image of GO flakes in stock solution and the height profile of the selected GO flake (**B**). The AFM image of GO flakes with reduced size (**C**), which was also demonstrated by the height profile of the selected GO flake (**D**).

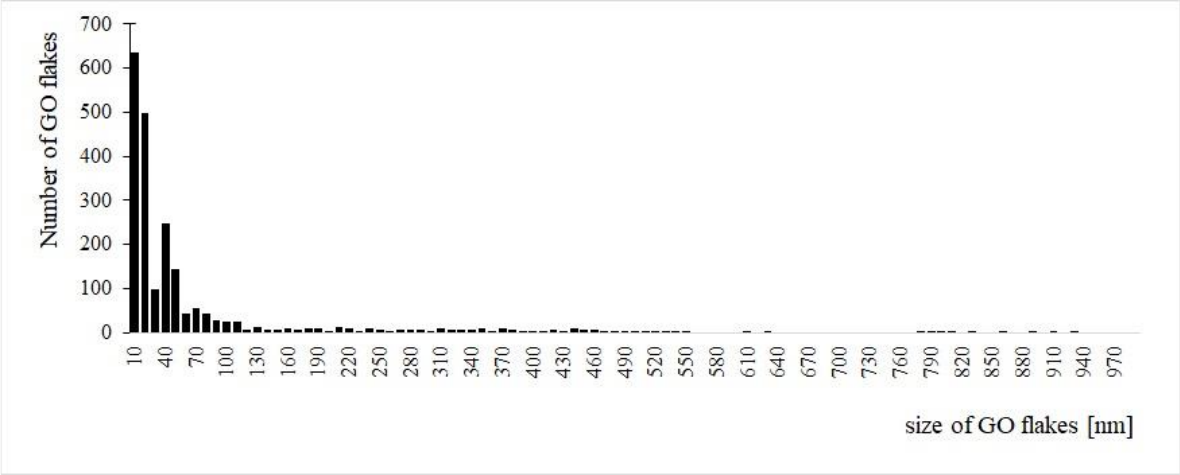

Figure S2. The size distribution of GO flakes in supernatant as observed from AFM images.

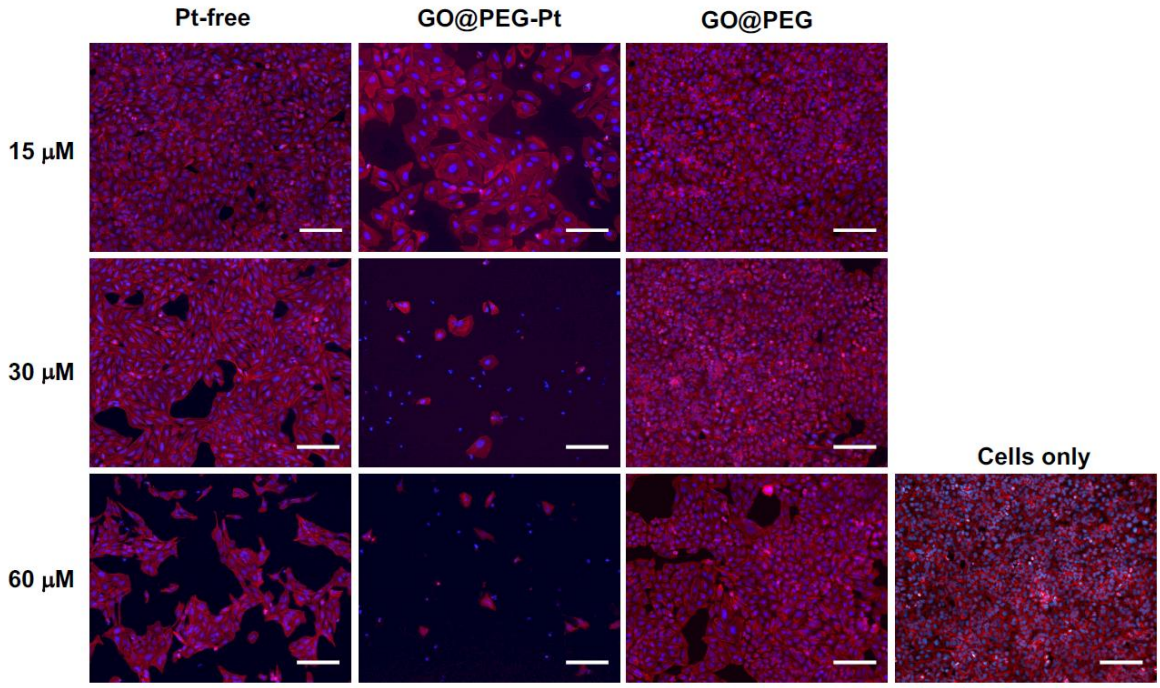

Figure S3. U2-OS cells' morphology evaluation at 72 hours. Phalloidin in red stains for actin filaments and DAPI in blue stains for cell nuclei. Scale bars: 100 μm.

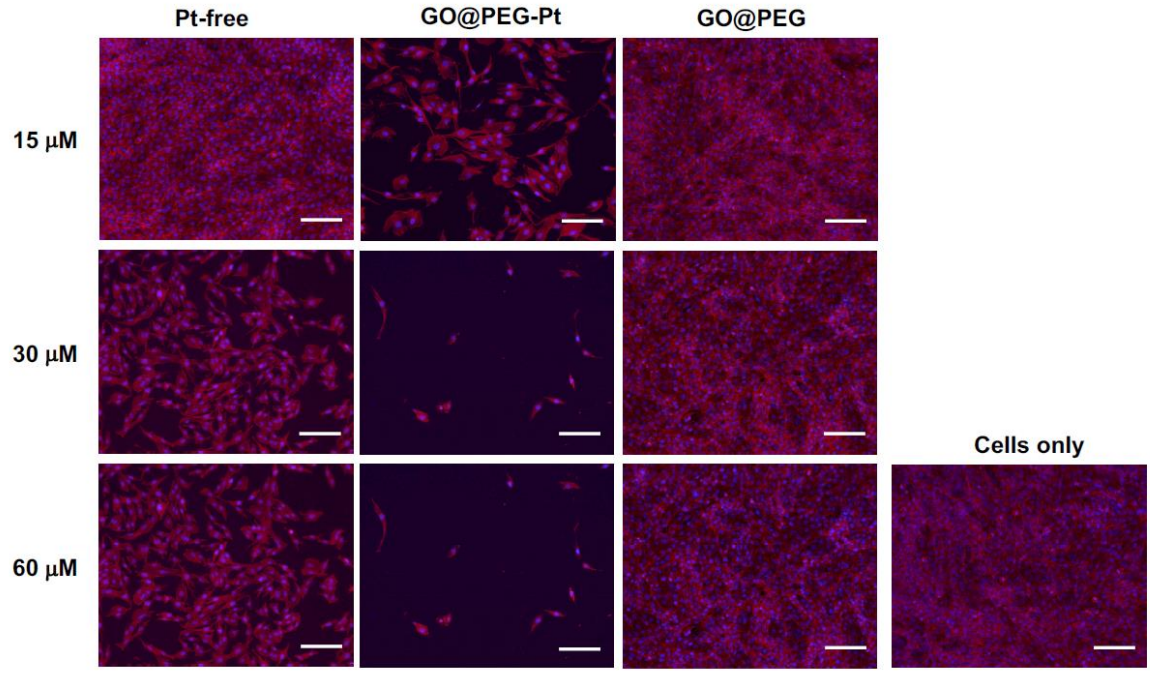

Figure S4. MG63 cells' morphology evaluation at 72 hours. Phalloidin in red stains for actin filaments and DAPI in blue stains for cell nuclei. Scale bars: 100 μm.

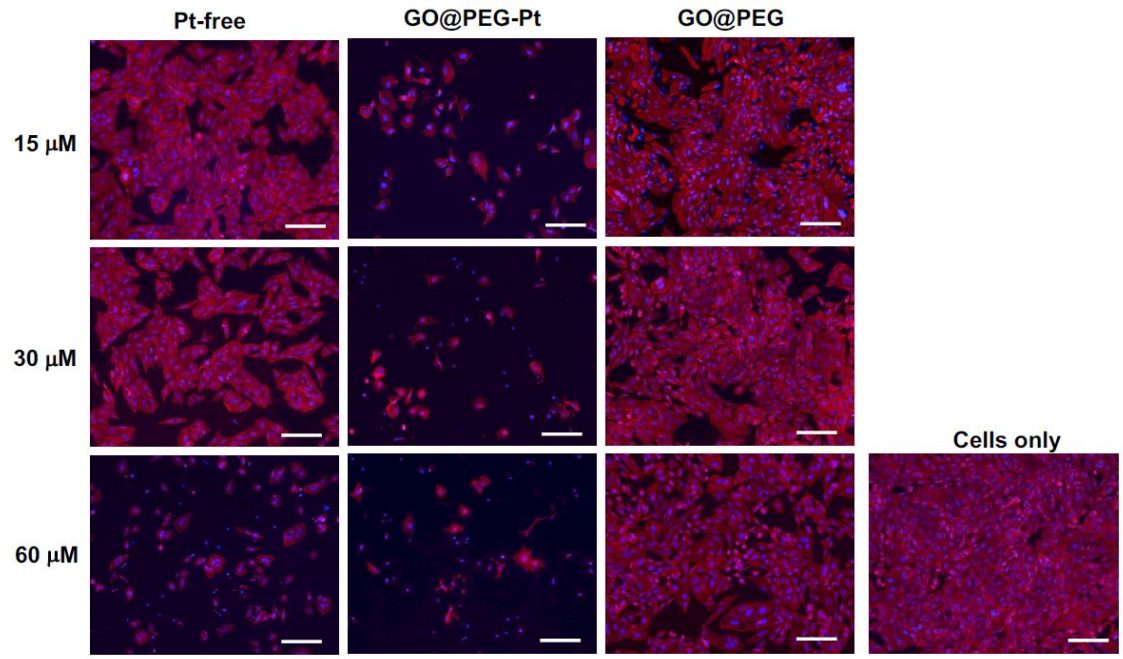

Figure S5. SAOS-2 cells' morphology evaluation at 72 hours. Phalloidin in red stains for actin filaments and DAPI in blue stains for cell nuclei. Scale bars: 100 µm.

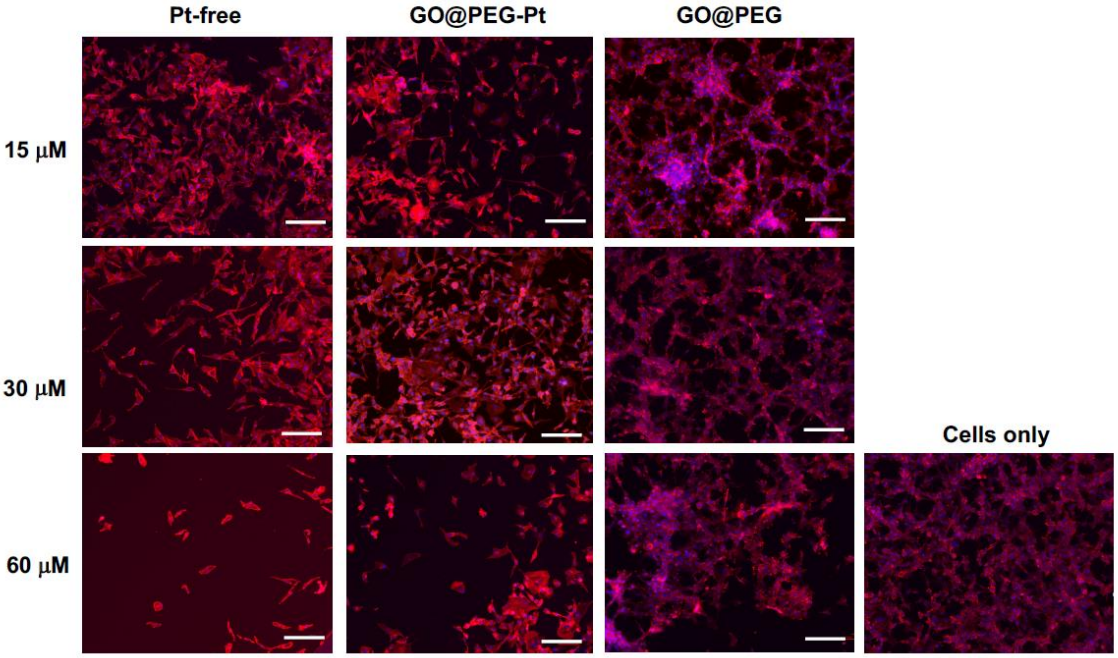

Figure S6. U87 cells' morphology evaluation at 72 hours. Phalloidin in red stains for actin filaments and DAPI in blue stains for cell nuclei. Scale bars: 100 µm.

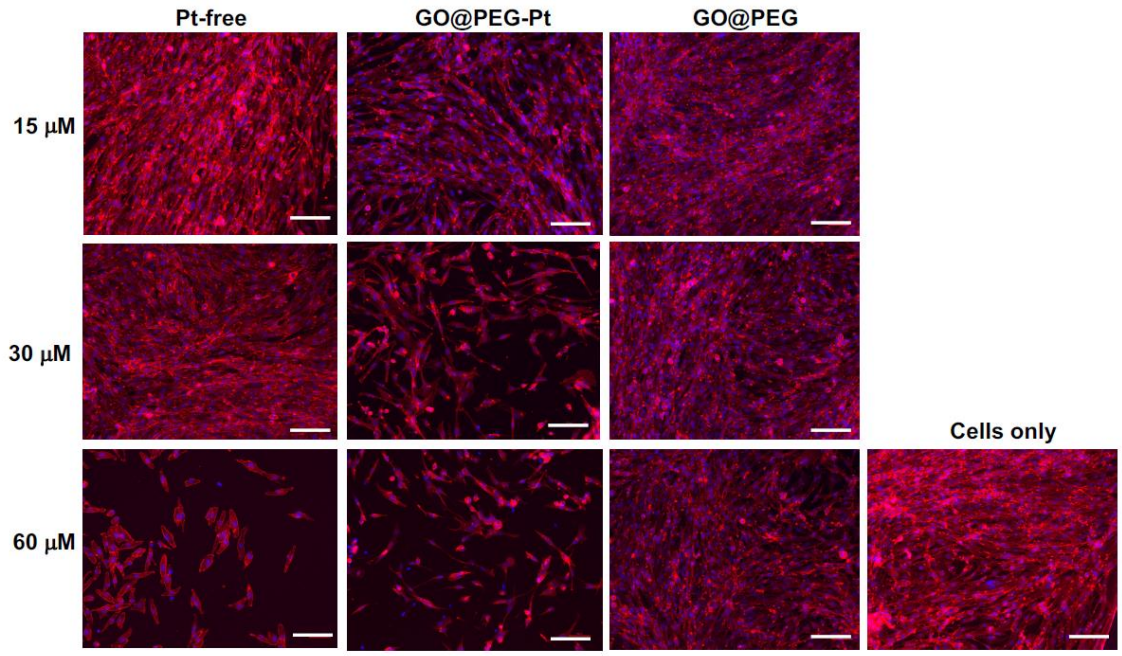

Figure S7. U118 cells' morphology evaluation at 72 hours. Phalloidin in red stains for actin filaments and DAPI in blue stains for cell nuclei. Scale bars: 100 μm.

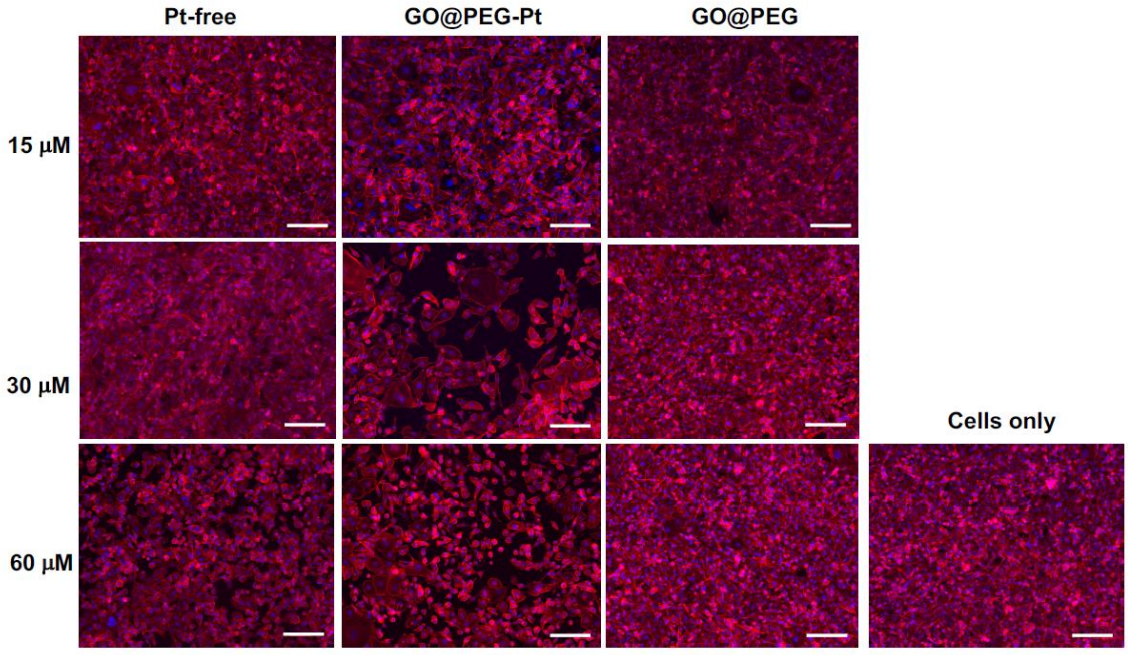

Figure S8. MDA-MB-231 cells' morphology evaluation at 72 hours. Phalloidin in red stains for actin filaments and DAPI in blue stains for cell nuclei. Scale bars: 100 μm.

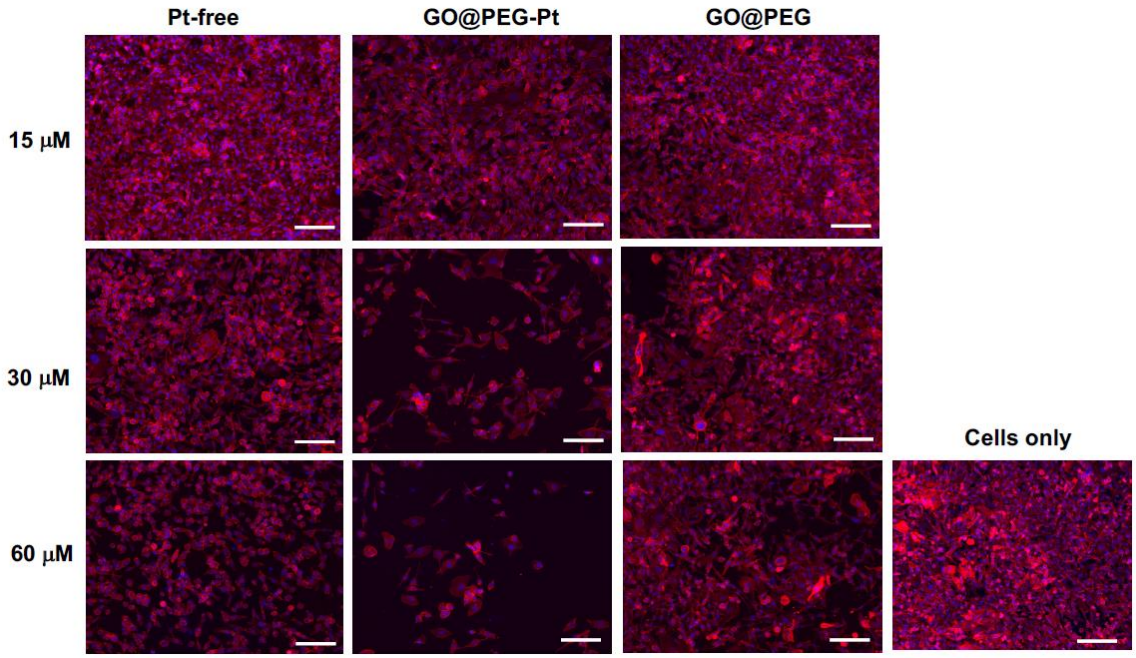

Figure S9. MDA-MB-468 cells' morphology evaluation at 72 hours. Phalloidin in red stains for actin filaments and DAPI in blue stains for cell nuclei. Scale bars: 100 μm.