

## Supplemental Materials

# Iron Oxide Nanoparticles as Carriers for DOX and Magnetic Hyperthermia after Intratumoral Application into Breast Cancer in Mice: Impact and Future Perspectives

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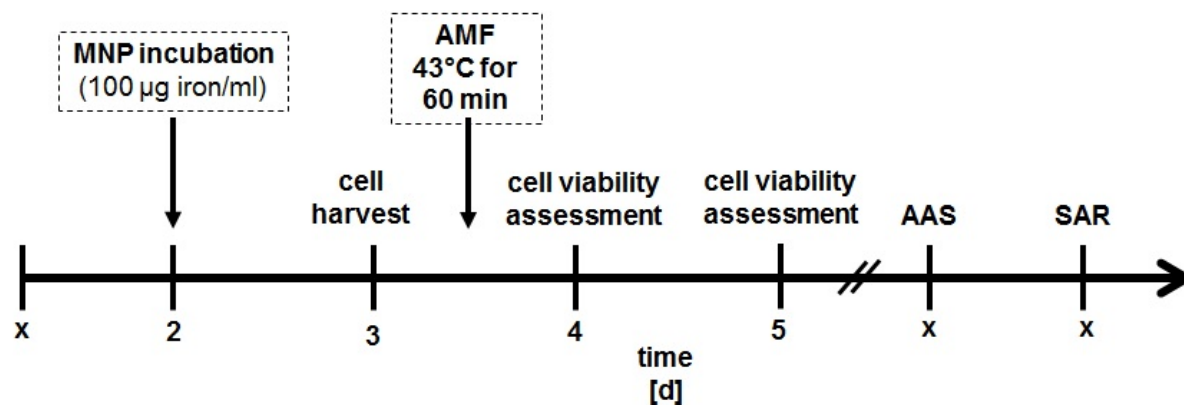
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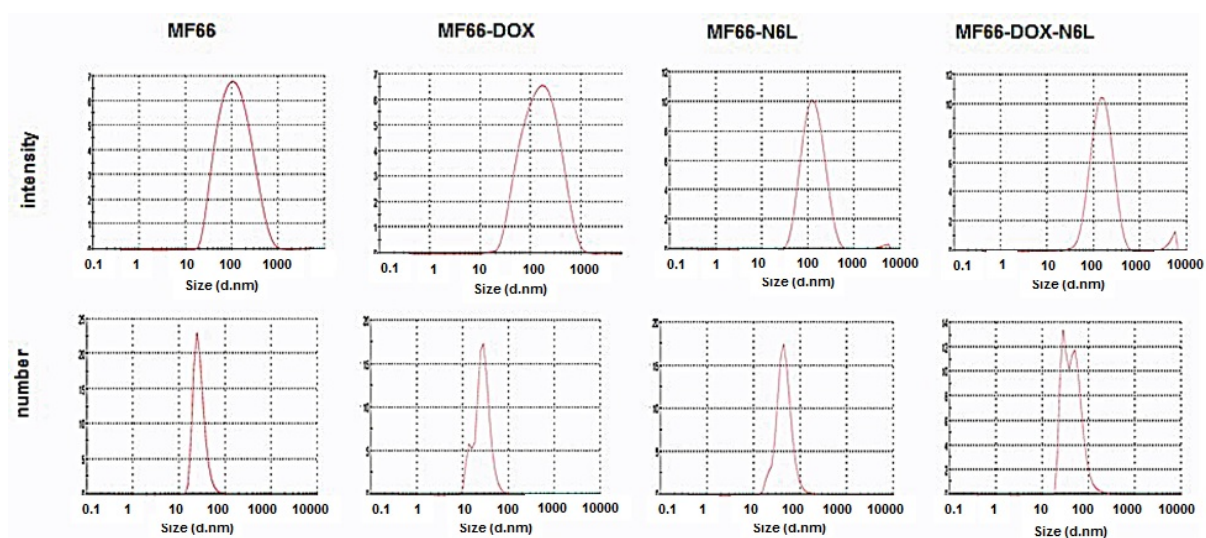
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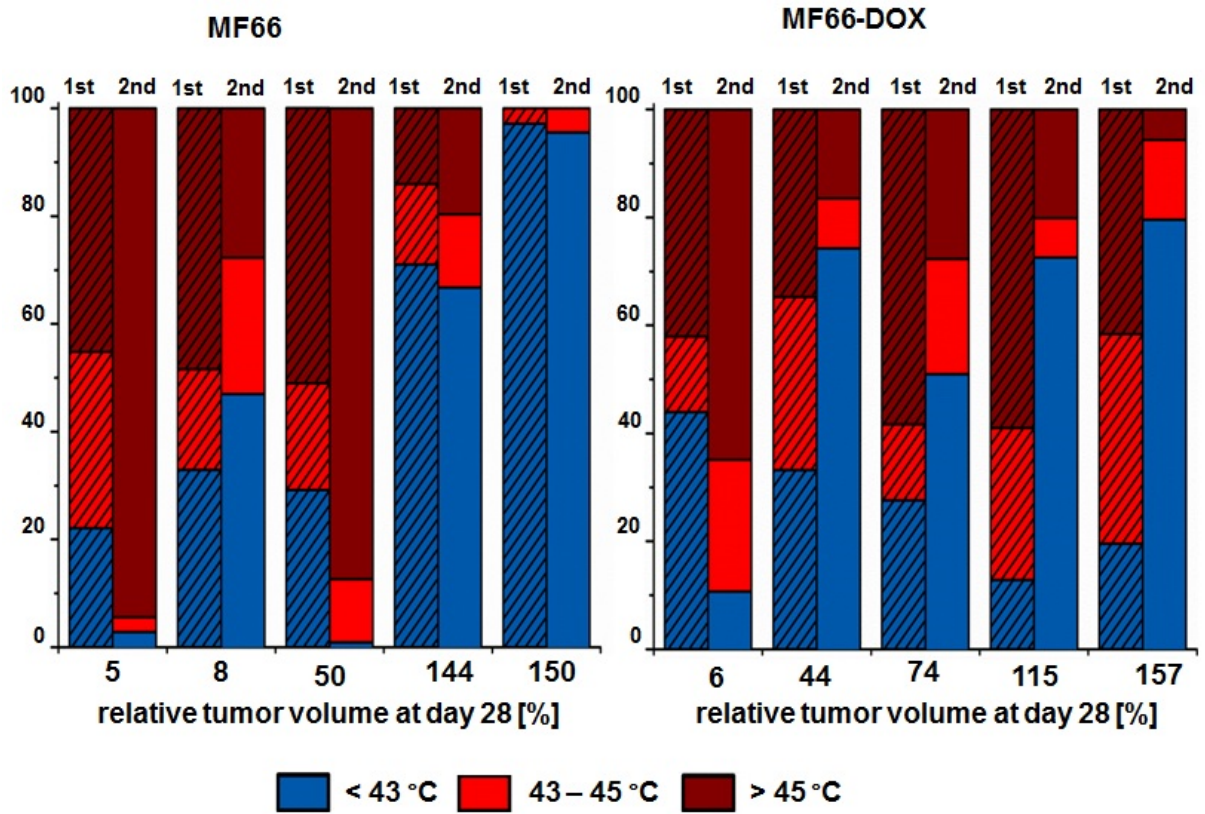
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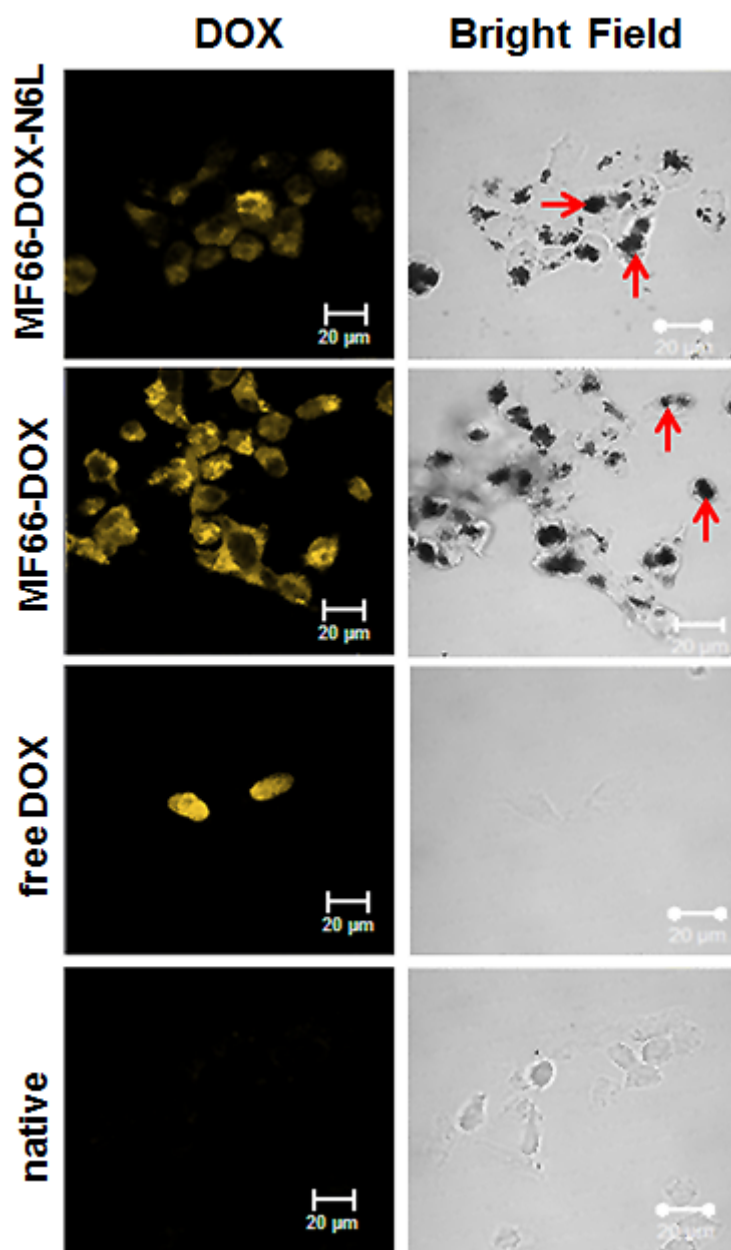
**Figure S1.** Experimental set up of the *in vitro* experiments.



**Figure S2.** Characterization of the MNP formulations by dynamic light scattering (DLS). Determination of the hydrodynamic diameter of the MNP formulations using size distribution by intensity and number.



**Figure S3.** Temperature distribution maps (heat maps) of tumor surface temperatures of the two consecutive hyperthermia treatments. The temperature distribution of the tumor surface (in percentage) is plotted against the respective relative tumor volume at day 28 for each animal after the first (striped bars) and second hyperthermia treatment (plain colored bars) for MF66 and MF66-DOX treated BT474 xenografts.



**Figure S4.** Internalization of MNP formulations in BT474 cancer cells. Representative fluorescence microscopic images of internalized free ligand DOX and MNP formulations by BT474 cells *in vitro*. Cells (each  $1 \times 10^4$  cells) were incubated with different MNP formulations (MF66-DOX-N6L: 40  $\mu\text{mol}$  DOX/g iron, 3.5  $\mu\text{mol}$  N6L/g iron; MF66-DOX: 40  $\mu\text{mol}$  DOX/g iron) and the free ligand DOX in comparable concentrations as in the functionalized modality for 24 h. Fluorescence microscopic analysis (excitation 480–485 nm; emission 580–595 nm). Red arrows: Internalized MNPs. Scale bar: 20  $\mu\text{m}$ .