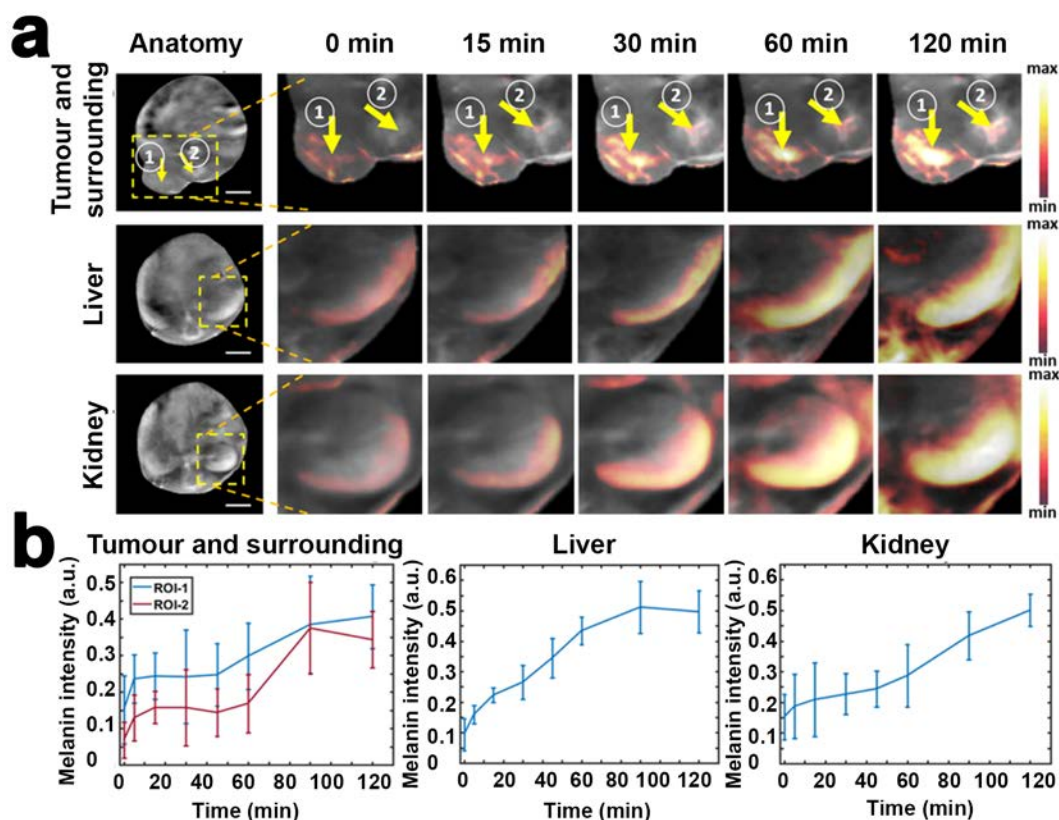


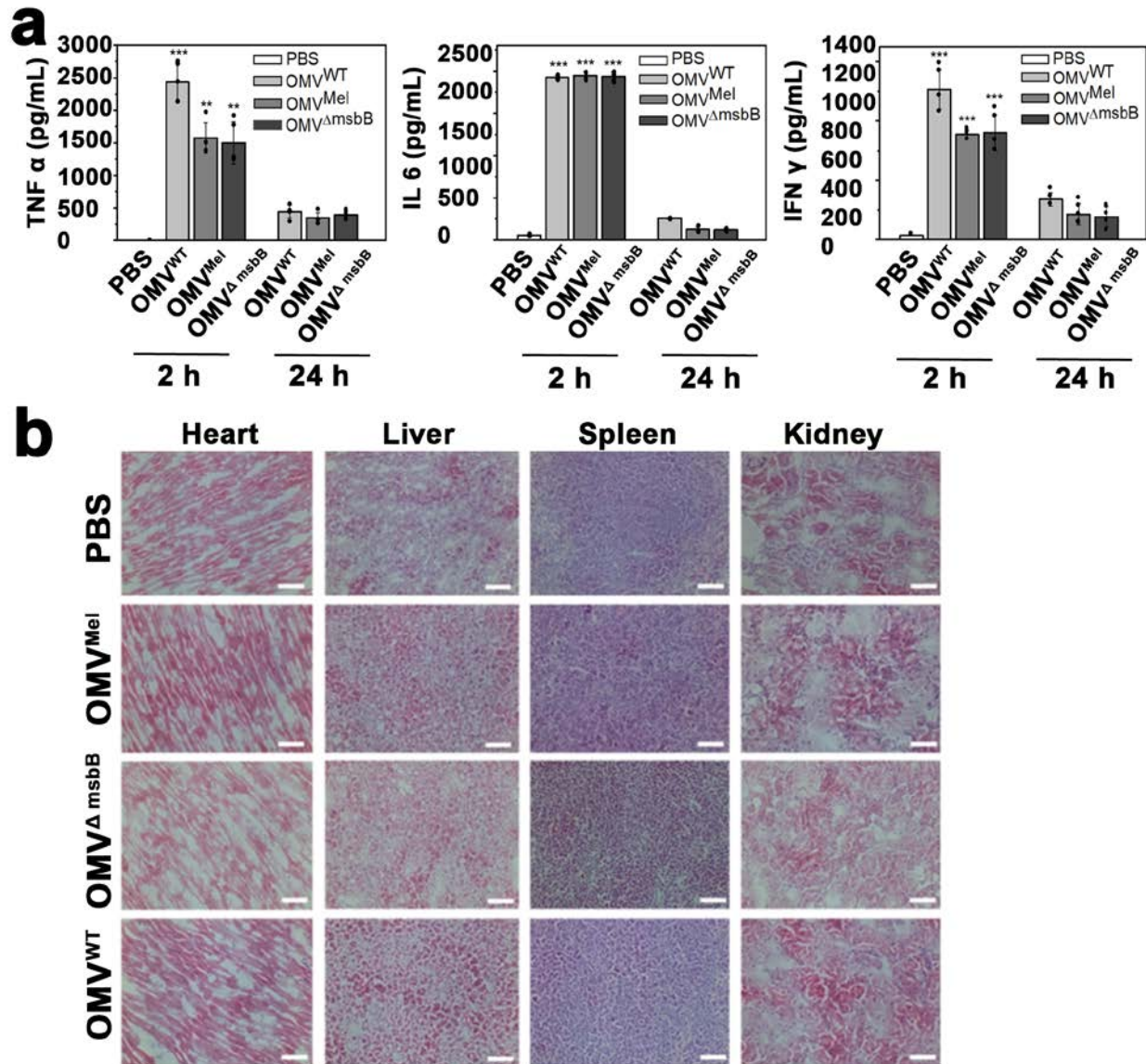
Supplementary Information

Bioengineered bacterial vesicles as biological nano-heaters for optoacoustic imaging

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Supplementary Figure 1. In vivo MSOT imaging. (a) Melanin signal was monitored in the tumour, surround region, and in vital organs (liver and kidney) during 2 h after tail vein injection of OMV^{Mel} in a mouse. The arrow indicates an ROI in the tumor (ROI-1) and surrounding region (ROI-2). Scale bar, 5 mm. (b) Melanin intensity was evaluated in the tumour (ROI-1), surrounding region (ROI-2), liver and kidney, in time dependent manner (0 to 120 min). Melanin intensities are averages calculated from 6 adjacent slices from the tumour centre.



Supplementary Figure 2. In vivo immunogenicity and safety. (a) Serum levels of TNF- α , IL-6 and IFN- γ were quantified at 2 and 24 h after i.v injection of PBS, OMV^{WT}, OMV^{Mel} or OMV ^{Δ msbB}. Mean values and error bars are presented as mean \pm SD, inter-group differences were assessed for significance using the paired t test compared to control (***) $p < 0.001$ vs. PBS; $n=5$ mice/group). (b) Histology of heart, liver, spleen and kidney extracted at 24 h after injection of PBS, OMV^{WT}, OMV ^{Δ msbB}, or OMV^{Mel}. Scale bar, 50 μ m.