

Supporting information

Protein corona formation and its influence on biomimetic magnetite nanoparticles

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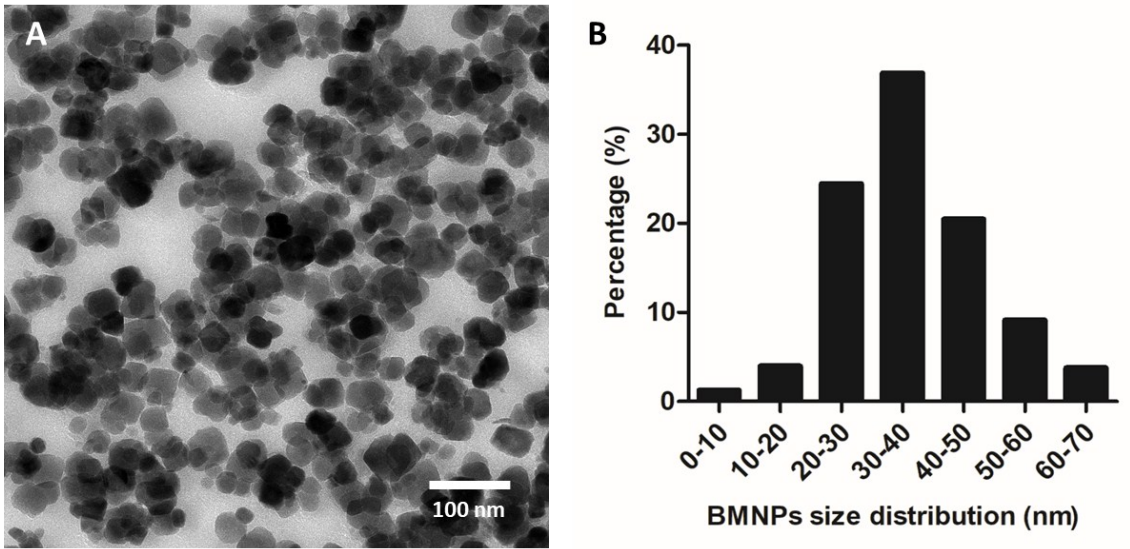
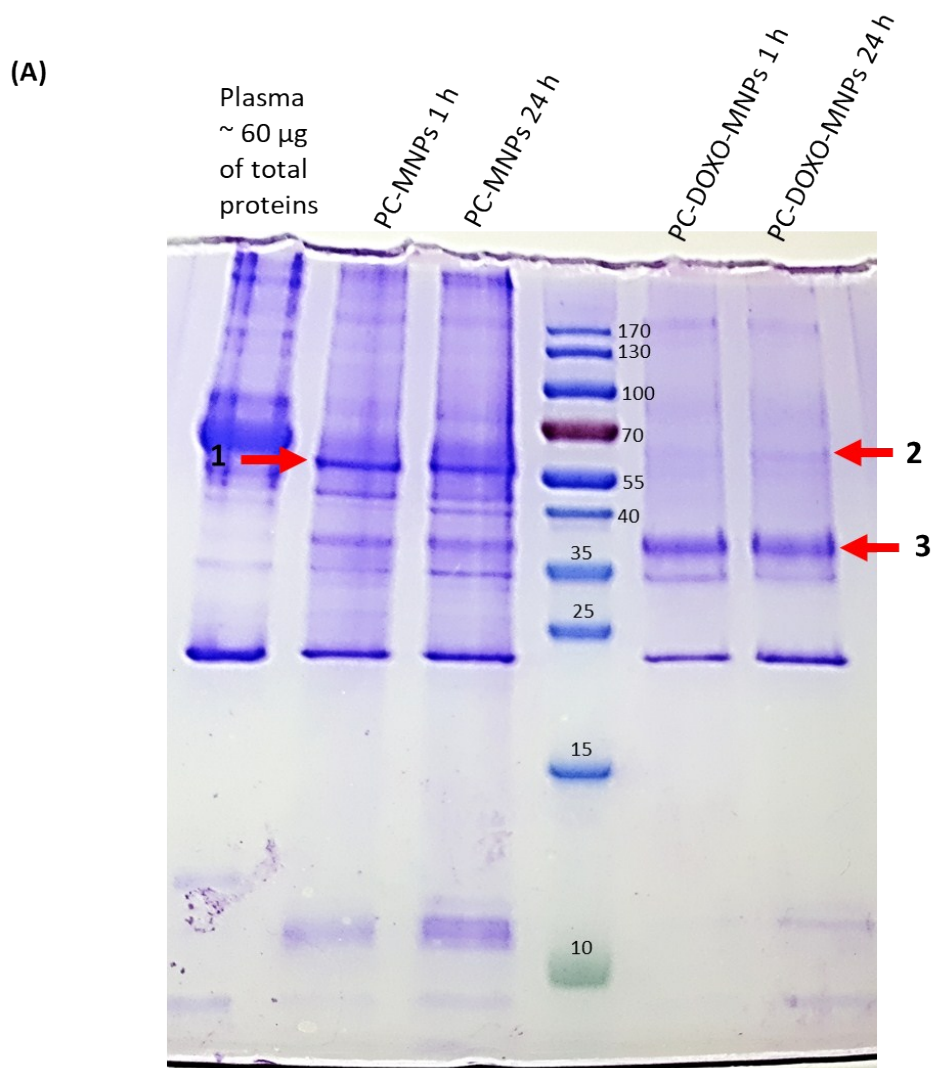


Figure S1. (A) Transmission electron microscopy images of biomimetic magnetic nanoparticles (BMNPs). (B) Size distribution of BMNPs.



(B)

Band #	SwissProt Accession	Protein	Mascot Score	Peptide matches	Sequence coverage (%)	Expect value
1	FIBB_HUMAN	Fibrinogen beta (57 kDa)	170	23	43	5.6e-12
2	FIBB_HUMAN	Fibrinogen beta (57 kDa)	70	11	29	1.9e-3
3	CLUS_HUMAN	Clusterin (53 kDa)	74	11	23	7.7e-4

Figure S2. (A) Protein binding profiles of inorganic magnetite nanoparticles (MNPs). Protein constituents of full human plasma and BMNPs with and without doxorubicin (DOXO) coupled, followed by 1 or 24 h incubation with human plasma (PC-(DOXO)-MNPs 1 or 24 h). Proteins were separated by one-dimensional SDS-PAGE and visualized by Coomassie Brilliant Blue staining. (B) Protein constituents of inorganic magnetite nanoparticles (MNPs) bearing protein corona, as determined by trypsin peptide mass fingerprints recorded using MALDI-TOF-MS.

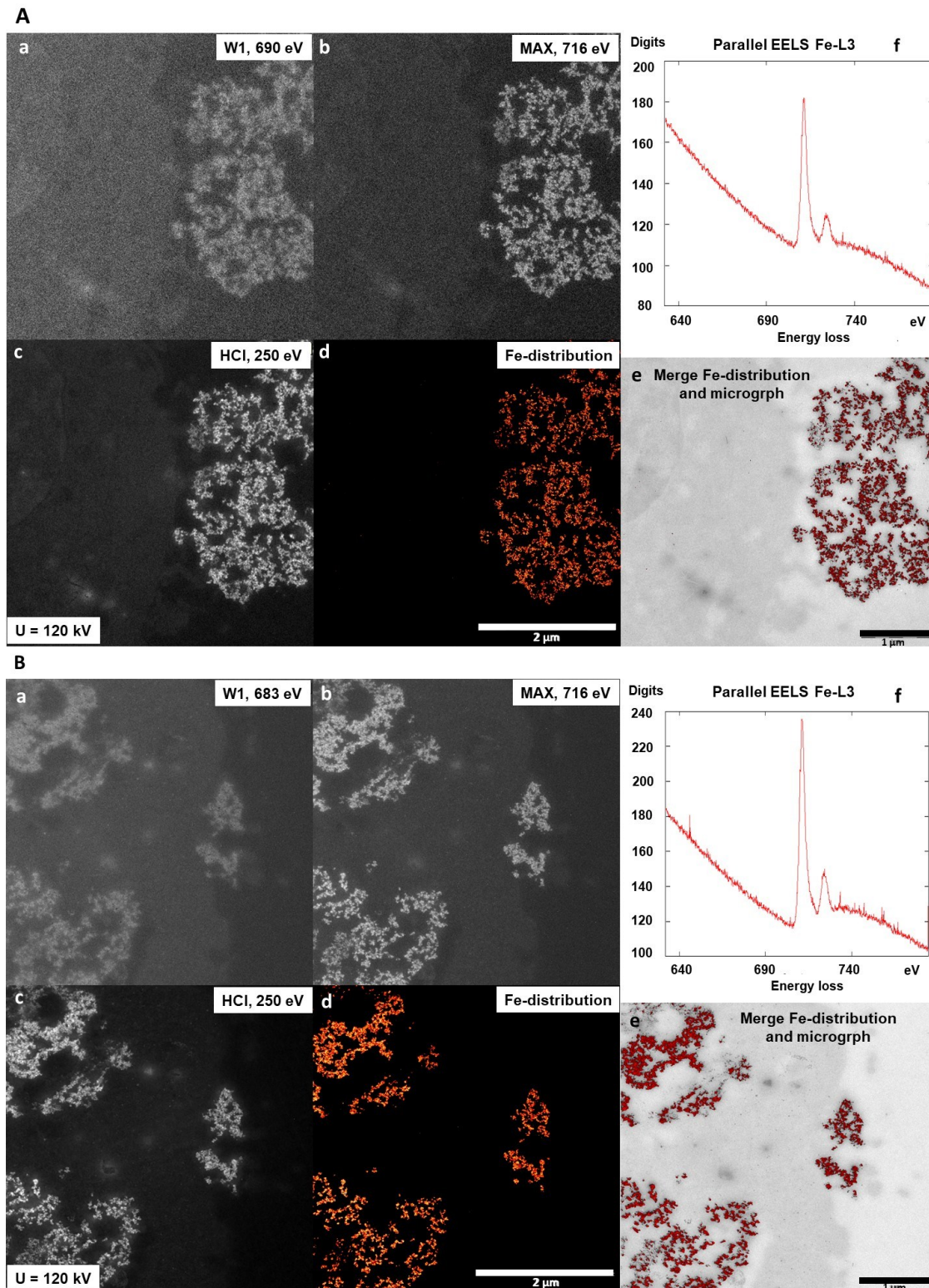


Figure S3. Elemental mapping by electron spectroscopy imaging – Transmission electron microscopy (ESI-TEM) (a-e) and electron energy loss spectroscopy (EELS) (f) of BMNPs either (**A**) outside or (**B**) inside the cells.

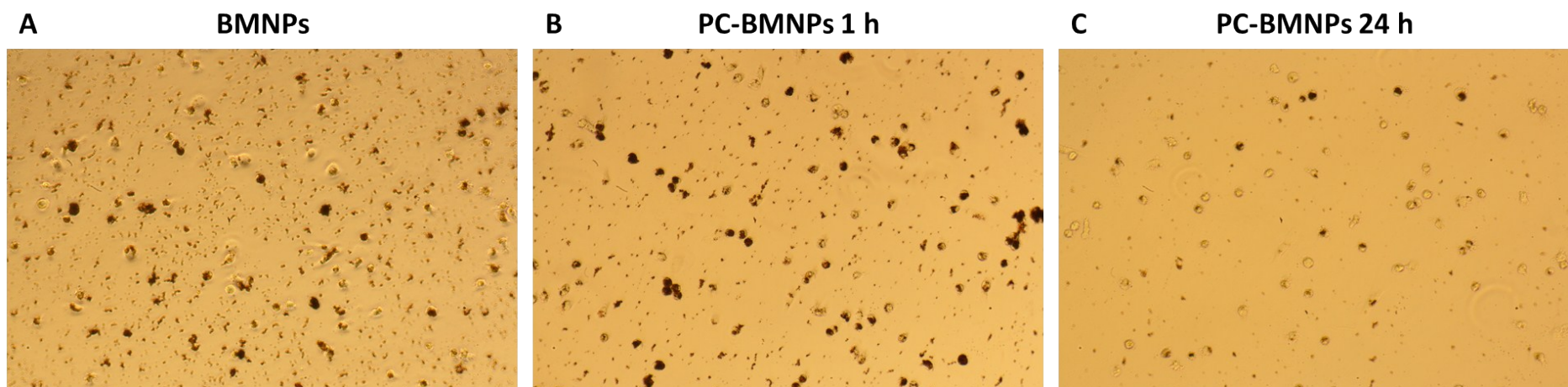


Figure S4. Primary human macrophages cultured with (A) BMNPs, (B) PC-BMNPs 1h and (C) PC-BMNPs 24 h after 4 h incubation at 37 °C and 5% CO₂.