

## Supplementary Materials

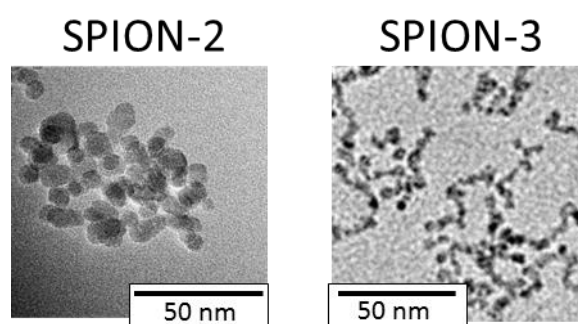
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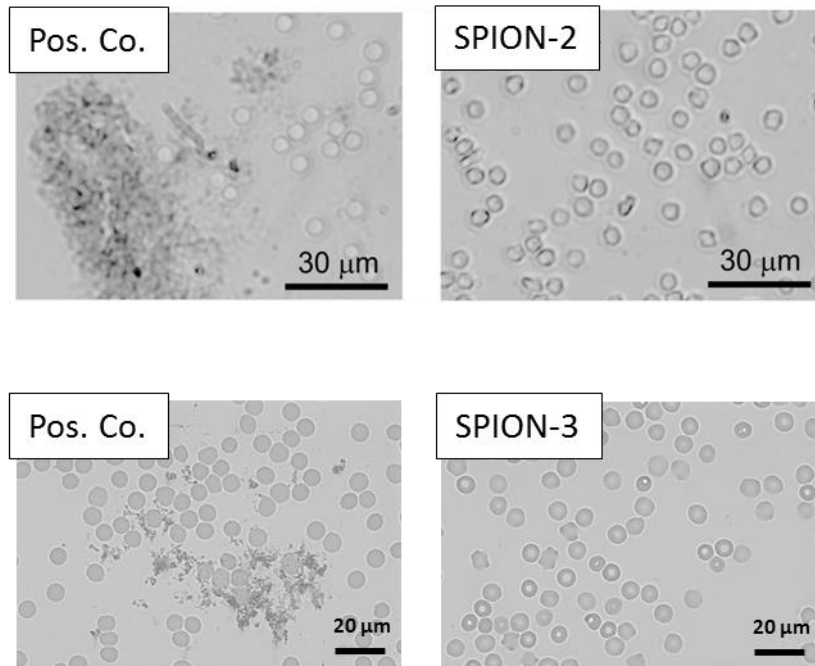
**Supplementary Table 1.** Physicochemical characterisation of the tested SPIONs.

	SPION-2	SPION-3
Core size [nm]	$8.9 \pm 2.2$	$4.3 \pm 0.9$
Hydrodynamic diameter [nm]	71	74
$\zeta$ -potential [mV]	-18.1	-3.8
Coating	LA/BSA	crosslinked dextran T-40

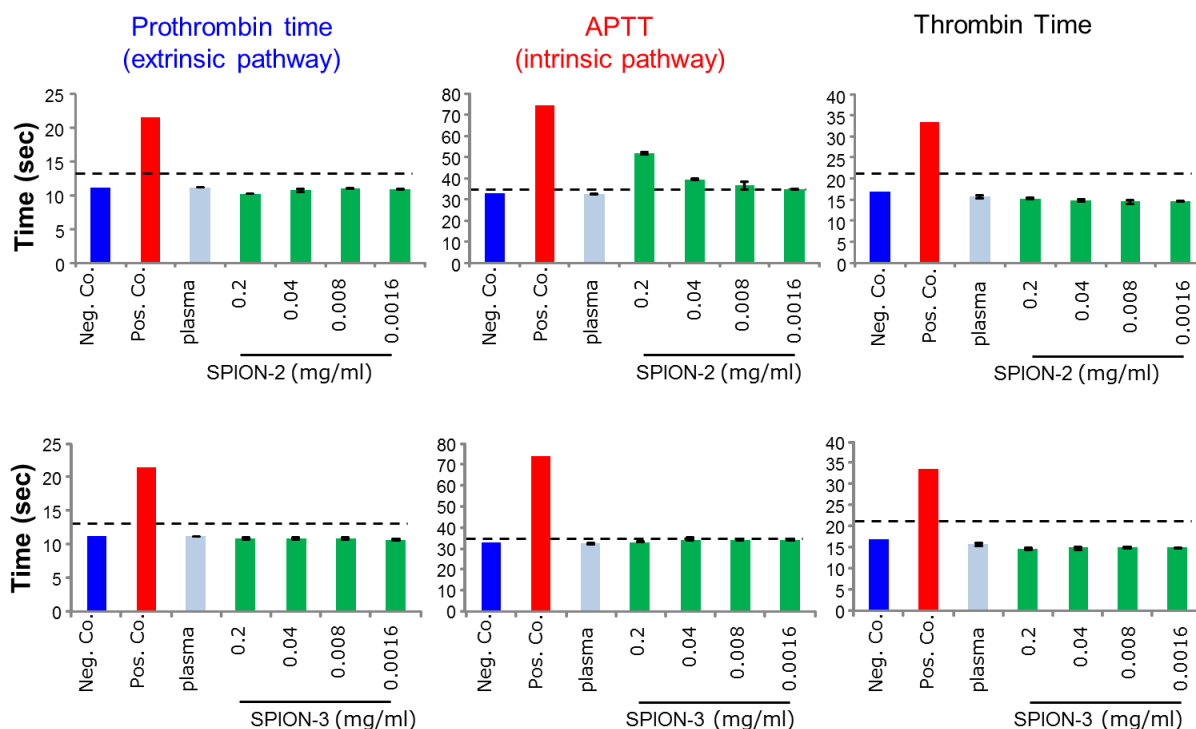
The hydrodynamic size (Z-average size) and  $\zeta$ -potential of the nanoparticles were determined with a Zetasizer Nano ZS (Malvern). BSA, bovine serum albumin; LA, lauric acid; SPIONs, superparamagnetic iron oxide nanoparticles.



**Supplementary Figure 1.** Transmission electron microscopy (TEM) images of the tested SPIONs [1,2].



**Supplementary Figure 2.** Blood stability of the tested SPIONs. Blood stability was investigated in EDTA-anticoagulated sheep (SPION-2 [3]) or rabbit (SPION-3 [2]) whole blood. Blood sample was mixed with SPIONs to an iron concentration of 1 mg/mL. Lauric acid-coated SPIONs served as positive control. Microscopic images were taken after 45 min incubation.



**Supplementary Figure 3.** Effects of SPIONs on plasma coagulation. Platelet poor human plasma pooled from 3 donors was treated with SPIONs for 30 minutes. Afterwards, the respective coagulation activation reagent was added to each sample (Neoplastine for prothrombin time,  $\text{CaCl}_2$  for activated partial thromboplastin time (APTT), or thrombin for thrombin time) and their respective coagulation time was measured. Means  $\pm$  SD of replicate samples are shown. Upper panel: SPION-2 (data courtesy of Dr. Christina Janko, SEON, University Hospital Erlangen); Lower panel: SPION-3 [2].

## References

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2. Unterweger, H.; Janko, C.; Schwarz, M.; Dezs, L.; Urbanics, R.; Matuszak, J.; Orfi, E.; Fulop, T.; Bauerle, T.; Szebeni, J., et al. Non-immunogenic dextran-coated superparamagnetic iron oxide nanoparticles: a biocompatible, size-tunable contrast agent for magnetic resonance imaging. *Int J Nanomedicine* **2017**, *12*, 5223-5238, doi:10.2147/IJN.S138108.
3. Friedrich, R.P.; Janko, C.; Poettler, M.; Tripal, P.; Zaloga, J.; Cicha, I.; Durr, S.; Nowak, J.; Odenbach, S.; Slabu, I., et al. Flow cytometry for intracellular SPION quantification: specificity and sensitivity in comparison with spectroscopic methods. *International Journal of Nanomedicine* **2015**, *10*, 4185-4201, doi:10.2147/Ijn.S82714.