Electronic Supplementary Material (ESI) for Analyst.

Supporting Information

Investigating influences of Intravenous Fluids on HUVEC and U937 monocyte cell lines using magnetic levitation method

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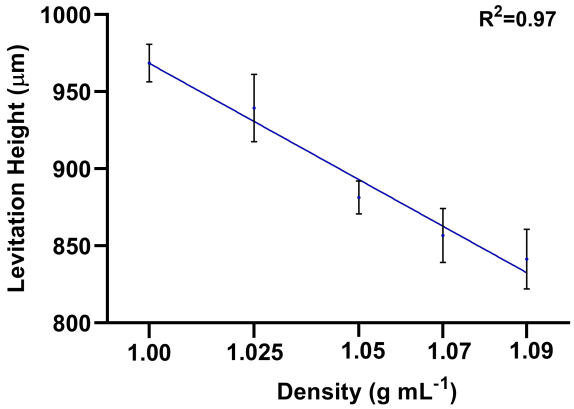

Figure S1. Density profile of the magnetic levitation platform. Standard density microparticles (1.00 g mL^{-1}, 1.025 g mL^{-1}, 1.05 g mL^{-1}, 1.07 g mL^{-1} and 1.09 g mL^{-1} (Cospheric LLC, USA)) were levitated in a regular growth medium containing 100 mM Gd^{3+}. Measured levitation height profiles were depicted as dots, and a curve represented the linear fitting of measured heights and their corresponding densities. By using this calibration curve, densities of microparticles/cells can be calculated.

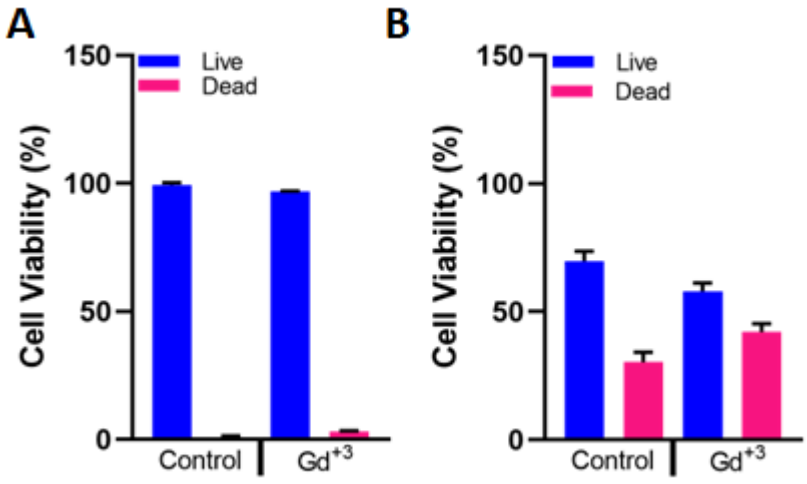

Figure S2. Shown that cell viability for HUVEC and U937 cells. In control group, only appropriate cell medium is used for cells and Gd^{3+} concentration is 100 mM. **(A)** HUVEC cell viability is 99.4 ± 0.85 and 96.83 ± 0.26 for control and Gd^{3+}, respectively. **(B)** U937 cell viability is 69.69 ± 3.8 and 57.96 ± 3.2 for control and Gd^{3+}, respectively. Cells were treated with Gd^{3+} for 30 min before conducting cell viability test.

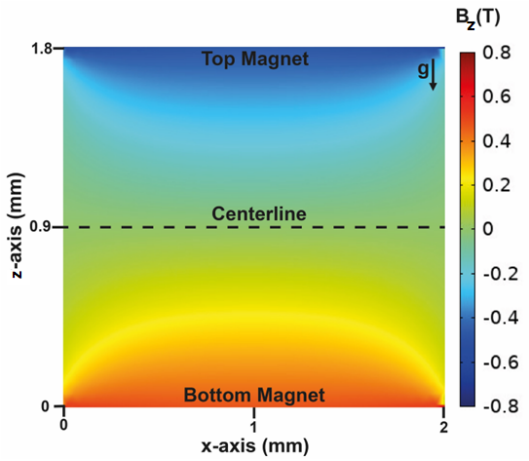

Figure S3. Magnetic induction in the z-axis (B_z). The distance between magnets is 1.8 mm. The acceleration of the gravity (g) is on the z-axis.

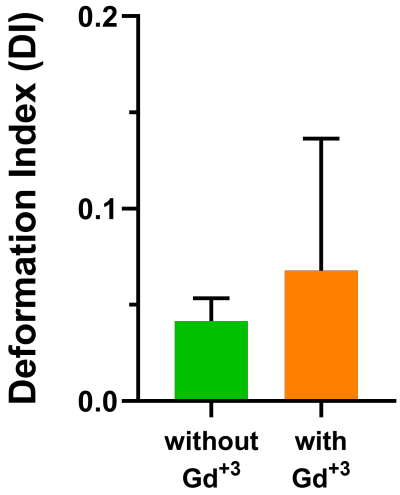

Figure S4. Deformation index values of HUVEC cells with and without 100 mM Gd^{3+}.

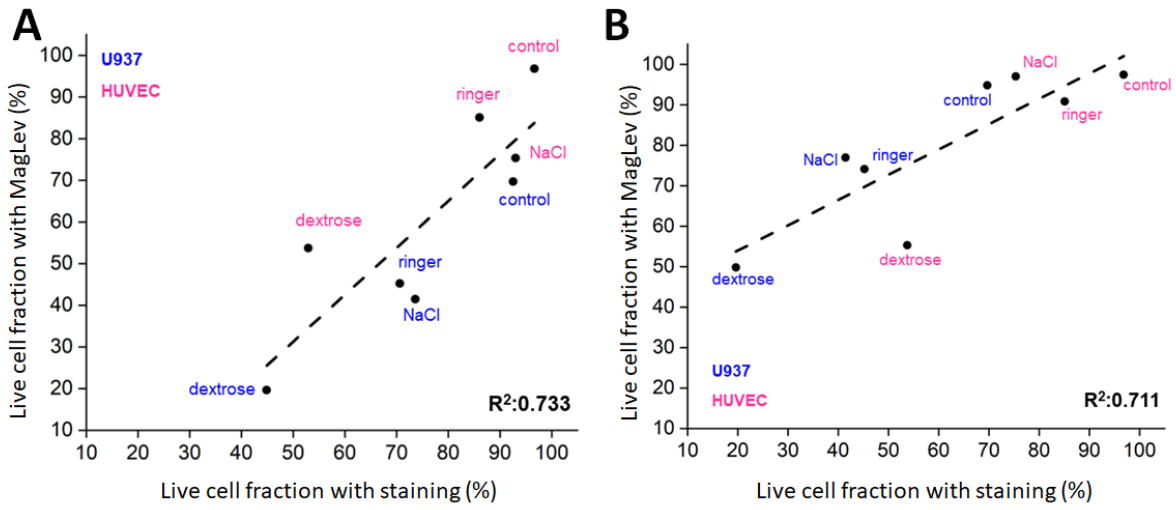

Figure S5. Correlation of live cell fraction obtained from the magnetic levitation platform (MagLev) versus number of live cells determined by trypan blue staining by using different cut-off levitation values: (a) CL1 and (b) CL2 obtained by subtracting 20 µm and 40 µm, respectively, from the maximum peak levitation height of cells.