## Label-Free Density-Based Detection of Adipocytes of Bone Marrow Origin Using Magnetic Levitation

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*tequal contribution* 

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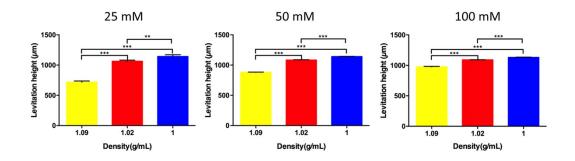
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## \* Correspondence to:

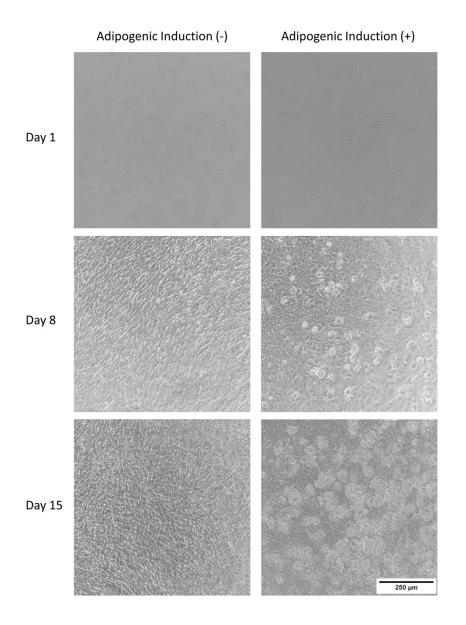
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## **Figure captions**

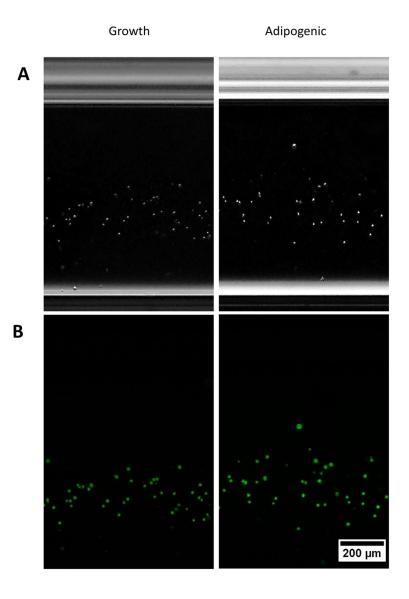
**Supplementary Figure S1.** Levitation heights of beads with different densities (1, 1.02 and 1.09 g/mL) at 25, 50 and 100 mM Gd<sup>3+</sup> containing medium. Data are presented as mean of replicates with error bars (±SD) and one-way ANOVA with Tukey's multiple comparisons test was performed for statistical analysis. Statistical significance was defined as \*: p < 0.05; \*\*: p<0.01; \*\*\*: p<0.001.



Supplementary Figure S2. Cell culture images of D1 ORL UVA cells that were cultured in standard growth medium and adipogenic differentiation medium over 15 days. Scale bar: 250  $\mu$ m.



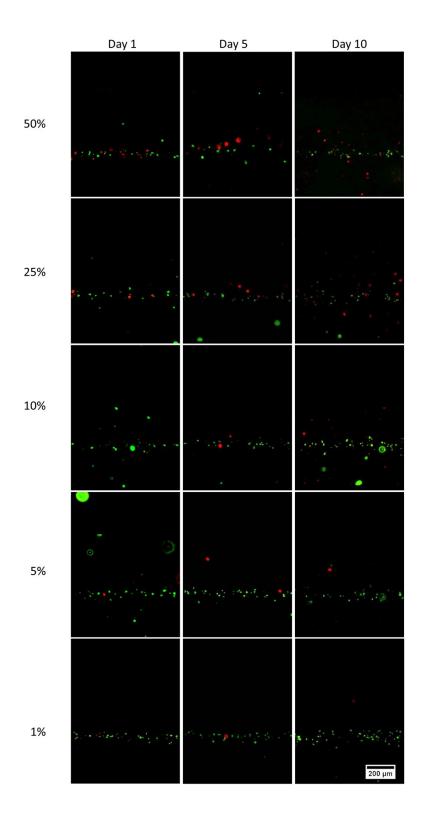
Supplementary Figure S3. Bright-field (A) and fluorescent (B) microscopy images of D1 ORL UVA cells cultured in growth or adipogenic differentiation medium at the  $22^{nd}$  day, in magnetic levitation device (25 mM Gd<sup>3+</sup>). Cell viability was visualized by live-dead (live: green, dead: red) staining. Dead cells were not detected in the system. Scale bar: 200 µm.



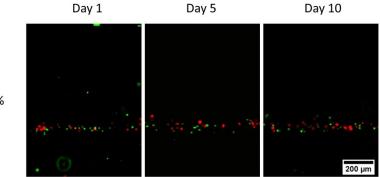
Supplementary Figure S4. Cell culture images of 7F2 cells that were cultured in standard growth medium and adipogenic medium for 10 days. Scale bar:  $250 \mu m$ .

Adipogenic Induction (+) Adipogenic Induction (-) Day 1 Day 5 Day 10

Supplementary Figure S5. Fluorescent images of the levitated heterogeneous populations consisted of quiescent D1 ORL UVA cells (green) and adipogenic differentiated 7F2 cells (red) at different ratios (50%, 25%, 10%, 5% and 1%) after 1, 5 and 10 day culture. Scale bar: 200  $\mu$ m.



**Supplementary Figure S6.** Fluorescent images of the levitated heterogeneous population consist of undifferentiated 7F2 (red) cells and D1 ORL UVA (green) cells mixed at 50% ratio after 1, 5 and 10 day culture. Scale bar:  $200 \mu m$ .



50%