

## *Supplementary Information*

# Lipid nanocapsules for intracellular delivery of microRNA: a first step towards intervertebral disc degeneration therapy

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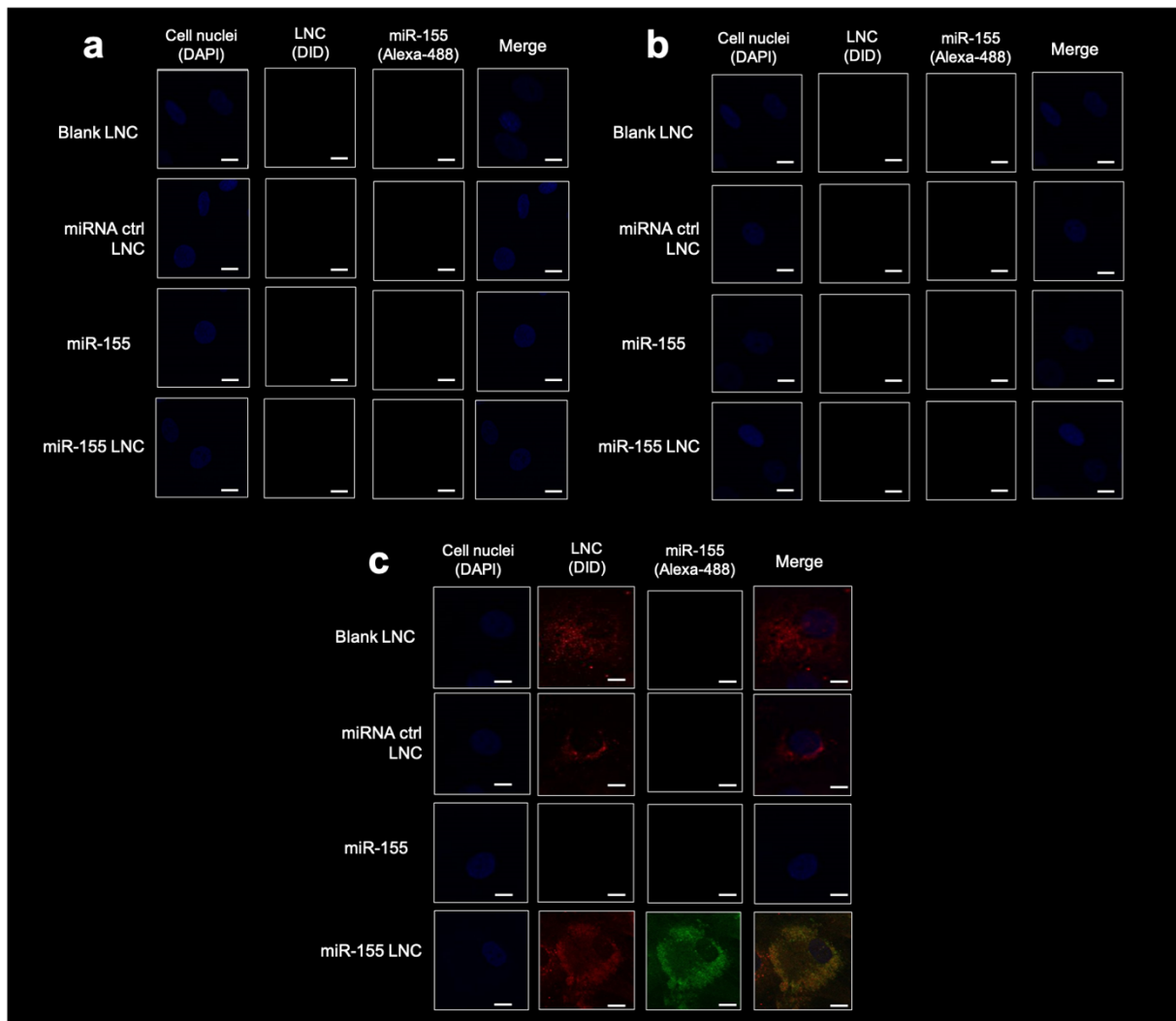
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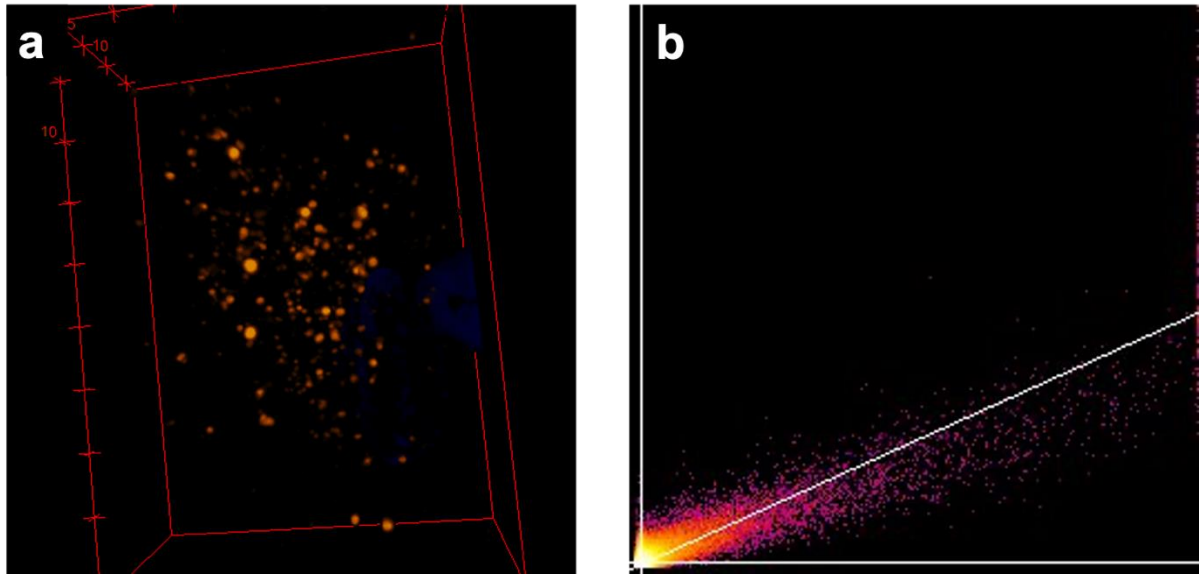
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**Figure S1: *In vitro* uptake imaging study.** Cell internalization on hASC cells (at 80 % of confluence) of miR-155 alone, miR ctrl LNC (miR unlabeled), blank LNC and miR-155 LNC (a) after 2 h of treatment, (b) after 4 h of treatment, (c) after 6 h of treatment. Hoescht 33342 staining cell nuclei in blue; LNC labelled with DID in red; miR-155 labelled with Alexa-488 in green. Scale bar = 8  $\mu$ m. n = 3 (representative images shown).



**Figure S2: Image analysis.** (a) 3D distribution of fluorescence by z-stack confocal imaging. The distribution showed the colocalization between red and green fluorescences, in orange. (b) Pearson correlation on the 3D distribution between red and green fluorescence: Pearson score = 0,89. Pearson score > 0.5 indicates the colocalization of the two parameters (all tests were performed by Image J software).