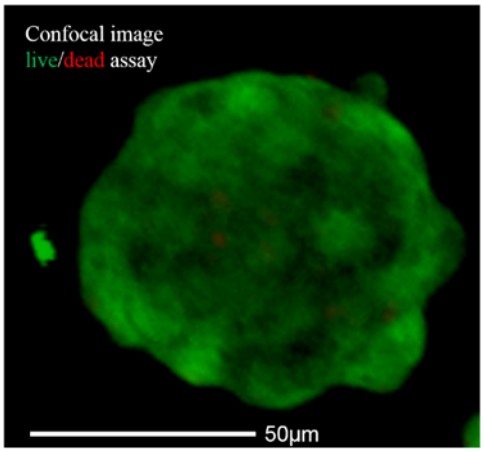
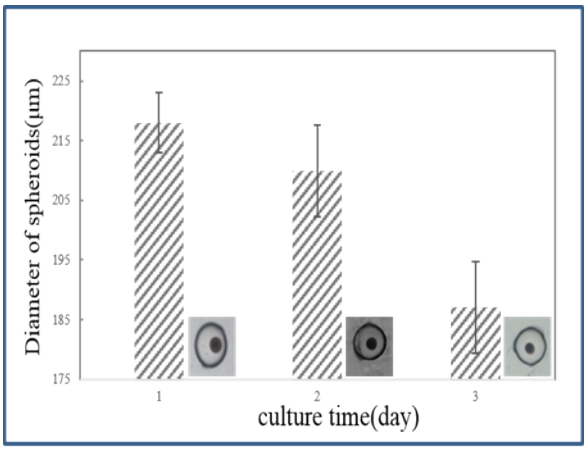
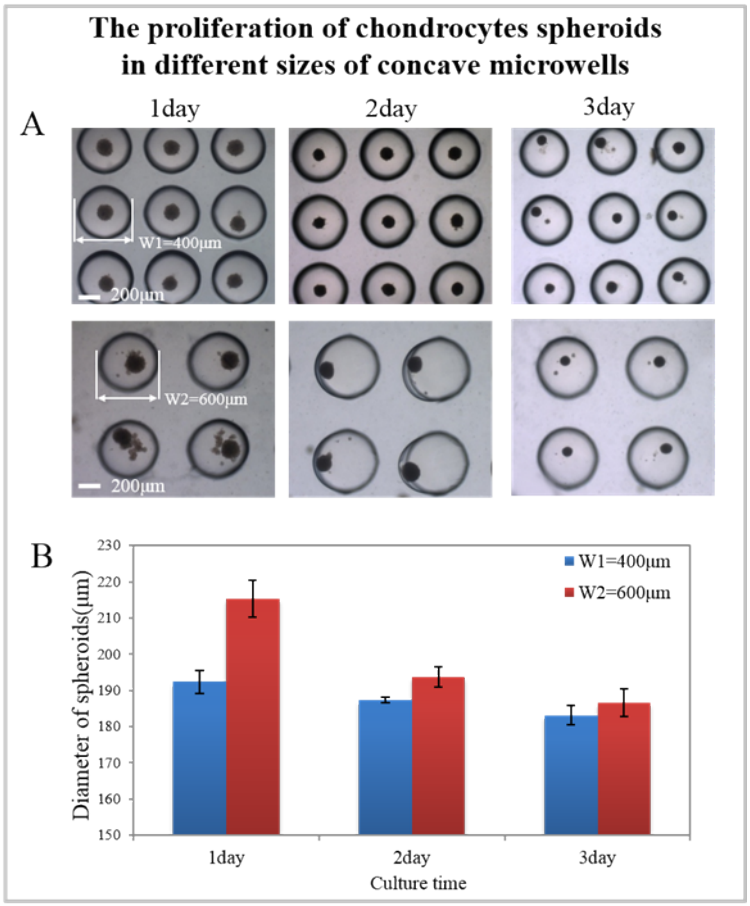
Electronic Supplementary Material (ESI) for Integrative Biology.



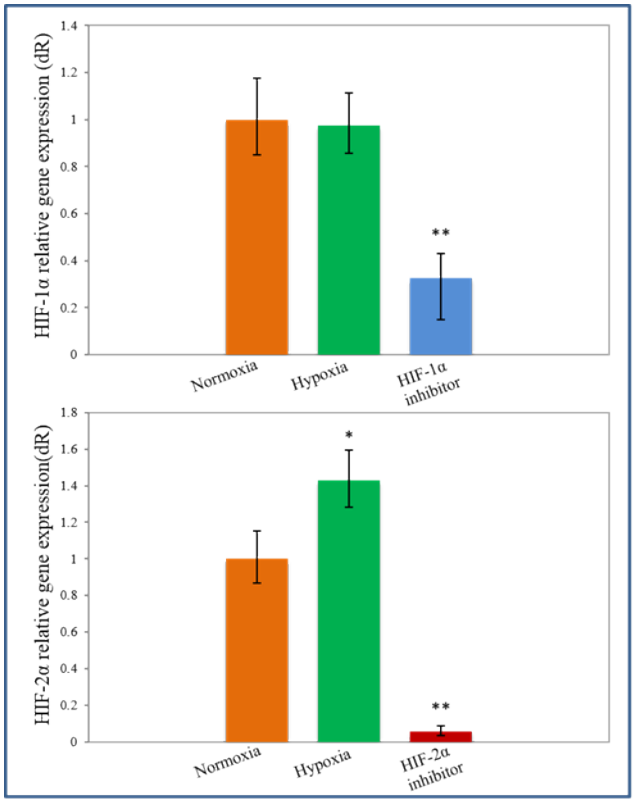
Supplemental figure1. The viability test of chondrocytes cultured for up to 7 days using dead/live staining. Green color represented for live cells stained by Calcein AM and Red for dead cells stained by Eth-D.



Supplemental figure 2. The proliferation testing of chondrocytes cultured in concave microwells for 3 days. Error bars represent the standard deviations (mean ± SD) obtained from six independent experiments.



Supplemental figure 3. The proliferation testing of chondrocytes cultured in concave microwells with different sizes over 3 days. A. Bright images of cellular spheroids cultured in microwells with diameter at 400μm, and 600μm, respectively. B. The averaged diameter of chondrocytes spheroids cultured in both sizes of microwells (mean ±SD, n=10).



Supplemental figure 4. The effects of HIFs inhibitors on the mRNA gene expressions of HIF-1α and HIF-2α by quantitative RT-PCR assay. Chondrocyte spheroids were cultured for 3 days after treated with HIF-1α and HIF-2α inhibitors at the concentration of 30μM, respectively. Error bars were standard deviations, the data was shown as mean±SD (n=3), Statistic significance was calculated by Student's unpaired t-test; **, $p<0.01$ vs normoxic group *, $p<0.05$ vs normoxic group.