

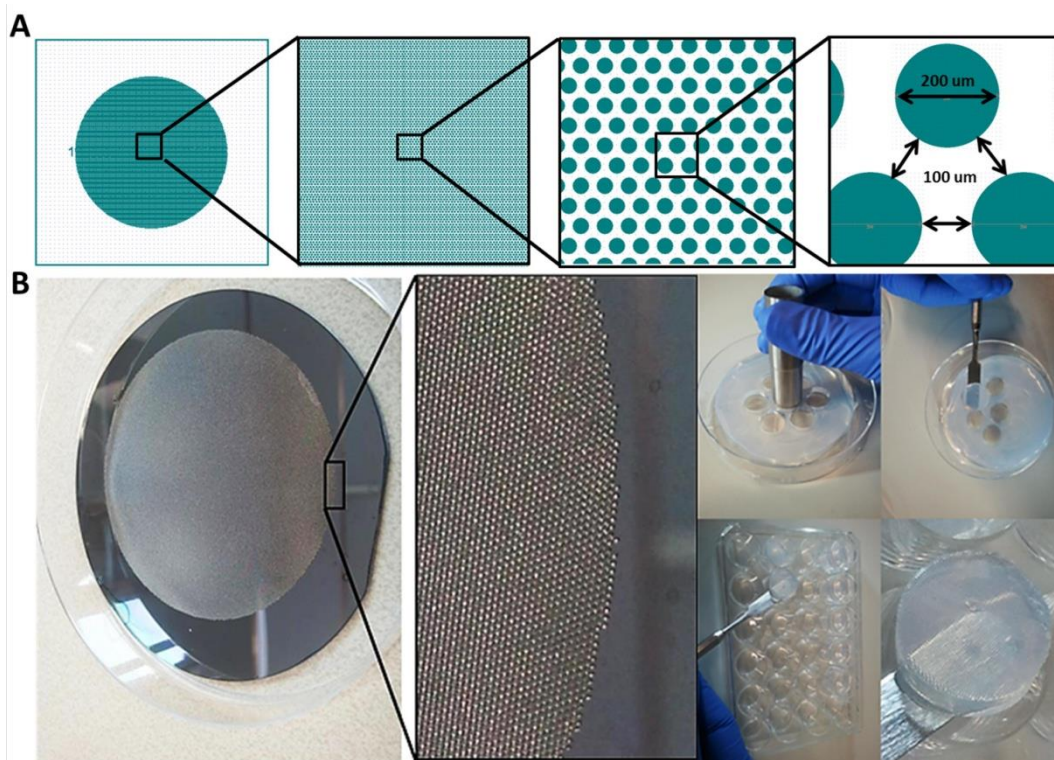
## SUPPLEMENTARY INFORMATION

**Bioinspired seeding of biomaterials using three dimensional microtissues induces chondrogenic stem cell differentiation and cartilage formation under growth factor free conditions**

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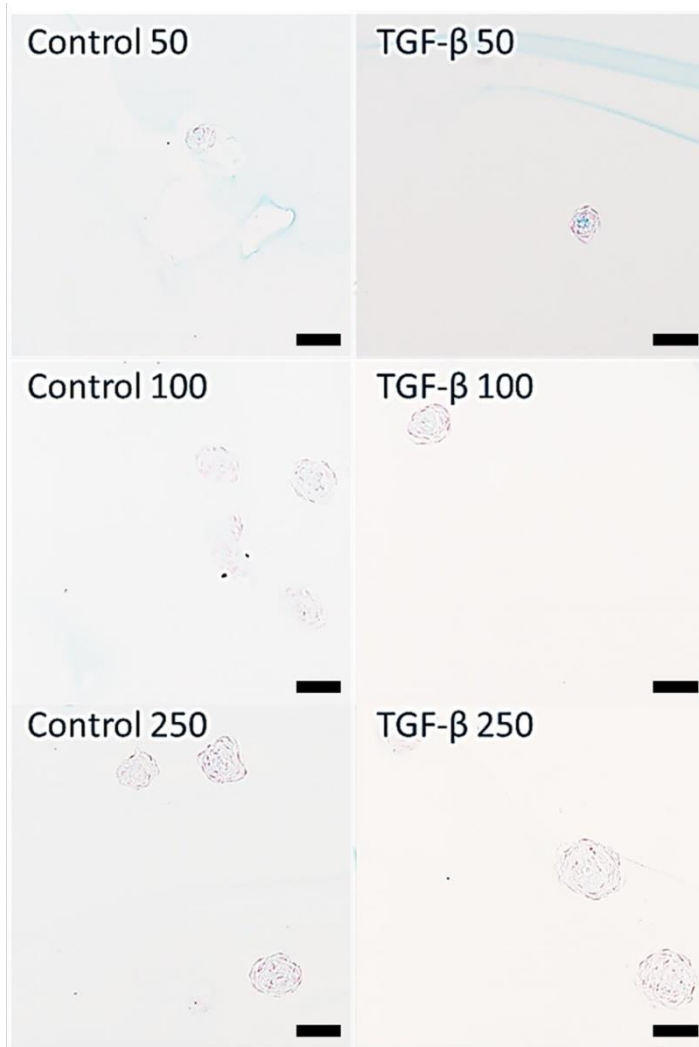
### SUPPLEMENTAL FIGURES



**Supplemental figure 1.** Design and fabrication of microaggregate forming agarose microwells.

(A) A photomask was designed containing a circular array of 125.000 circular spots. Each spot has a radius of 200 micrometer and is spaced minimally 100 micrometer from each other spot.

(B) The patterned silicon wafer was used to create 3% agarose negative copies. Using a sterile biopsy punches microwell inserts were cut to tightly fit into 24 well culture plates.



**Supplemental figure 2.** Implanted constructs did not demonstrate detectable levels of glycosaminoglycan. Prior to implantation, hPDC were cultured in vitro as single cells or microaggregate supplemented with 10 ng/ml of TGF $\beta$  for 6 days. Specimen were fixated and histologically analyzed on glycosaminoglycan deposition using Alcian blue staining. Scale bars equal 200  $\mu$ m.