Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supplementary Information

IGF-2 Coated Porous Collagen Microwells for the Culture of Pancreatic Islets

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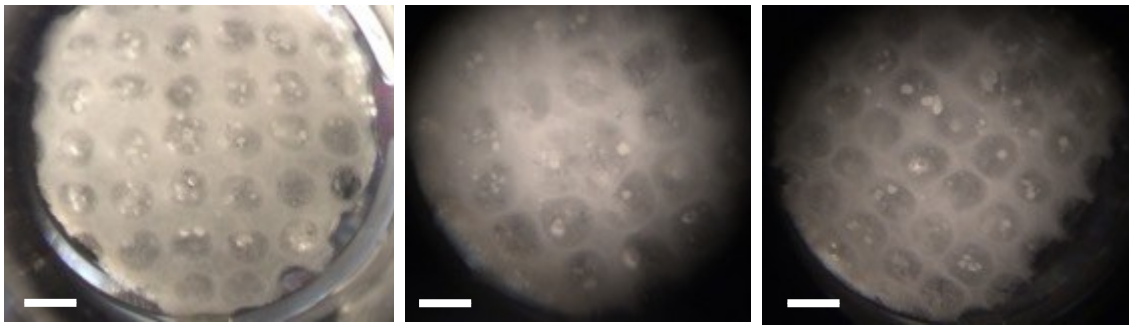

Fig. S1: Photographs of human slets loaded in the PCM arrays, showing the partition of the islets into microwells. Scale bars 1mm.

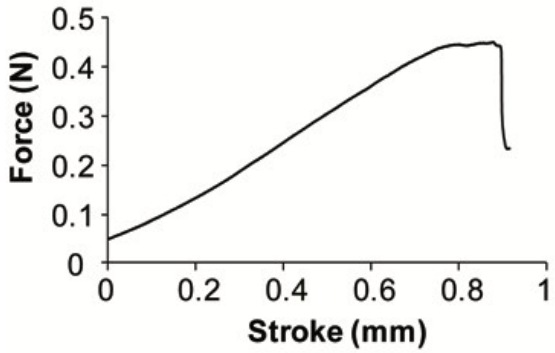

Fig. S2: Tensile testing of the PCM array. Representative test in elongation.

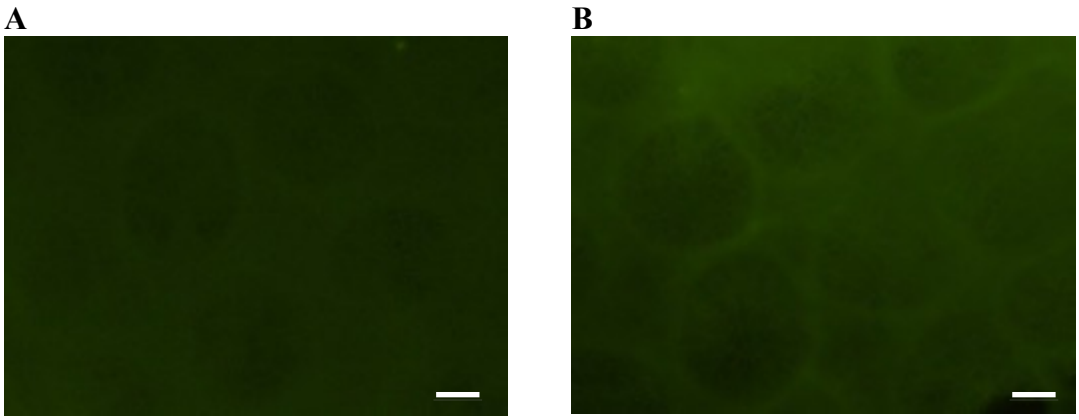

Fig. S3: Fluorescence microscopy images with high exposure time (1 s) of negative control, showing PCM arrays coated with (**A**) IGF-2-biotin without addition of avidin-FITC and (**B**)avidin-FITC. Scale bars 250 µm.

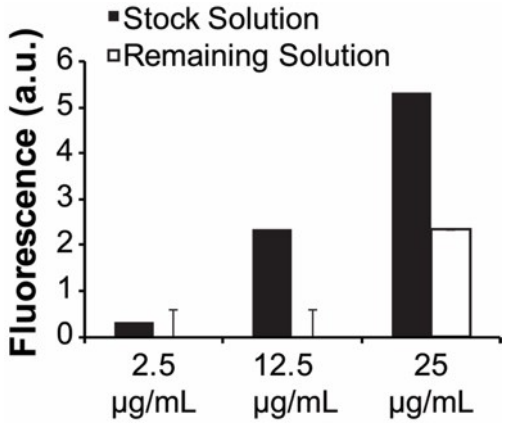

Fig. S4: Amount of IGF-2 remaining in the coating solution after immobilization on the PCM arrays showing optimum concentration is obtained for 12.5 ng/µL were all the IGF-2 in the coating solution is immobilized on the scaffold.

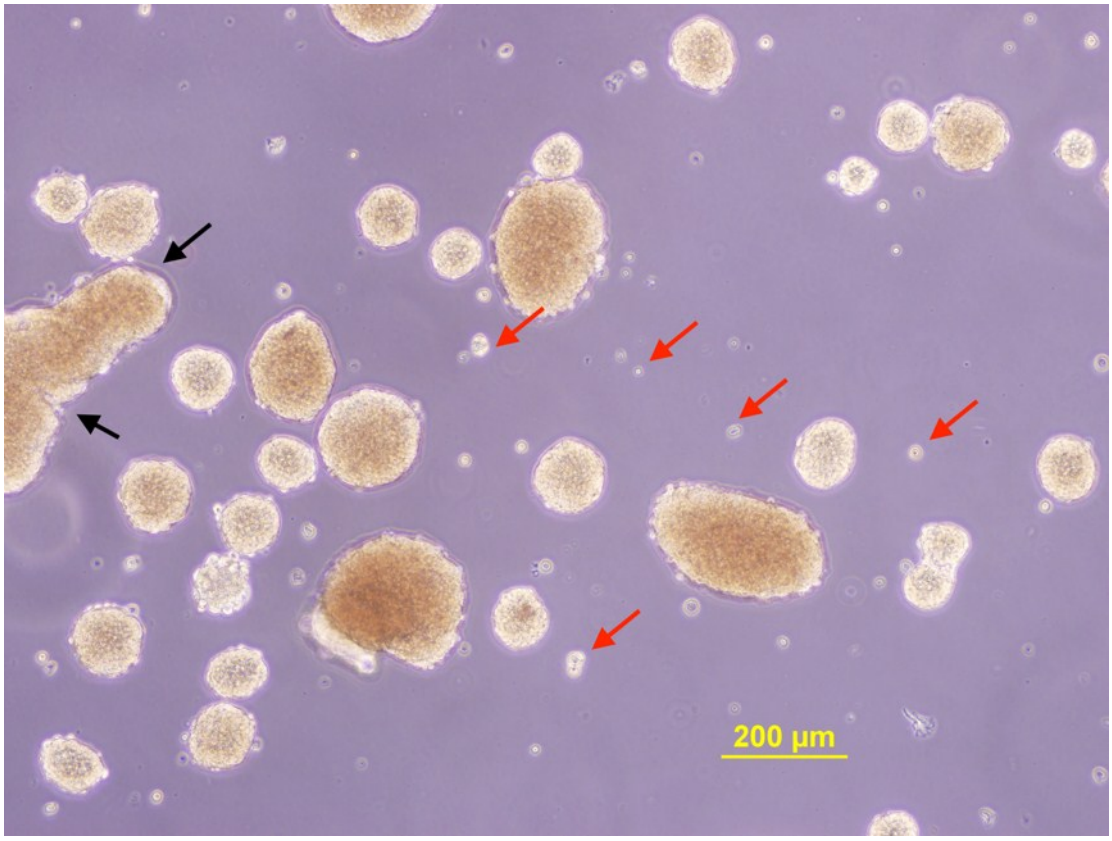

Fig. S5: Mouse islets cultured on tissue culture polystyrene for 16h, showing dissociation of the islet (red arrows) and aggregation of islet (black arrows).

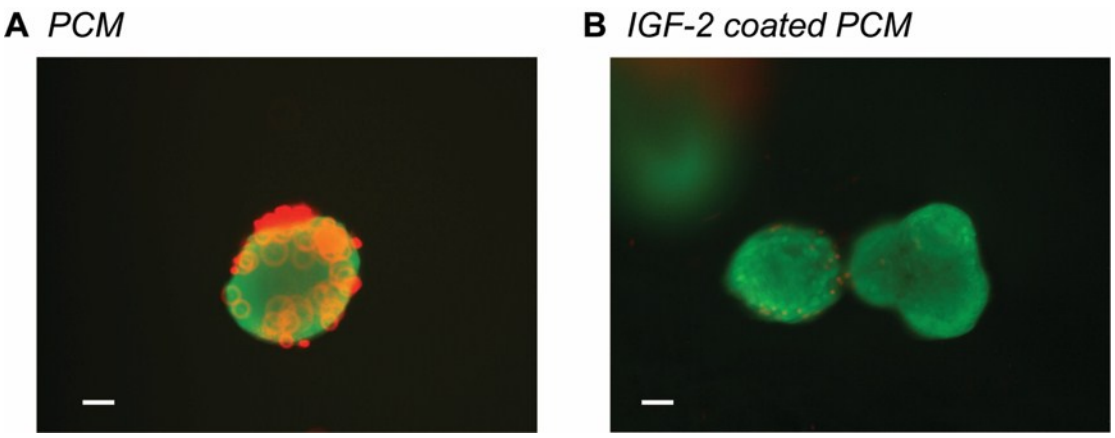

Fig. S6: Fluorescence microscopy images of FDA/PI stained mouse islets isolated in PCMs (**A**) with no coating, and (**B**) with IGF-2 coating. Living cells are stained green and dead cells are stained red. Scale bars 100 µm.

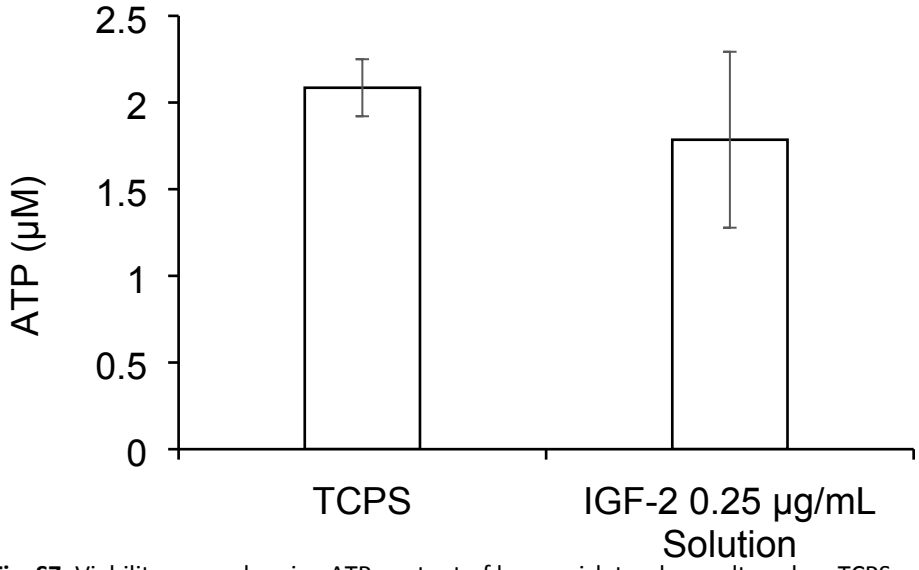

Fig. S7: Viability assay showing ATP content of human islets when cultured on TCPS and TCPS with 250 ng/mL of IGF-2 supplemented to the media.

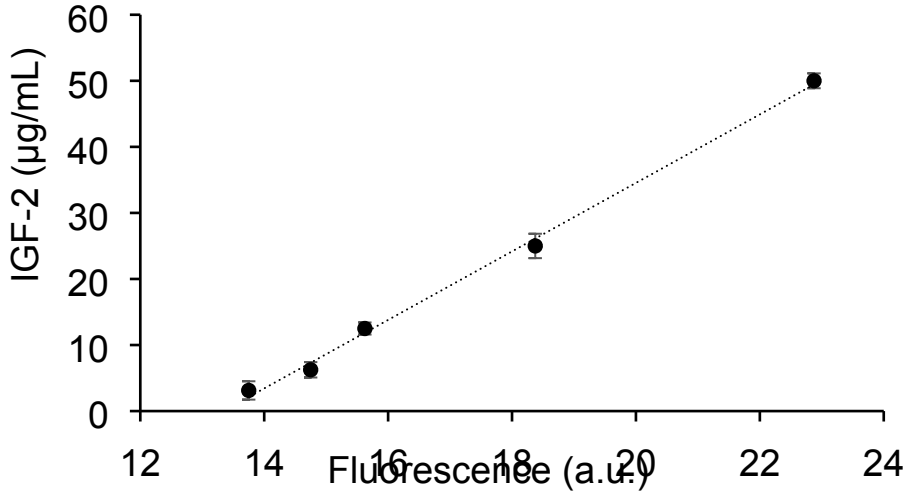

Fig. S8: Calibration curve of the IGF-2 labeled with FITC use for measuring the amount of IGF-2 release out of the IGF-2 coated PCM. Error bars are standard deviation for n=6.