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Supplementary Materials

Figure S1. Results from qPCR analysis comparing the relative expression levels of the mRNAs that code for (**a**) collagen I, (**b**) collagen II, and (**c**) aggrecan by chondrocytes cultured for 7 days in non-supplemented 3D fibrin-alginate hydrogels (n = 7), *vs.* chondrocytes cultured in monolayer for either 6 days (n = 3) or 12 days (n = 3). In these graphs, the collagen and aggrecan RNA levels for both the hydrogel and monolayer cultures are expressed as a ratio of the corresponding RNA levels in freshly isolated chondrocytes, which were assigned an R value of 1. Bar heights represent the median value ± standard error as determined by REST statistical analysis.

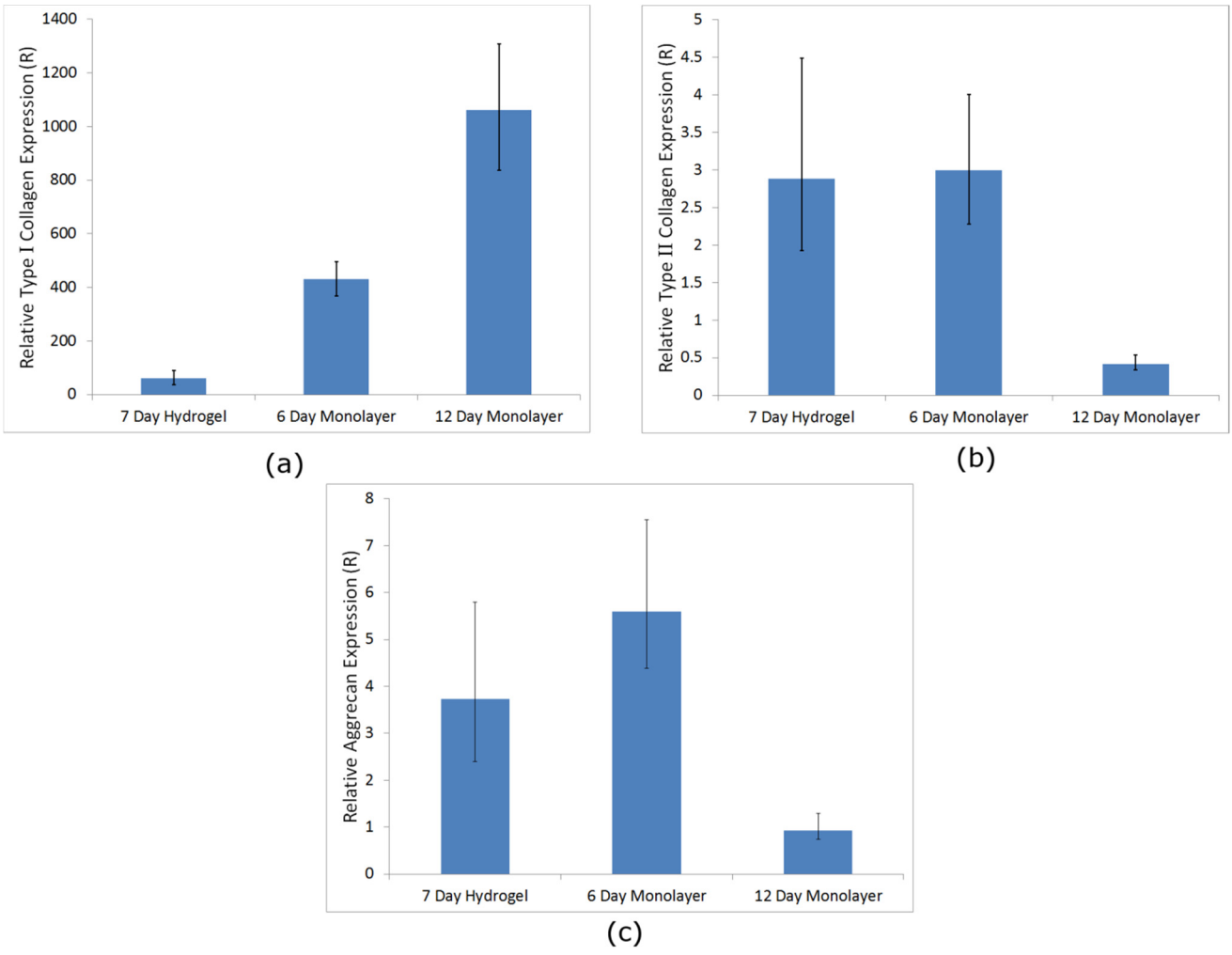

Figure S2. Results from qPCR analysis comparing the ratio of collagen II RNA to collagen I RNA expression in freshly isolated chondrocytes ($n = 3$), chondrocytes cultured for 7 days in 3D fibrin-alginate hydrogels ($n = 7$), and chondrocytes cultured in monolayer for either 6 days ($n = 3$) or 12 days ($n = 3$). Bar heights represents the median value ± standard error as calculated by REST statistical analysis. A high collagen II/collagen I RNA expression ratio is characteristic of phenotypically differentiated chondrocytes, whereas dedifferentiated chondrocytes exhibit low collagen II/collagen I expression ratios. (In this logarithmic graph, $R = 1$ if collagen II and collagen I gene expression levels are equal. A value below 1 indicates that the collagen II RNA expression is lower than collagen I expression.).