



## Supplementary Materials: Xeno-Free In Vitro Cultivation and Osteogenic Differentiation of hAD-MSCs on Resorbable 3D Printed RESOMER<sup>®</sup>

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**Figure S1.** Representative picture of the determination of the average filament size of 3D printed constructs. Scale bar 100 μm.



**Figure S2.** Micrographs of constructs after 0, 3, 4, 5 and 6 months of degradation. (**A**) 500 × magnification of the construct surface in 2D and 3D taken with 3D microscope. Scale bar 100  $\mu$ m. (**B**) 3000 × magnification of the construct surface. Scale bar 25  $\mu$ m.



**Figure S3.** Morphological examination of hAD-MSCs growing on degraded printed RESOMER® Filament LG D1.75 (0, 3, 4, 5, and 6 months). After cultivation of 1, 3, and 7 days, the cells were stained with calcein-AM; 4× objective, scale bar 100 μm.



**Figure S4.** Osteogenic differentiation of hAD-MSCs cultivated on the cell culture surface and stained with Alizarin Red 7, 14 and 21 days after induction of the osteogenic differentiation under influence of FCS, HS and hPL. Proliferation control after week 3;  $4 \times$  objective, scale bar 200 µm.



**Figure S5.** Osteogenic differentiation of hAD-MSCs cultivated on printed RESOMER<sup>®</sup> Filament LG D1.75 and stained with Alizarin Red seven days after induction of the osteogenic differentiation under influence of FCS, HS and hPL;  $4 \times$  objective, scale bar 200 µm.



Figure S6. Alkaline phosphatase staining of differentiated hAD-MSCs cultivated and for seven days differentiated on printed RESOMER<sup>®</sup> Filament LG D1.75. Scale bar 2500  $\mu$ m.



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