Supplementary Material 2: Proliferation of C3H10 T1/2 in porous PCL/β-TCP scaffolds

Methods

The porous scaffolds consisted of cylinders measuring 10mm in diameter and 5mm in height, with a 20% β-TCP composition, a strut distance of 1.25mm and a layer thickness of 200µm. Using µ-CT images, the surface area of the scaffolds was assessed, and the appropriate number of cells were seeded to ensure a concentration of 0.8×10^4 cells/cm^2. Proliferation was assessed using the same protocol as the non-porous flat scaffolds described in the manuscript.

Results and discussion

The number of cells at the surface of the porous scaffolds after 1, 7 and 11 days is introduced in Fig. S3 a), showing a significant increase. The proliferation rate, calculated as the ratio of the number of cells at a given time point over the number of cells at day 1, is presented in Fig. S3 b). As a matter of comparison, the proliferation rate on the flat scaffolds with a similar composition is also represented. A similar increase can be noted between the 2D and 3D scaffolds, without significant differences. Such results tend to confirm that the size of the pores (<100µm) is large enough for the cells to sense the porous scaffolds as a 2D surface, thus validating the use of 2D non-porous scaffolds as a model for biological studies.

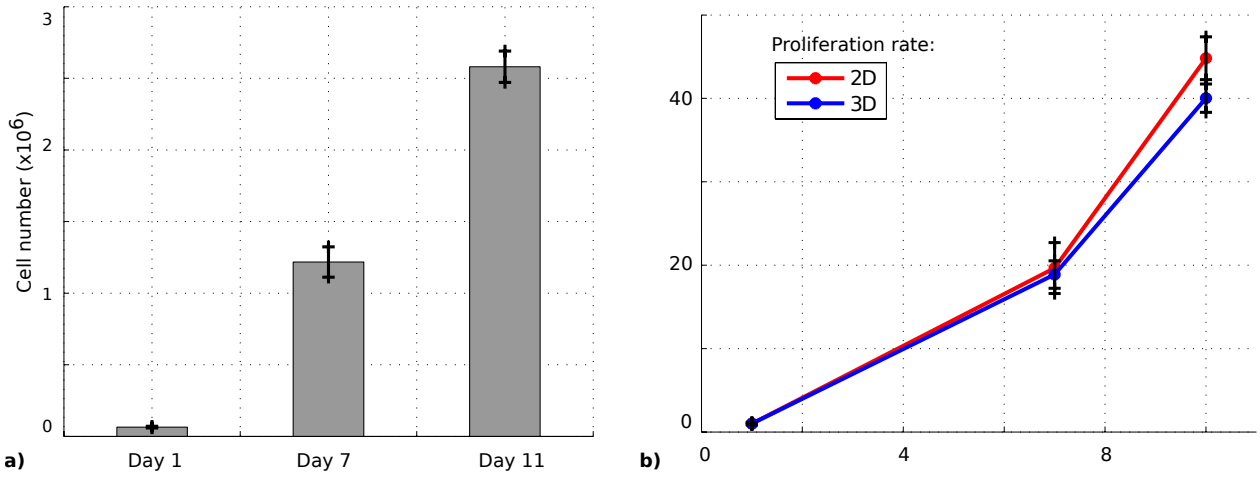

FIG. S2: a) Evolution of the number of cells of C3H10T1/2 cells in porous 3D printed PCL/β-TCP (80:20) over time. b) Proliferation rates of C3H10T1/2 on a 2D flat surface and a 3D porous scaffold surface of identical composition.