Figure 5: Swelling ratio of candidate placebo (w/o FGF) and active (w FGF) alginate-based gels, prepared with non-PG sodium alginate.

Figure 6: Swelling ratio of placebo (w/o FGF) and active (w FGF) alginate-based gels without collagen type I, prepared with non-PG sodium alginate.

Figure 7: Swelling degree of candidate placebo (w/o FGF) and active (w FGF) alginate-based gels, prepared with PG sodium alginate

~~**Figure 8:** FGF-18 bioassay in 4%wt alginate gel with 2 mcg/ml collagen type I~~

~~**Figure 9:** SEM images (1OOx) of alginate-based gels from polymer liquid solutions at 3% wt or 4% wt, containing 0, 1 or 2 mcg/ml of collagen type I and FGF-18 54 mcg/ml.~~

~~**Figure 10:** Section view of a 3D image acquired by CLSM for (a) alginate-based gel with 2 µg/ml collagen type I after incubation with HTB94 cells for 72 h and (b) alginate-based gel without collagen after incubation with HTB94 cells for 144 h. In white, HTB94 cells labelled with Rhodamine B. Right hand: Top of the gel; left hand: bottom of the gel.~~

Figure 8: SEM images (1OOx) of alginate-based gels from polymer liquid solutions at 3% wt or 4% wt, containing 0, 1 or 2 mcg/ml of collagen type I and FGF-18 54 mcg/ml.

Figure 9: Section view of a 3D image acquired by CLSM for (a) alginate-based gel with 2 µg/ml collagen type I after incubation with HTB94 cells for 72 h and (b) alginate-based gel without collagen after incubation with HTB94 cells for 144 h. In white, HTB94 cells labelled with Rhodamine B. Right hand: Top of the gel; left hand: bottom of the gel.

Figure 10: FGF-18 bioassay in 4%wt alginate gel with 2 mcg/ml collagen type I

Figure 11: Sequence of human FGF-18, corresponding to SEQ ID N0:1 (a) and sequence of sprifermin corresponding to SEQ ID N0:2 (b)

Figure 12: pH variation of the freeze-dried (FD) formulation over time in 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C)

Figure 13: % of moisture content variation of the freeze-dried (FD) formulation over time in 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C)

Figure 14: FGF-18 content variation of the freeze-dried (FD) formulation over time in 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C)

Figure 15: alginate content variation of the freeze-dried (FD) formulation over time in 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C)

Figure 16: a) intrinsic viscosity variation, calculated as mean ± standard deviation within the shear rate of 10-50 s^{-1}, of the freeze-dried (FD) formulation over time in 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C). . Figure 16 b: influence of shear rate on intrinsic shear viscosity of the freeze-dried formulation (FD) at time 0 and after 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C)

Figure 17: mechanical properties evaluation. Figure 17 a: Storage modulus (G') variation of the freeze-dried (FD) formulation over time in 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C). XXX. Figure 17 b: Frequency sweep test performed on freeze-dried formulation (FD) at time zero and after 3-month stability at normal storage conditions (5°C), accelerate conditions (25°C) and stressed conditions (40°C)

Description of the sequences: