biomimetics

Supplementary Material

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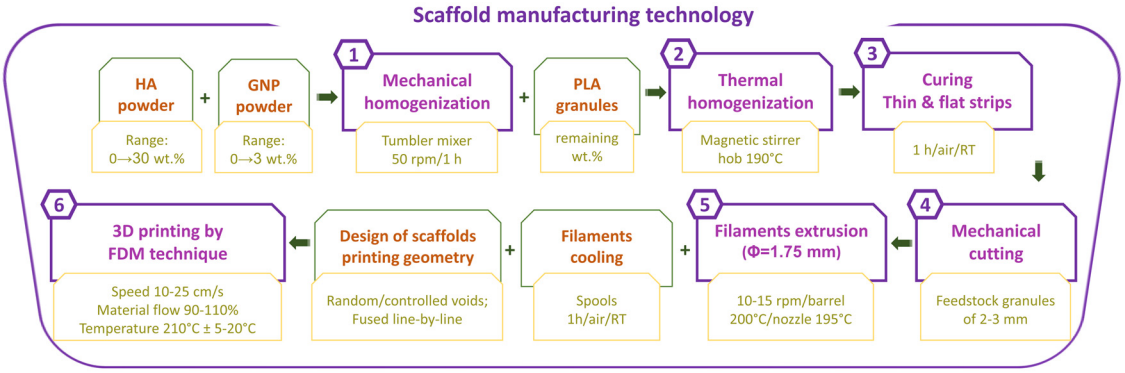
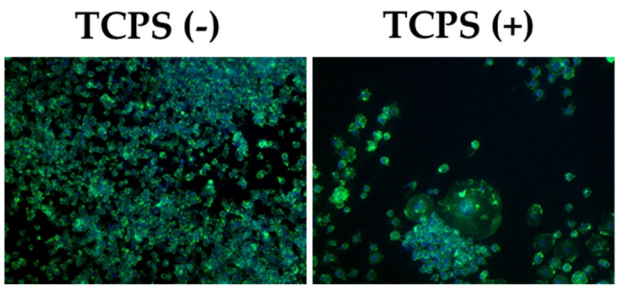


Figure S1. Scaffold manufacturing - graphical presentation.

A1.



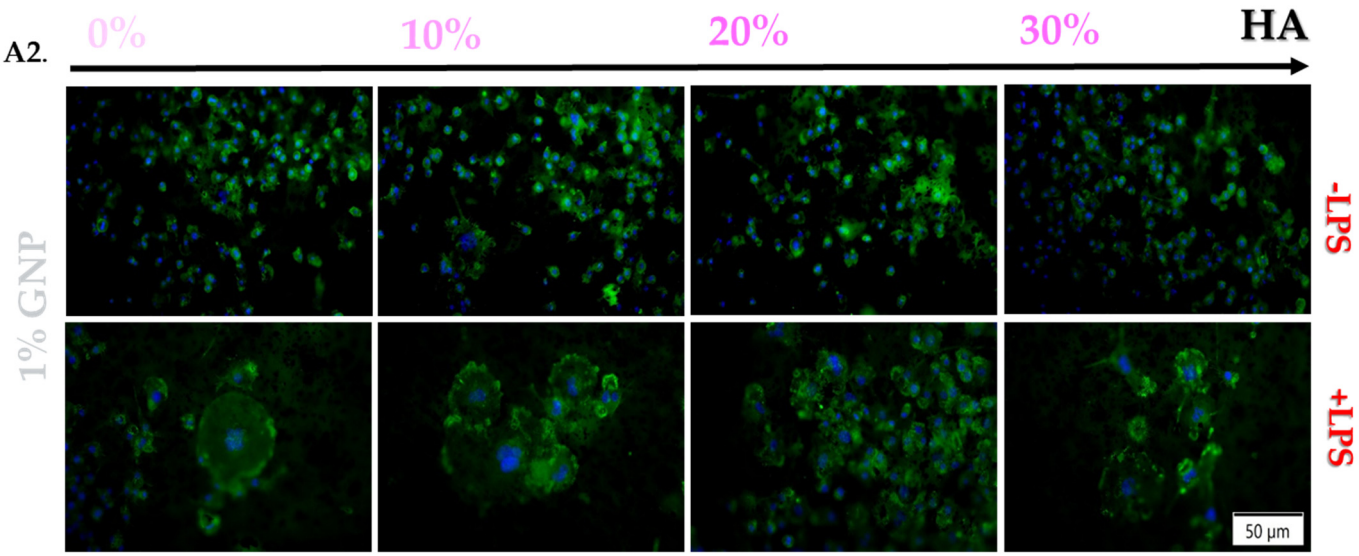
B1.

Sample (-LPS)		Total number of nuclei	Number of nuclei in multinuclear cells	Multinuclear index (%)
0 % GNP	0% HA	26	3	11.5%
	10% HA	85	3	3.5%
	20% HA	63	4	6.3%
	30% HA	38	0	0%
TCPS (-)		324	3	0.9%

Sample (+LPS)		Total number of nuclei	Number of nuclei in multinucleate cells	Multinuclear index (%)
0 % GNP	0% HA	62	0	0%
	10% HA	48	3	6.25%
	20% HA	51	3	5.8%
	30% HA	28	0	0%
TCPS (+)		30	8	26.6%

Note: Due to its composition and huge number of cells, the 0 wt.% % GNP support was impossible to be observed under fluorescence microscopy due to the fact that the PLA-HA matrix absorbed the stain which made the cells undistinguishable from the substrate.

A2.

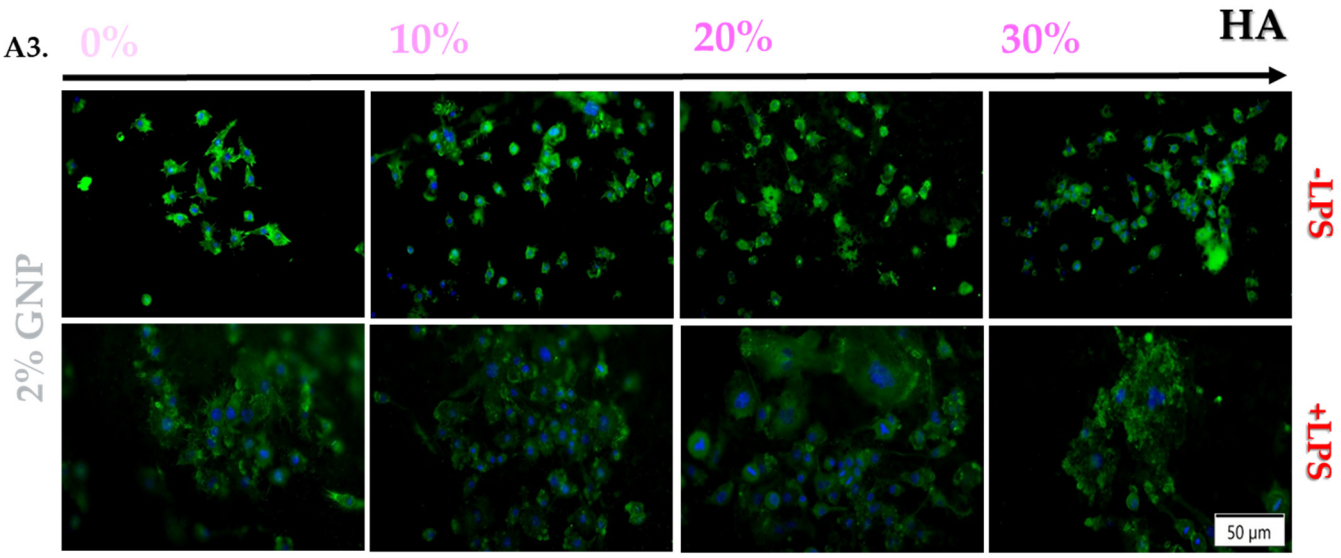


B2.

Sample (-LPS)		Total number of nuclei	Number of nuclei in multinuclear cells	Multinuclear index (%)
1% GNP	0% HA	129	7	5.4%
	10% HA	101	3	3.12%
	20% HA	58	3	5.1%
	30% HA	99	3	3.03%

Sample (+LPS)		Total number of nuclei	Number of nuclei in multinucleate cells	Multinuclear index (%)
1% GNP	0% HA	60	5	8.3%
	10% HA	59	3	5.8%
	20% HA	54	6	11.1%
	30% HA	59	6	10.1%

A3.

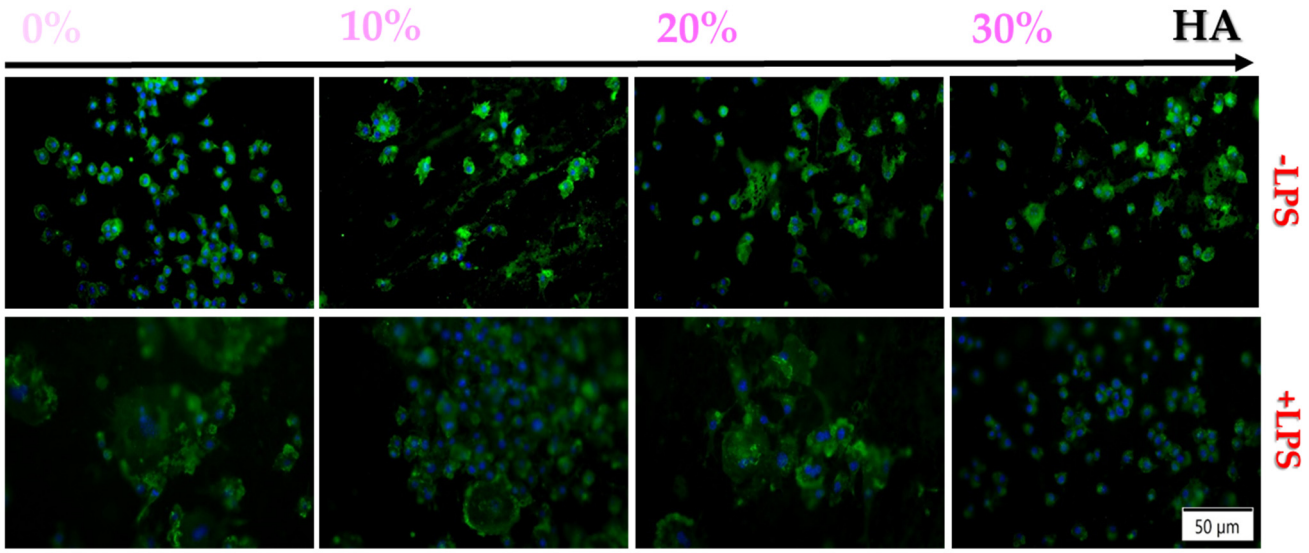


B3.

Sample (-LPS)		Total number of nuclei	Number of nuclei in multinuclear cells	Multinuclear index (%)
2% GNP	0% HA	19	0	0%
	10% HA	53	3	5.66%
	20% HA	47	0	0%
	30% HA	63	3	4.76%

Sample (+LPS)		Total number of nuclei	Number of nuclei in multinucleate cells	Multinuclear index (%)
2% GNP	0% HA	38	3	7.8%
	10% HA	36	3	8.3%
	20% HA	74	6	9.6%
	30% HA	27	3	11.1%

A4.



B4.

Sample (-LPS)		Total number of nuclei	Number of nuclei in multinuclear cells	Multinuclear index (%)
3% GNP	0% HA	59	3	5.08%
	10% HA	38	3	7.8%
	20% HA	58	0	0%
	30% HA	75	3	4%

Sample (+LPS)		Total number of nuclei	Number of nuclei in multinucleate cells	Multinuclear index (%)
3% GNP	0% HA	59	3	5.08%
	10% HA	63	3	6.3%
	20% HA	141	3	2.11%
	30% HA	130	3	2.3%

Figure S2 (A1-A4). Representative fluorescence images highlighting the formation of multinucleated FBGC both under standard (-LPS) and pro-inflammatory conditions (+LPS, stimulation with 100 ng/ml LPS) (actin cytoskeleton – green fluorescence; nuclei- blue fluorescence). Scale bar represents 50 µm; **(B1-B4)** The values of the "multinuclear index" as determined by examining 10–14 microscopic fields for each sample. The TCPS (-) and TCPS (+) notations denote the negative and positive controls for inflammation, respectively.