Supplementary data

Title: Conditioning the microenvironment for targeted *in vivo* adipogenesis and soft tissue regeneration in a cell-free poly(urethane-ester)-based scaffold

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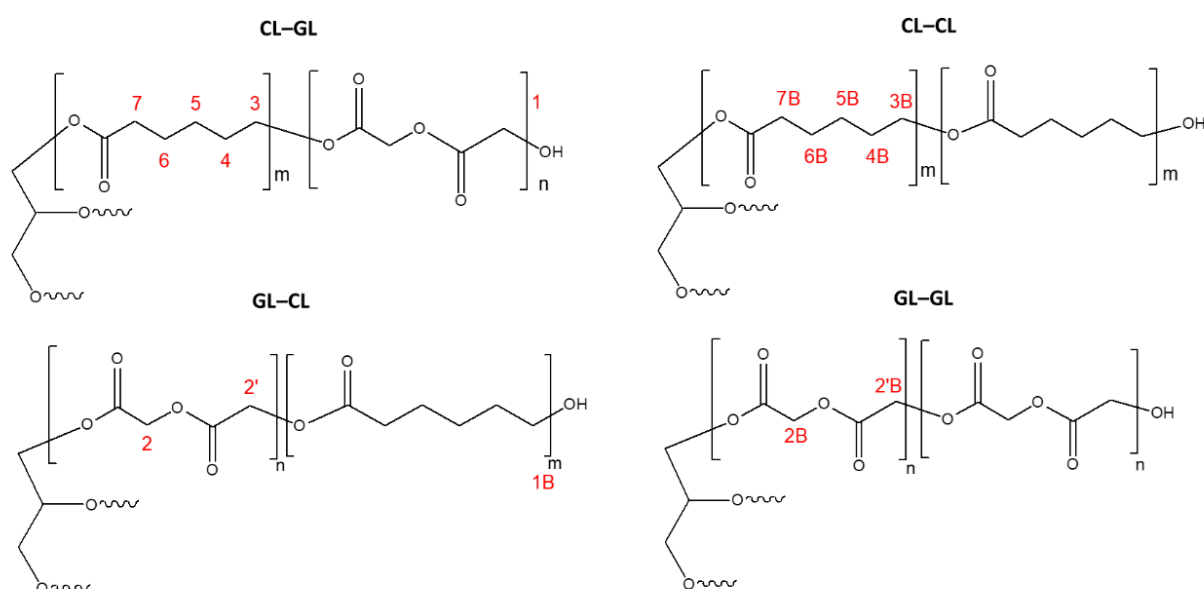
Figure S1. Chemical structure of P(CL-co-GL)triol. Only one branch of the star polymer is represented. The 4 alternations between CL and GL units: CL-GL; CL-CL; GL-CL; GL-GL were reported, where the relevant protons where numbered in red for structural elucidation by HNMR spectroscopy

Signals (ppm)	Assignment	Total H number	P(CL-co-GL) 4:1		P(CL-co-GL) 10:1		P(CL-co-GL) 20:1	
			integral	norm. area	integral	norm. area	integral	norm. area
1.2- 1.9	4,5,6,4B,5B,6B (CL)	6	610.69	101.78	448.53	74.76	393.26	65.54
2.3	7B (CL)	2	100.22	50.11	100	50	100.24	50.12
2.44	7 (CL)	2	84.06	42.03	26.82	13.41	12.35	6.18
3.65	1B (chain end groups)	2	2.1	1.05	3.64	0.91	3.18	1.59
3.75	1 (chain end groups)	2	-	-			-	-
4.07	3B (CL)	2	100	50	100	50	100	50
4.18	3 (CL)	2	84.7	42.35	26.88	13.44	12.27	6.14
4.6- 4.74	2,2B,2',2'B (GL)	4	84.66	21.17	28.6	7.15	11.97	2.99
	[CL]/[GL]$_{HNMR}$ =		4.36		8.87		18.78	
	[CL]/[GL]$_{Feed}$=		4		10		20	

Table S1. Semi-quantification of the CL: GL ratio among the 3 polyesters: P(CL-co-GL) triol synthesized in the present study

Response	Cell type	Score				
		0	1	2	3	4
Encapsulation		0	Partial to complete thin band of granulation tissue/fibrosis surrounding the scaffold	Moderately thick band of granulation tissue/fibrosis surrounding the scaffold	Thick band of granulation tissue/fibrosis surrounding the scaffold	Extensive band of granulation tissue/fibrosis surrounding the scaffold
	Granulocytes (G) (including neutrophils and eosinophils)	0	Minimal infiltrate, 1-5/HPF	Mild infiltrate, 5-10/HPF	Moderate infiltrate, 10-30/HPF	Heavy infiltrate
Inflammation	Lymphocytes (L)	0	Minimal infiltrate, 1-5/HPF	Mild infiltrate, 5-10/HPF	Moderate infiltrate	Heavy infiltrate
	Plasma cells (P)	0	Minimal infiltrate, 1-5/HPF	Mmild infiltrate, 5-10/HPF	Moderate infiltrate	Heavy infiltrate
	Macrophages	0	Minimal infiltrate, 1-10/HPF	Mild infiltrate, 10-30/HPF	Moderate infiltrate	Heavy infiltrate
	Multinucleated giant cells (MGCs)	0	Minimal infiltrate, 1-2/HPF	Mild infiltrate, 3-5/HPF	Moderate infiltrate 6-9/HPF	Heavy infiltrate >10/HPF
Necrosis	Necrotic debris = nuclear basophilic granular debris and/or cytoplasmic eosinophilic amorphous material surrounding the test material.	0	Minimal amount	Mild amount	Moderate amount	Large amount
Tissue ingrowth into porous scaffolds (including Total tissue ingrowth adipose tissue, fibrous tissue, mesenchymal tissue)		0	<25% of Total available space	25-50% of Total available space	50-75% of Available total space	>75% of Available total space

HPF = high power field (field at 400x)

A total inflammation score was also calculated by adding the scores of G+L+P+M+MGCS (range 0-15)

Table S2. Histologic scoring system for Biocompatibility evaluation according to ISO 10993-6:2007, slightly modified to adapt to the present study