

The Regenerative Capacity of Cell Imprinting and Collagen/PCL Scaffold in Gastrocnemius Tendon Defect

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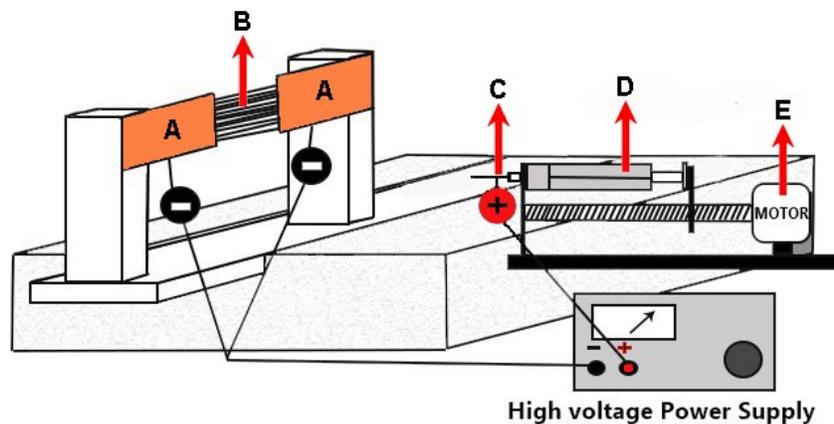
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Supplementary Figure 1. Schematic view of the electrospinning compound. Fiber receiver (A), parallel nanofibers (B), injector needle (C), syringe containing polymer (D), syringe pump (E).

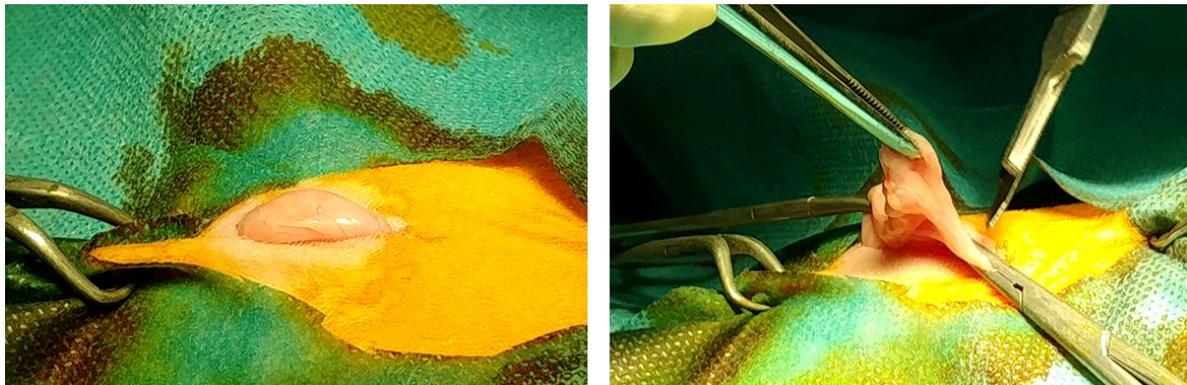
Primer	Sequence (5'-3')
COL1-F	GTCCTTCTGGTCCTCGTGGTC
COL1-R	CTTCGCCATCATCTCCGTTC
TNMD-F	TGTGGACTGGTGTGGTATCC
TNMD-R	CCATTGCTGTAGAAAGTGTGCTC
TNC-F	CAGCCAAAGAGACCTTCACAAC
TNC-R	CTTGCCATTCCTCCATTCCAG
SCX-F	ACACCCAGCCCAAACAGATC
SCX-R	GCCACCTCCTAACTGCGAATC
AGR-F	CACCACGCCTTCTGCTTCC
AGR-R	TGTCACCATCCACTCCTCCAC
RUNX2-F	GGAGTGGACGAGGCAAGAGT
RUNX2-R	AGGCGGTCAGAGAACAACACTAGG
GAPDH-F	TCAAGATCATCAGCAATGCCTC
GAPDH-R	GTCATGAGTCCTTCCACGATACF

F: forward and R: reverse

Supplementary Table 1. Sequences of primers used in real-time PCR

Extracellular matrix (ECM)	1	2	2	2	2	1	0	0	0	1	1	0	1	1	1	0	0	1	1	1
Proteoglycan content	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1
Cellularity/cell–matrix ratio	2	1	2	1	1	0	1	1	0	0	1	1	1	1	2	1	0	0	1	0
Cell alignment	2	2	2	2	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1
Cell distribution	1	0	1	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0
Cell nucleus morphology	2	1	2	1	1	1	1	1	1	1	1	2	1	2	1	0	1	1	0	1
Organization of repair tissue of the tendon callus Homogeneous	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Transition from defective to normal tissue	2	2	2	2	2	1	1	1	1	1	1	1	1	0	1	1	0	0	1	0
configuration of callus	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	0	1
Degenerative changes/tissue metaplasia	2	3	2	3	3	2	1	2	1	2	2	2	2	2	2	1	1	2	1	1
Vascularization in the defect area	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Inflammation	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Sum	17	17	19	18	14	9	8	10	7	8	11	9	10	11	12	6	5	9	6	7

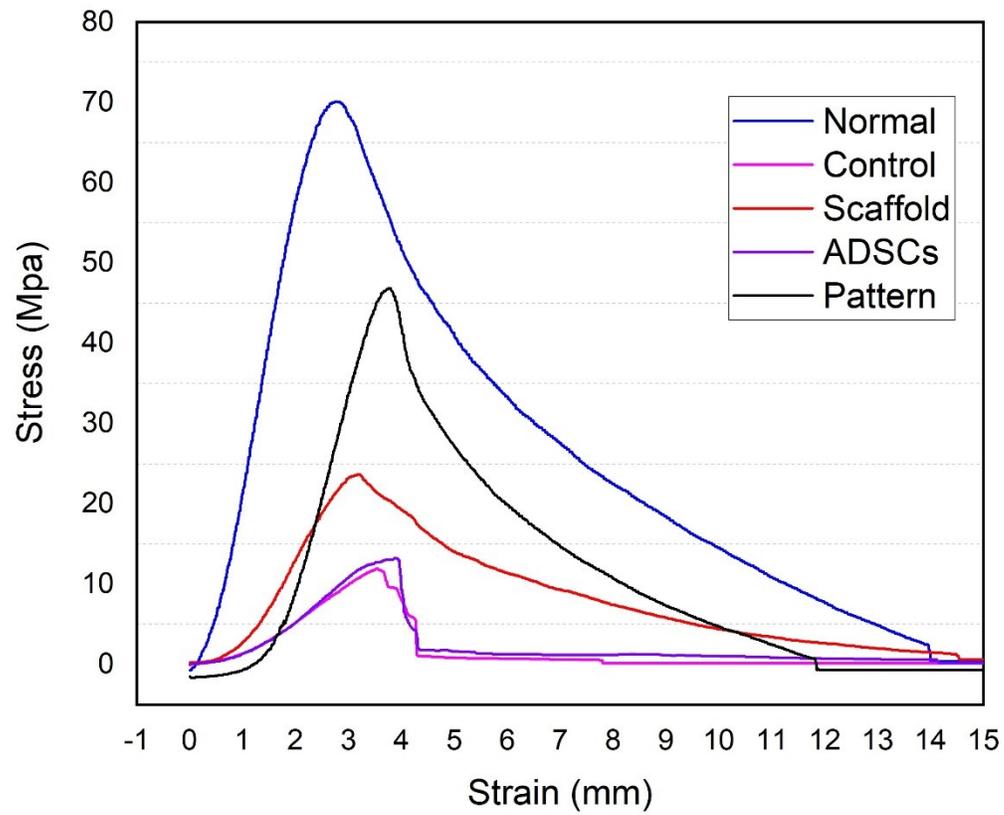
Supplementary Table 2. Scoring categories and each individual rabbit's score after 24 weeks of tendon defect induction and treatment.



Supplementary Figure 2. Adipose tissue isolation from the interscapular region of rabbits.



Supplementary Figure 3. Microscopic image of a longitudinal section of a tendon defect in the Scaffold group showing a natural tendon (NT) at the top of the image. The site of the suture thread connecting the scaffold (S) to the tendon is marked with an asterisk. The remaining scaffold sections are surrounded by a layer of infiltrating mononuclear inflammatory cells and distinct giant cells. Relatively thick parallel collagen fibers are observed around the remaining scaffold structure. Staining: hematoxylin–eosin.



Supplementary Figure 4. Mechanical testing of the rabbit gastrocnemius tendon. The figure shows a plot of stress force vs. strain (displacement).