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Supplementary Materials for

Human Nail Bed Extracellular Matrix Facilitates Bone Regeneration via

JAK2/STAT3 Pathway Mediated Macrophage Polarization

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Fig. S1 Characterization of decellularized nail bed (dNB) tissues. (A) Macroscopic appearance of fresh nail bed tissue (middle) derived from amputated patient (left) and decellularized nail bed scaffold (right). (B) DNA concentration. (C) H&E staining of fresh and decellularized nail bed scaffold. (D) SHG imaging of fresh and decellularized nail bed tissues stained for TRITC-phalloidin showing complete absence of cells in decellularized nail bed scaffolds. SHG imaging. Middle panel: collagen type I. Right panel: collagen type IV. Scale bar: 50 μ m. (E) SEM observations. Scale bar: 1 μ m. (F) Mean fibril diameter quantification in fresh and dNB. (G) Compressive modulus measurement in fresh and dNB.



Fig. S2 KEGG pathway enrichment. KEGG pathways with significant enrichment of differentially expressed proteins (dNB/NC) are visualized. Red indicates upregulated proteins; green indicates downregulated proteins. (A) ECM-receptor interaction; (B) JAK/STAT pathway.



Fig. S3 Effectiveness of STAT3 siRNA to downregulate the expression of STAT3. Western blot analysis of STAT3 pre- and post-application of STAT3 siRNA.

Table S1. Rat (m)-specific (host) forward and reverse primer sets used for qPCR analysis of RNA levels.

Gene	Primers (5' to 3'): Sense & Antisense
Rat CD86	Forward: 5'-GCTCGTAGTATTTTGGCAGGACC-3'
	Reverse: 5'-CGGGTATCCTTGCTTAGATGAGC-3'
Rat iNOS	Forward: 5'-CCAACCTGCAGGTCTTCGATG-3'
	Reverse: 5'-GTCGATGCACAACTGGGTGAAC-3'
Rat CD206	Forward: 5'-TGGTTCCATGAAAGTGCTGC-3'
	Reverse: 5'-TTCCTGGGCTGACTGACTGTA-3'
Rat CD163	Forward: 5'-GTGACGTTCCCTGCATAGGT-3'
	Reverse: 5'-TCCTTGTGCCTGCAGTTATG-3'
Rat IL-10	Forward: 5'-AAGGCAGTGGAGCAGGTGAA-3'
	Reverse: 5'-CCAGCAGACTCAATACACAC-3'
Rat F4/80	Forward: 5'-GATACAGCAATGCCAAGCAGT-3'
	Reverse: 5'-TTGTGAAGGTAGCATTCACAAGTGTA-3'
Rat CD68	Forward: 5'-GCCCGAGTACAGTCTACCTGG-3'
	Reverse: 5'-AGAGATGAATTCTGCGCCAT-3'
Rat CD11b	Forward: 5'-CCAAGAGAATGCAAAAGGCTTT-3'
	Reverse: 5'-GGGGGGCTGCAACAACCACA-3'
Rat NKp46	Forward: 5'-GCAACCCCCTGAAACTGGTA-3'
	Reverse: 5'-AAGGTTACCTCAGGCTGTGGATA-3'
Rat CD19	Forward: 5'-GGAAACCTGACCATCGAGAG-3'
	Reverse: 5'-TGGGACTATCCATCCACCAGTT-3'
Rat CD74	Forward: 5'-CCCAGGACCATGTGATGCAT-3'
	Reverse: 5'-CTTAAGATGCTTCAGATTCTCT-3'
Rat CD207	Forward: 5'-GGACTACAGAACAGCTTGGAGAATG-3'
	Reverse: 5'-TACTTCCAGCCTCGAGCCAC-3'
Rat CD4	Forward: 5'-GAAGATTCTGGGGCAGCATGGCAAAG-3'
	Reverse: 5'-TTTGGAATCAAAACGATCAA-3'
Rat GAPDH	Forward: 5'-TCTTCTTGTGCAGTGCCAGC-3'
	Reverse: 5'-CCCAATACGGCCAAATCCGT-3'