Heather Megan Powell

List of Publications by Year
in descending order

76 papers	2,645 citations	218381 26 h-index	197535 49 g-index
77 all docs	77 docs citations	77 times ranked	3807 citing authors

#	Article	IF	Citations
1	Engineered Human Skin Fabricated Using Electrospun Collagenâ€“PCL Blends: Morphogenesis and Mechanical Properties. Tissue Engineering - Part A, 2009, 15, 2177-2187.	1.6	232
2	Influence of electrospun collagen on wound contraction of engineered skin substitutes. Biomaterials, 2008, 29, 834-843.	5.7	230
3	EDC cross-linking improves skin substitute strength and stability. Biomaterials, 2006, 27, 5821-5827.	5.7	221
4	Mixedâ€species biofilm compromises wound healing by disrupting epidermal barrier function. Journal of Pathology, 2014, 233, 331-343.	2.1	161
5	Direct conversion of injury-site myeloid cells to fibroblast-like cells of granulation tissue. Nature Communications, 2018, 9, 936.	5.8	132
6	Adipogenesis of murine embryonic stem cells in a three-dimensional culture system using electrospun polymer scaffolds. Biomaterials, 2007, 28, 450-458.	5.7	121
7	Staphylococcus aureus Biofilm Infection Compromises Wound Healing by Causing Deficiencies in Granulation Tissue Collagen. Annals of Surgery, 2020, 271, 1174-1185.	2.1	108
8	Dehydrothermal Crosslinking of Electrospun Collagen. Tissue Engineering - Part C: Methods, 2011, 17, 9-17.	1.1	102
9	Plant-Derived Human Collagen Scaffolds for Skin Tissue Engineering. Tissue Engineering - Part A, 2013, 19, 1507-1518.	1.6	69
10	Uniaxial Strain Regulates Morphogenesis, Gene Expression, and Tissue Strength in Engineered Skin. Tissue Engineering - Part A, 2010, 16, 1083-1092.	1.6	60
11	Loss of Myoferlin Redirects Breast Cancer Cell Motility towards Collective Migration. PLoS ONE, 2014, 9, e86110.	1.1	50
12	Wound closure with EDC cross-linked cultured skin substitutes grafted to athymic mice. Biomaterials, 2007, 28, 1084-1092.	5.7	48
13	Nanofibrillar Surfaces via Reactive Ion Etching. Langmuir, 2003, 19, 9071-9078.	1.6	45
14	Regulation of electrospun scaffold stiffness via coaxial core diameter. Acta Biomaterialia, 2011, 7, 1133-1139.	4.1	41
15	Burn Scar Biomechanics after Pressure Garment Therapy. Plastic and Reconstructive Surgery, 2015, 136, 572-581.	0.7	41
16	Inflammatory responses, matrix remodeling, and reâ€epithelialization after fractional CO₂ laser treatment of scars. Lasers in Surgery and Medicine, 2017, 49, 675-685.	1.1	41
17	Collagen-Based Electrospun Materials for Tissue Engineering: A Systematic Review. Bioengineering, 2021, 8, 39.	1.6	38
18	Chondroitinâ€6â€sulfate incorporation and mechanical stimulation increase MSCâ€collagen sponge construct stiffness. Journal of Orthopaedic Research, 2010, 28, 1092-1099.	1.2	35

#	ARTICLE	IF	CITATIONS
19	Scar formation following excisional and burn injuries in a red Duroc pig model. Wound Repair and Regeneration, 2017, 25, 618-631.	1.5	35
20	Inflammatory response and biomechanical properties of coaxial scaffolds for engineered skin in vitro and post-grafting. Acta Biomaterialia, 2018, 80, 247-257.	4.1	35
21	High-Resolution Harmonics Ultrasound Imaging for Non-Invasive Characterization of Wound Healing in a Pre-Clinical Swine Model. PLoS ONE, 2015, 10, e0122327.	1.1	34
22	Effect of skin graft thickness on scar development in a porcine burn model. Burns, 2018, 44, 917-930.	1.1	33
23	Collagen VII Expression Is Required in Both Keratinocytes and Fibroblasts for Anchoring Fibril Formation in Bilayer Engineered Skin Substitutes. Cell Transplantation, 2019, 28, 1242-1256.	1.2	29
24	Current research trends and challenges in tissue engineering for mending broken hearts. Life Sciences, 2019, 229, 233-250.	2.0	29
25	Nanotopographic Control of Cytoskeletal Organization. Langmuir, 2006, 22, 5087-5094.	1.6	28
26	Fluorescein Diacetate for Determination of Cell Viability in Tissue-Engineered Skin. Tissue Engineering - Part C: Methods, 2008, 14, 89-96.	1.1	28
27	Effects of early combinatorial treatment of autologous splitâ€thickness skin grafts in red duroc pig model using pulsed dye laser and fractional CO₂ laser. Lasers in Surgery and Medicine, 2018, 50, 78-87.	1.1	28
28	Fractional CO2 laser micropatterning of cell-seeded electrospun collagen scaffolds enables rete ridge formation in 3D engineered skin. Acta Biomaterialia, 2020, 102, 287-297.	4.1	28
29	Vascular Wall Engineering Via Femtosecond Laser Ablation: Scaffolds with Self-Containing Smooth Muscle Cell Populations. Annals of Biomedical Engineering, 2011, 39, 3031-3041.	1.3	27
30	Tunable Engineered Skin Mechanics via Coaxial Electrospun Fiber Core Diameter. Tissue Engineering - Part A, 2014, 20, 2746-2755.	1.6	26
31	Novel burn device for rapid, reproducible burn wound generation. Burns, 2016, 42, 384-391.	1.1	26
32	Elevated vacuum suspension preserves residual-limb skin health in people with lower-limb amputation: Randomized clinical trial. Journal of Rehabilitation Research and Development, 2016, 53, 1121-1132.	1.6	24
33	Sustained Release of Basic Fibroblast Growth Factor (bFGF) Encapsulated Polycaprolactone (PCL) Microspheres Promote Angiogenesis In Vivo. Nanomaterials, 2019, 9, 1037.	1.9	24
34	Nanoscale modifications of PET polymer surfaces via oxygen-plasma discharge yield minimal changes in attachment and growth of mammalian epithelial and mesenchymal cellsin vitro. Journal of Biomedical Materials Research Part B, 2002, 61, 234-245.	3.0	23
35	Scalable Biomimetic Coaxial Aligned Nanofiber Cardiac Patch: A Potential Model for â€œClinical Trials in a Dishâ€. Frontiers in Bioengineering and Biotechnology, 2020, 8, 567842.	2.0	23
36	Early cessation of pressure garment therapy results in scar contraction and thickening. PLoS ONE, 2018, 13, e0197558.	1.1	22

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37	Cellular Mechanics of Primary Human Cervical Fibroblasts: Influence of Progesterone and a Pro-inflammatory Cytokine. Annals of Biomedical Engineering, 2018, 46, 197-207.	1.3	20
38	Role of Early Application of Pressure Garments following Burn Injury and Autografting. Plastic and Reconstructive Surgery, 2019, 143, 310e-321e.	0.7	19
39	Cultured Epithelial Autograft Combined with Micropatterned Dermal Template Forms Rete Ridges<i>In Vivo</i>. Tissue Engineering - Part A, 2020, 26, 1138-1146.	1.6	19
40	Direct comparison of reproducibility and reliability in quantitative assessments of burn scar properties. Burns, 2021, 47, 466-478.	1.1	18
41	The effect of intravitreal bevacizumab and ranibizumab on cutaneous tensile strength during wound healing. Clinical Ophthalmology, 2013, 7, 185.	0.9	17
42	Epidermal differentiation governs engineered skin biomechanics. Journal of Biomechanics, 2010, 43, 3183-3190.	0.9	15
43	Comparison of the Biological Equivalence of Two Methods for Isolating Bone Marrow Mononuclear Cells for Fabricating Tissue-Engineered Vascular Grafts. Tissue Engineering - Part C: Methods, 2015, 21, 597-604.	1.1	15
44	Skin Biomechanics and miRNA Expression Following Chronic UVB Irradiation. Advances in Wound Care, 2020, 9, 79-89.	2.6	15
45	Coming to Consensus: What Defines Deep Partial Thickness Burn Injuries in Porcine Models?. Journal of Burn Care and Research, 2021, 42, 98-109.	0.2	15
46	Chemotherapeutic implants via subcritical CO2 modification. Biomaterials, 2007, 28, 5562-5569.	5.7	14
47	In situ differentiation of human-induced pluripotent stem cells into functional cardiomyocytes on a coaxial PCL-gelatin nanofibrous scaffold. Materials Science and Engineering C, 2021, 118, 111354.	3.8	14
48	Electrospun Aligned Coaxial Nanofibrous Scaffold for Cardiac Repair. Methods in Molecular Biology, 2021, 2193, 129-140.	0.4	13
49	Fractional CO2 laser ablation of porcine burn scars after grafting: Is deeper better?. Burns, 2020, 46, 937-948.	1.1	12
50	Incorporation of 3D stereophotogrammetry as a reliable method for assessing scar volume in standard clinical practice. Burns, 2019, 45, 1614-1620.	1.1	11
51	Improved Scar Outcomes with Increased Daily Duration of Pressure Garment Therapy. Advances in Wound Care, 2020, 9, 453-461.	2.6	11
52	Electrospun vascular graft properties following femtosecond laser ablation. Journal of Applied Polymer Science, 2012, 124, 2513-2523.	1.3	10
53	Standardized Approach to Quantitatively Measure Residual Limb Skin Health in Individuals with Lower Limb Amputation. Advances in Wound Care, 2017, 6, 225-232.	2.6	10
54	Mechanomodulation of Burn Scarring Via Pressure Therapy. Advances in Wound Care, 2022, 11, 179-191.	2.6	10

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55	Microstructural disassembly of calcium phosphates. Journal of Biomedical Materials Research Part B, 2004, 68A, 61-70.	3.0	9
56	Hemoglobin regulates the metabolic and synthetic function of rat insulinoma cells cultured in a hollow fiber bioreactor. Biotechnology and Bioengineering, 2010, 107, 582-592.	1.7	9
57	Early Intervention in Ischemic Tissue with Oxygen Nanocarriers Enables Successful Implementation of Restorative Cell Therapies. Cellular and Molecular Bioengineering, 2020, 13, 435-446.	1.0	9
58	3D engineered human gingiva fabricated with electrospun collagen scaffolds provides a platform for in vitro analysis of gingival seal to abutment materials. PLoS ONE, 2022, 17, e0263083.	1.1	9
59	Evaluation of femoral head damage during canine total hip replacement. Veterinary and Comparative Orthopaedics and Traumatology, 2003, 16, 184-190.	0.2	8
60	MRI compatibility of silver based wound dressings. Burns, 2018, 44, 1940-1946.	1.1	8
61	Isolation and feeder-free primary culture of four cell types from a single human skin sample. STAR Protocols, 2022, 3, 101172.	0.5	8
62	Morphogenesis and Biomechanics of Engineered Skin Cultured Under Uniaxial Strain. Advances in Wound Care, 2012, 1, 69-74.	2.6	7
63	Scaffold Architecture Controls Insulinoma Clustering, Viability, and Insulin Production. Tissue Engineering - Part A, 2014, 20, 1784-1793.	1.6	7
64	Survey of national and local practice of compression therapy timing for burn patients in the United States. Burns, 2019, 45, 1215-1222.	1.1	7
65	Influence of hydration on fiber geometry in electrospun scaffolds. Acta Biomaterialia, 2012, 8, 4342-4348.	4.1	6
66	Fluorescein Diacetate for Determination of Cell Viability in 3D Fibroblastâ€"Collagenâ€"GAG Constructs. Methods in Molecular Biology, 2011, 740, 115-126.	0.4	6
67	Structural, Chemical, and Mechanical Properties of Pressure Garments as a Function of Simulated Use and Repeated Laundering. Journal of Burn Care and Research, 2018, 39, 562-571.	0.2	5
68	FXCO2 laser therapy of existing burn scars does not significantly improve outcomes in a porcine model. Burns Open, 2019, 3, 89-95.	0.2	3
69	Advantages and Disadvantages of Using Small and Large Animals in Burn Research: Proceedings of the 2021 Research Special Interest Group. Journal of Burn Care and Research, 2022, 43, 1032-1041.	0.2	3
70	Report on Three Porcine Proof-of-concept Studies: Comparison of a Dermatome With a Rotating Excision Ring With Conventional Dermatomes for the Harvesting of Split Skin Grafts and Excision of Necrosis. Wounds, 2019, 31, 137-144.	0.2	1
71	Evaluation of a Novel Scaffold Material for Tendon Tissue Engineering. , 2007, , 1005.		0
72	Regulation of Tendon Tissue Engineered Construct Stiffness by Culture Time, Mesenchymal Stem Cells and Mechanical Stimulation. , 2009, , .		0

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73	656 Inter- and Intra-user Reliability of Skin Graft Thickness as a Function of Instrument. Journal of Burn Care and Research, 2020, 41, S173-S174.	0.2	0
74	Response to the Letter to the Editor: Fractional CO2 laser ablation of porcine burn scars after grafting: Is deeper better?. Burns, 2021, 47, 494-495.	1.1	0
75	Combined Effect of Glycosaminoglycan and Mechanical Stimulation on the In Vitro Biomechanics of Tissue Engineered Tendon Constructs. , 2007, , .		0
76	610 Myofibroblasts Are Not Characteristic Features of Keloid Lesions. Journal of Burn Care and Research, 2022, 43, S145-S145.	0.2	0