Frank P T Baaijens

List of Publications by Year
in descending order

179 papers	8,827 citations	36299 51 h-index	49904 87 g-index
180 all docs	180 docs citations	180 times ranked	8532 citing authors

#	Article	IF	Citations
1	Decreased mechanical stiffness in LMNAâˆ'/âˆ' cells is caused by defective nucleo-cytoskeletal integrity: implications for the development of laminopathies. Human Molecular Genetics, 2004, 13, 2567-2580.	2.9	316
2	Substrates for cardiovascular tissue engineering. Advanced Drug Delivery Reviews, 2011, 63, 221-241.	13.7	235
3	Fibrin as a cell carrier in cardiovascular tissue engineering applications. Biomaterials, 2005, 26, 3113-3121.	11.4	232
4	In situ heart valve tissue engineering using a bioresorbable elastomeric implant â€" From material design to 12 months follow-up in sheep. Biomaterials, 2017, 125, 101-117.	11.4	231
5	Minimally-Invasive Implantation of Living Tissue Engineered Heart Valves. Journal of the American College of Cardiology, 2010, 56, 510-520.	2.8	213
6	Determination of the Poisson's ratio of the cell: recovery properties of chondrocytes after release from complete micropipette aspiration. Journal of Biomechanics, 2006, 39, 78-87.	2.1	207
7	Tissue Engineering of Human Heart Valve Leaflets: A Novel Bioreactor for a Strain-Based Conditioning Approach. Annals of Biomedical Engineering, 2005, 33, 1778-1788.	2.5	187
8	Biomechanics and mechanobiology in functional tissue engineering. Journal of Biomechanics, 2014, 47, 1933-1940.	2.1	186
9	Linear viscoelastic behavior of subcutaneous adipose tissue. Biorheology, 2008, 45, 677-688.	0.4	174
10	Off-the-shelf human decellularized tissue-engineered heart valves in a non-human primate model. Biomaterials, 2013, 34, 7269-7280.	11.4	173
11	Transcatheter Implantation of Homologous â€œOff-the-Shelfâ€•Tissue-Engineered Heart Valves With Self-Repair Capacity. Journal of the American College of Cardiology, 2014, 63, 1320-1329.	2.8	170
12	Tailoring Fiber Diameter in Electrospun Poly(É›-Caprolactone) Scaffolds for Optimal Cellular Infiltration in Cardiovascular Tissue Engineering. Tissue Engineering - Part A, 2009, 15, 437-444.	3.1	165
13	The Role of Collagen Cross-Links in Biomechanical Behavior of Human Aortic Heart Valve Leafletsâ€"Relevance for Tissue Engineering. Tissue Engineering, 2007, 13, 1501-1511.	4.6	158
14	In vitro indentation to determine the mechanical properties of epidermis. Journal of Biomechanics, 2011, 44, 1176-1181.	2.1	153
15	Strain-dependent modulation of macrophage polarization within scaffolds. Biomaterials, 2014, 35, 4919-4928.	11.4	150
16	Decellularized homologous tissue-engineered heart valves as off-the-shelf alternatives to xeno- and homografts. Biomaterials, 2012, 33, 4545-4554.	11.4	147
17	Pressure Induced Deep Tissue Injury Explained. Annals of Biomedical Engineering, 2015, 43, 297-305.	2.5	146
18	Computational modeling guides tissue-engineered heart valve design for long-term in vivo performance in a translational sheep model. Science Translational Medicine, 2018, 10, .	12.4	142

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19	The Relative Contributions of Compression and Hypoxia to Development of Muscle Tissue Damage: An In Vitro Study. Annals of Biomedical Engineering, 2007, 35, 273-284.	2.5	138
20	Autologous Human Tissue-Engineered Heart Valves: Prospects for Systemic Application. Circulation, 2006, 114, I-152-I-158.	1.6	130
21	Next-generation tissue-engineered heart valves with repair, remodelling and regeneration capacity. Nature Reviews Cardiology, 2021, 18, 92-116.	13.7	128
22	Tissue engineering of heart valves: advances and current challenges. Expert Review of Medical Devices, 2009, 6, 259-275.	2.8	126
23	Advanced maturation by electrical stimulation: Differences in response between C2C12 and primary muscle progenitor cells. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 529-539.	2.7	125
24	A Structural Constitutive Model For Collagenous Cardiovascular Tissues Incorporating the Angular Fiber Distribution. Journal of Biomechanical Engineering, 2005, 127, 494-503.	1.3	124
25	Dynamic Straining Combined with Fibrin Gel Cell Seeding Improves Strength of Tissue-Engineered Small-Diameter Vascular Grafts. Tissue Engineering - Part A, 2009, 15, 1081-1089.	3.1	115
26	Remodelling of the angular collagen fiber distribution in cardiovascular tissues. Biomechanics and Modeling in Mechanobiology, 2008, 7, 93-103.	2.8	108
27	Large Deformation Finite Element Analysis of Micropipette Aspiration to Determine the Mechanical Properties of the Chondrocyte. Annals of Biomedical Engineering, 2005, 33, 494-501.	2.5	96
28	<i>In Situ</i> Tissue Engineering of Functional Small-Diameter Blood Vessels by Host Circulating Cells Only. Tissue Engineering - Part A, 2015, 21, 2583-2594.	3.1	92
29	Temporal differences in the influence of ischemic factors and deformation on the metabolism of engineered skeletal muscle. Journal of Applied Physiology, 2007, 103, 464-473.	2.5	91
30	Effects of a combined mechanical stimulation protocol: Value for skeletal muscle tissue engineering. Journal of Biomechanics, 2010, 43, 1514-1521.	2.1	91
31	Meet the new meat: tissue engineered skeletal muscle. Trends in Food Science and Technology, 2010, 21, 59-66.	15.1	91
32	Computational Analyses of Mechanically Induced Collagen Fiber Remodeling in the Aortic Heart Valve. Journal of Biomechanical Engineering, 2003, 125, 549-557.	1.3	89
33	Thermoplastic Elastomers Based on Strong and Well-Defined Hydrogen-Bonding Interactions. Macromolecules, 2008, 41, 5703-5708.	4.8	85
34	Modeling the mechanics of tissue-engineered human heart valve leaflets. Journal of Biomechanics, 2007, 40, 325-334.	2.1	84
35	Emerging Trends in Heart Valve Engineering: Part I. Solutions for Future. Annals of Biomedical Engineering, 2015, 43, 833-843.	2.5	80
36	The influence of matrix integrity on stress-fiber remodeling in 3D. Biomaterials, 2012, 33, 7508-7518.	11.4	79

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37	Osmoviscoelastic finite element model of the intervertebral disc. European Spine Journal, 2006, 15, 361-371.	2.2	76
38	Modeling collagen remodeling. Journal of Biomechanics, 2010, 43, 166-175.	2.1	75
39	Local axial compressive mechanical properties of human carotid atherosclerotic plaquesâ€"characterisation by indentation test and inverse finite element analysis. Journal of Biomechanics, 2013, 46, 1759-1766.	2.1	75
40	Computationally Designed 3D Printed Self-Expandable Polymer Stents with Biodegradation Capacity for Minimally Invasive Heart Valve Implantation: A Proof-of-Concept Study. 3D Printing and Additive Manufacturing, 2017, 4, 19-29.	2.9	73
41	Improved Prediction of the Collagen Fiber Architecture in the Aortic Heart Valve. Journal of Biomechanical Engineering, 2005, 127, 329-336.	1.3	72
42	Heading in the Right Direction: Understanding Cellular Orientation Responses to Complex Biophysical Environments. Cellular and Molecular Bioengineering, 2016, 9, 12-37.	2.1	71
43	An Integrated Finite-Element Approach to Mechanics, Transport and Biosynthesis in Tissue Engineering. Journal of Biomechanical Engineering, 2004, 126, 82-91.	1.3	69
44	Effect of Strain Magnitude on the Tissue Properties of Engineered Cardiovascular Constructs. Annals of Biomedical Engineering, 2008, 36, 244-253.	2.5	68
45	Hydrolytic and oxidative degradation of electrospun supramolecular biomaterials: In vitro degradation pathways. Acta Biomaterialia, 2015, 27, 21-31.	8.3	68
46	Quantification of the Temporal Evolution of Collagen Orientation in Mechanically Conditioned Engineered Cardiovascular Tissues. Annals of Biomedical Engineering, 2009, 37, 1263-1272.	2.5	67
47	How to Make a Heart Valve: From Embryonic Development to Bioengineering of Living Valve Substitutes. Cold Spring Harbor Perspectives in Medicine, 2014, 4, a013912-a013912.	6.2	63
48	Mechanical characterization of anisotropic planar biological soft tissues using finite indentation: Experimental feasibility. Journal of Biomechanics, 2008, 41, 422-429.	2.1	59
49	Soft substrates normalize nuclear morphology and prevent nuclear rupture in fibroblasts from a laminopathy patient with compound heterozygous LMNA mutations. Nucleus, 2013, 4, 61-73.	2.2	58
50	Intermittent Straining Accelerates the Development of Tissue Properties in Engineered Heart Valve Tissue. Tissue Engineering - Part A, 2009, 15, 999-1008.	3.1	56
51	A computational analysis of cell-mediated compaction and collagen remodeling in tissue-engineered heart valves. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 58, 173-187.	3.1	55
52	Compressive mechanical properties of atherosclerotic plaquesâ€"Indentation test to characterise the local anisotropic behaviour. Journal of Biomechanics, 2014, 47, 784-792.	2.1	54
53	Computational model predicts cell orientation in response to a range of mechanical stimuli. Biomechanics and Modeling in Mechanobiology, 2014, 13, 227-236.	2.8	54
54	Emerging Trends in Heart Valve Engineering: Part II. Novel and Standard Technologies for Aortic Valve Replacement. Annals of Biomedical Engineering, 2015, 43, 844-857.	2.5	52

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55	Mechanoregulation of Vascularization in Aligned Tissue-Engineered Muscle: A Role for Vascular Endothelial Growth Factor. Tissue Engineering - Part A, 2011, 17, 2857-2865.	3.1	50
56	Polymerâ€based Scaffold Designs For In Situ Vascular Tissue Engineering: Controlling Recruitment and Differentiation Behavior of Endothelial Colony Forming Cells. Macromolecular Bioscience, 2012, 12, 577-590.	4.1	50
57	Strain-induced Collagen Organization at the Micro-level in Fibrin-based Engineered Tissue Constructs. Annals of Biomedical Engineering, 2013, 41, 763-774.	2.5	50
58	Improved Geometry of Decellularized Tissue Engineered Heart Valves to Prevent Leaflet Retraction. Annals of Biomedical Engineering, 2016, 44, 1061-1071.	2.5	50
59	Linear shear response of the upper skin layers. Biorheology, 2011, 48, 229-245.	0.4	49
60	Differential Response of Endothelial and Endothelial Colony Forming Cells on Electrospun Scaffolds with Distinct Microfiber Diameters. Biomacromolecules, 2014, 15, 821-829.	5.4	49
61	Age-Dependent Changes in Geometry, Tissue Composition and Mechanical Properties of Fetal to Adult Cryopreserved Human Heart Valves. PLoS ONE, 2016, 11, e0149020.	2.5	48
62	Stress related collagen ultrastructure in human aortic valvesâ€"implications for tissue engineering. Journal of Biomechanics, 2008, 41, 2612-2617.	2.1	47
63	A comparative analysis of the collagen architecture in the carotid artery: Second harmonic generation versus diffusion tensor imaging. Biochemical and Biophysical Research Communications, 2012, 426, 54-58.	2.1	47
64	Age-dependent changes of stress and strain in the human heart valve and their relation with collagen remodeling. Acta Biomaterialia, 2016, 29, 161-169.	8.3	47
65	A physically motivated constitutive model for cell-mediated compaction and collagen remodeling in soft tissues. Biomechanics and Modeling in Mechanobiology, 2014, 13, 985-1001.	2.8	45
66	Can We Grow Valves Inside the Heart? Perspective on Material-based In Situ Heart Valve Tissue Engineering. Frontiers in Cardiovascular Medicine, 2018, 5, 54.	2.4	45
67	Cytokine and chemokine release upon prolonged mechanical loading of the epidermis. Experimental Dermatology, 2007, 16, 567-573.	2.9	44
68	The Influence of Serum-Free Culture Conditions on Skeletal Muscle Differentiation in a Tissue-Engineered Model. Tissue Engineering - Part A, 2008, 14, 161-171.	3.1	44
69	3D Fiber Orientation in Atherosclerotic Carotid Plaques. Journal of Structural Biology, 2017, 200, 28-35.	2.8	44
70	A Theoretical Analysis of Damage Evolution in Skeletal Muscle Tissue With Reference to Pressure Ulcer Development. Journal of Biomechanical Engineering, 2003, 125, 902-909.	1.3	43
71	Understanding the requirements of self-expandable stents for heart valve replacement: Radial force, hoop force and equilibrium. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 68, 252-264.	3.1	43
72	Hypoxia Induces Near-Native Mechanical Properties in Engineered Heart Valve Tissue. Circulation, 2009, 119, 290-297.	1.6	42

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73	Finite Element Model of Mechanically Induced Collagen Fiber Synthesis and Degradation in the Aortic Valve. Annals of Biomedical Engineering, 2003, 31, 1040-1053.	2.5	40
74	Tailoring the void space and mechanical properties in electrospun scaffolds towards physiological ranges. Journal of Materials Chemistry B, 2014, 2, 305-313.	5.8	40
75	Influence of Osmotic Pressure Changes on the Opening of Existing Cracks in 2 Intervertebral Disc Models. Spine, 2006, 31, 1783-1788.	2.0	39
76	Monitoring Local Cell Viability in Engineered Tissues: A Fast, Quantitative, and Nondestructive Approach. Tissue Engineering, 2003, 9, 269-281.	4.6	38
77	Does subcutaneous adipose tissue behave as an (anti-)thixotropic material?. Journal of Biomechanics, 2010, 43, 1153-1159.	2.1	37
78	Mechanical Characterization of Anisotropic Planar Biological Soft Tissues Using Large Indentation: A Computational Feasibility Study. Journal of Biomechanical Engineering, 2005, 128, 428.	1.3	36
79	Are disc pressure, stress, and osmolarity affected by intra- and extrafibrillar fluid exchange?. Journal of Orthopaedic Research, 2007, 25, 1317-1324.	2.3	36
80	Tissue-Engineered Heart Valves Develop Native-like Collagen Fiber Architecture. Tissue Engineering - Part A, 2010, 16, 1527-1537.	3.1	36
81	An<i>In Vitro</i>Model System to Quantify Stress Generation, Compaction, and Retraction in Engineered Heart Valve Tissue. Tissue Engineering - Part C: Methods, 2011, 17, 983-991.	2.1	36
82	Synergistic protein secretion by mesenchymal stromal cells seeded in 3D scaffolds and circulating leukocytes in physiological flow. Biomaterials, 2014, 35, 9100-9113.	11.4	36
83	In vitro models to study compressive strain-induced muscle cell damage. Biorheology, 2003, 40, 383-8.	0.4	36
84	Shear flow affects selective monocyte recruitment into <scp>MCP</scp>â€•1â€•loaded scaffolds. Journal of Cellular and Molecular Medicine, 2014, 18, 2176-2188.	3.6	35
85	Emerging Trends in Heart Valve Engineering: Part III. Novel Technologies for Mitral Valve Repair and Replacement. Annals of Biomedical Engineering, 2015, 43, 858-870.	2.5	35
86	Modulation of collagen fiber orientation by strain-controlled enzymatic degradation. Acta Biomaterialia, 2016, 35, 118-126.	8.3	35
87	Influence of substrate stiffness on circulating progenitor cell fate. Journal of Biomechanics, 2012, 45, 736-744.	2.1	34
88	In situheart valve tissue engineering: simple devices, smart materials, complex knowledge. Expert Review of Medical Devices, 2012, 9, 453-455.	2.8	34
89	Emerging Trends in Heart Valve Engineering: Part IV. Computational Modeling and Experimental Studies. Annals of Biomedical Engineering, 2015, 43, 2314-2333.	2.5	34
90	<i>In Vivo</i> Collagen Remodeling in the Vascular Wall of Decellularized Stented Tissue-Engineered Heart Valves. Tissue Engineering - Part A, 2015, 21, 2206-2215.	3.1	33

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91	The Evolution of Collagen Fiber Orientation in Engineered Cardiovascular Tissues Visualized by Diffusion Tensor Imaging. PLoS ONE, 2015, 10, e0127847.	2.5	33
92	Controlling matrix formation and cross-linking by hypoxia in cardiovascular tissue engineering. Journal of Applied Physiology, 2010, 109, 1483-1491.	2.5	32
93	Passive and active contributions to generated force and retraction in heart valve tissue engineering. Biomechanics and Modeling in Mechanobiology, 2012, 11, 1015-1027.	2.8	32
94	Synergy between Rho signaling and matrix density in cyclic stretch-induced stress fiber organization. Acta Biomaterialia, 2014, 10, 1876-1885.	8.3	32
95	Effect of biomimetic conditions on mechanical and structural integrity of PGA/P4HB and electrospun PCL scaffolds. Journal of Materials Science: Materials in Medicine, 2008, 19, 1137-1144.	3.6	31
96	Competition between cap and basal actin fiber orientation in cells subjected to contact guidance and cyclic strain. Scientific Reports, 2015, 5, 8752.	3.3	31
97	The Transport Profile of Cytokines in Epidermal Equivalents Subjected to Mechanical Loading. Annals of Biomedical Engineering, 2009, 37, 1007-1018.	2.5	26
98	Percutaneous pulmonary valve replacement using completely tissue-engineered off-the-shelf heart valves: six-month in vivo functionality and matrix remodelling in sheep. EuroIntervention, 2016, 12, 62-70.	3.2	26
99	Evaluation of a Continuous Quantification Method of Apoptosis and Necrosis in Tissue Cultures. Cytotechnology, 2004, 46, 139-150.	1.6	25
100	Engineering Skeletal Muscle Tissues from Murine Myoblast Progenitor Cells and Application of Electrical Stimulation. Journal of Visualized Experiments, 2013, , e4267.	0.3	23
101	A Microstructurally Motivated Model of the Mechanical Behavior of Tissue Engineered Blood Vessels. Annals of Biomedical Engineering, 2008, 36, 1782-1792.	2.5	22
102	Geometry influences inflammatory host cell response and remodeling in tissue-engineered heart valves in-vivo. Scientific Reports, 2020, 10, 19882.	3.3	22
103	Trans-apical versus surgical implantation of autologous ovine tissue-engineered heart valves. Journal of Heart Valve Disease, 2012, 21, 670-8.	0.5	22
104	Straining Modeâ€“Dependent Collagen Remodeling in Engineered Cardiovascular Tissue. Tissue Engineering - Part A, 2009, 15, 841-849.	3.1	21
105	Degree of Scaffold Degradation Influences Collagen (re)Orientation in Engineered Tissues. Tissue Engineering - Part A, 2014, 20, 1747-1757.	3.1	21
106	Local anisotropic mechanical properties of human carotid atherosclerotic plaques â€“ Characterisation by micro-indentation and inverse finite element analysis. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 43, 59-68.	3.1	21
107	Diffusion profile of macromolecules within and between human skin layers for (trans)dermal drug delivery. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 50, 215-222.	3.1	21
108	An in vitro Model System to Study the Damaging Effects of Prolonged Mechanical Loading of the Epidermis. Annals of Biomedical Engineering, 2006, 34, 506-514.	2.5	20

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109	Plasma variations of biomarkers for muscle damage in male nondisabled and spinal cord injured subjects. Journal of Rehabilitation Research and Development, 2012, 49, 361.	1.6	20
110	A Mesofluidics-Based Test Platform for Systematic Development of Scaffolds for<i>In Situ</i>Cardiovascular Tissue Engineering. Tissue Engineering - Part C: Methods, 2012, 18, 475-485.	2.1	20
111	Variation in tissue outcome of ovine and human engineered heart valve constructs: relevance for tissue engineering. Regenerative Medicine, 2012, 7, 59-70.	1.7	20
112	Superior Tissue Evolution in Slow-Degrading Scaffolds for Valvular Tissue Engineering. Tissue Engineering - Part A, 2016, 22, 123-132.	3.1	19
113	First percutaneous implantation of a completely tissue-engineered self-expanding pulmonary heart valve prosthesis using a newly developed delivery system: a feasibility study in sheep. Cardiovascular Intervention and Therapeutics, 2017, 32, 36-47.	2.3	19
114	Diffusion measurements in epidermal tissues with fluorescent recovery after photobleaching. Skin Research and Technology, 2008, 14, 462-467.	1.6	18
115	The influence of endothelial cells on the ECM composition of 3D engineered cardiovascular constructs. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 11-18.	2.7	18
116	Collagen Matrix Remodeling in Stented Pulmonary Arteries after Transapical Heart Valve Replacement. Cells Tissues Organs, 2016, 201, 159-169.	2.3	18
117	Deformation-Controlled Load Application in Heart Valve Tissue Engineering. Tissue Engineering - Part C: Methods, 2009, 15, 707-716.	2.1	17
118	Nondestructive and Noninvasive Assessment of Mechanical Properties in Heart Valve Tissue Engineering. Tissue Engineering - Part A, 2009, 15, 797-806.	3.1	17
119	Cell-mediated retraction versus hemodynamic loading â€“ A delicate balance in tissue-engineered heart valves. Journal of Biomechanics, 2014, 47, 2064-2069.	2.1	17
120	Mechanisms that play a role in the maintenance of the calcium gradient in the epidermis. Skin Research and Technology, 2007, 13, 369-376.	1.6	16
121	The non-linear mechanical properties of soft engineered biological tissues determined by finite spherical indentation. Computer Methods in Biomechanics and Biomedical Engineering, 2008, 11, 585-592.	1.6	16
122	Understanding strain-induced collagen matrix development in engineered cardiovascular tissues from gene expression profiles. Cell and Tissue Research, 2013, 352, 727-737.	2.9	16
123	Mechanical analysis of ovine and pediatric pulmonary artery for heart valve stent design. Journal of Biomechanics, 2013, 46, 2075-2081.	2.1	16
124	Prediction of Cell Alignment on Cyclically Strained Grooved Substrates. Biophysical Journal, 2016, 111, 2274-2285.	0.5	15
125	Matrix Production and Organization by Endothelial Colony Forming Cells in Mechanically Strained Engineered Tissue Constructs. PLoS ONE, 2013, 8, e73161.	2.5	14
126	Mechanics of the pulmonary valve in the aortic position. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 29, 557-567.	3.1	14

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127	Computational and experimental investigation of local stress fiber orientation in uniaxially and biaxially constrained microtissues. Biomechanics and Modeling in Mechanobiology, 2014, 13, 1053-1063.	2.8	12
128	Functional tissue engineering: Ten more years of progress. Journal of Biomechanics, 2014, 47, 1931-1932.	2.1	11
129	The Effects of Scaffold Remnants in Decellularized Tissue-Engineered Cardiovascular Constructs on the Recruitment of Blood Cells<sup />. Tissue Engineering - Part A, 2017, 23, 1142-1151.	3.1	11
130	Excessive volume of hydrogel injectates may compromise the efficacy for the treatment of acute myocardial infarction. International Journal for Numerical Methods in Biomedical Engineering, 2016, 32, e02772.	2.1	10
131	Cellular strain avoidance is mediated by a functional actin cap; observations in an LMNA-deficient cell model. Journal of Cell Science, 2017, 130, 779-790.	2.0	9
132	Remodeling of the Collagen Fiber Architecture Due to Compaction in Small Vessels Under Tissue Engineered Conditions. Journal of Biomechanical Engineering, 2011, 133, 071002.	1.3	8
133	Low Oxygen Concentrations Impair Tissue Development in Tissue-Engineered Cardiovascular Constructs. Tissue Engineering - Part A, 2012, 18, 221-231.	3.1	8
134	The Potential of Prolonged Tissue Culture to Reduce Stress Generation and Retraction in Engineered Heart Valve Tissues. Tissue Engineering - Part C: Methods, 2013, 19, 205-215.	2.1	8
135	Poly-<i>Îµ</i>-caprolactone scaffold and reduced<i>in vitro</i>cell culture: beneficial effect on compaction and improved valvular tissue formation. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, E289-E301.	2.7	8
136	Transcatheter-Delivered Expandable Bioresorbable Polymeric Graft With Stenting Capacity Induces Vascular Regeneration. JACC Basic To Translational Science, 2020, 5, 1095-1110.	4.1	8
137	Are adipose-derived stem cells cultivated in human platelet lysate suitable for heart valve tissue engineering?. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2193-2203.	2.7	7
138	Cell nutrition. , 2008, , 327-362.		6
139	Predicting and understanding collagen remodeling in human native heart valves during early development. Acta Biomaterialia, 2018, 80, 203-216.	8.3	5
140	Controlling the adaption behaviour of next-generation tissue-engineered cardiovascular implants via computational modelling. European Heart Journal, 2020, 41, 1069-1073.	2.2	5
141	Functional tissue engineering of the aortic heart valve. Clinical Hemorheology and Microcirculation, 2005, 33, 197-9.	1.7	5
142	Response to Dr. Schachar. Journal of Biomechanics, 2006, 39, 2344-2345.	2.1	3
143	Computed Tomography Detects Tissue Formation in a Stented Engineered Heart Valve. Annals of Thoracic Surgery, 2011, 92, 344-345.	1.3	3
144	Dual Electrospun Supramolecular Polymer Systems for Selective Cell Migration. Macromolecular Bioscience, 2018, 18, e1800004.	4.1	2

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145	Point of View: Response. Spine, 2006, 31, E527.	2.0	1
146	Living Heart Valve and Small-Diameter Artery Substitutes - An Emerging Field for Intellectual Property Development. Recent Patents on Biotechnology, 2008, 2, 1-9.	0.8	1
147	Engineering Fibrin-based Tissue Constructs from Myofibroblasts and Application of Constraints and Strain to Induce Cell and Collagen Reorganization. Journal of Visualized Experiments, 2013, , e51009.	0.3	1
148	Stress-Fiber Remodeling in 3D: â€˜Contact Guidance vs Stretch Avoidanceâ€™. , 2012, , .		1
149	The Relative Contributions of Muscle Deformation and Ischemia to Pressure Ulcer Development. , 2012, , .		1
150	Computational analysis of the role of mechanosensitive Notch signaling in arterial adaptation to hypertension. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 133, 105325.	3.1	1
151	Stress Dependent Collagen Fibril Diameter Distribution in Human Aortic Valves. , 2007, , .		0
152	Mechanical Properties of the Epidermis and Stratum Corneum Determined by Submicron Indentation In Vitro. , 2009, , .		0
153	Instructive Materials for Functional Tissue Engineering. Macromolecular Bioscience, 2010, 10, 1283-1284.	4.1	0
154	Optimal Boundary Conditions for the Multi-Scale Finite Element Analysis of Fibrous Scaffolds for Heart Valve Tissue Engineering. , 2011, , .		0
155	Preface. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 401-401.	1.6	0
156	Computational Modeling of Cell Orientation in 3D Micro-Constructs. , 2013, , .		0
157	Effects of Valve Geometry and Tissue Anisotropy on the Radial Stretch and Coaptation Area of Tissue-Engineered Heart Valves. , 2013, , .		0
158	Local Anisotropic Mechanical Behavior of Human Carotid Atherosclerotic Plaques: Characterization Using Indentation Test and Inverse Finite Element Analysis. , 2013, , .		0
159	Cytokine and Chemokine Release Upon Sustained Mechanical Loading of the Epidermis. , 2007, , .		0
160	Non Invasive Assessment of Leaflet Deformation in Heart Valve Tissue Engineering. , 2007, , .		0
161	3D Coculture of Human Endothelial Cells and Myofibroblasts for Vascular Tissue Engineering. , 2007, , .		0
162	Ischemic Factors and Deformation Influence Metabolism of Engineered Skeletal Muscle. , 2007, , .		0

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163	Effects of Anomalous Diffusion Mechanisms in Developing Tissue Engineered Constructs. , 2007, , .		0
164	Mechanical Conditioning Stimulates the Development of Tissue Properties in Engineered Cardiovascular Constructs. , 2007, , .		0
165	Tissue Engineered Heart Valves Develop Native-Like Collagen Architecture. , 2009, , .		0
166	Deformation Controlled Load Application in Heart Valve Tissue Engineering. , 2009, , .		0
167	Effect of Continuous and Intermittent Mechanical Loading on the Development of Skeletal Muscle Damage - A Combined Experimental/Numerical Approach. , 2009, , .		0
168	Remodeling and Compaction in Tissue Engineered Small Vessels. , 2009, , .		0
169	Effect of Ischemia and Reperfusion on Skeletal Muscle Damage. , 2010, , .		0
170	The Role of Cells in Collagen Modeling in Tissue Engineered Constructs: A Theoretical Framework. , 2011, , .		0
171	A Novel 3D Model System to Study Deformation-Induced Cytoskeletal Remodeling. , 2011, , .		0
172	The Potential of Prolonged Tissue Culture to Reduce Stress Generation and Retraction in Engineered Heart Valve Tissues. , 2011, , .		0
173	Modulating the Inflammatory Response for In Situ Tissue Engineering â€“ The Role of MCP-1. , 2012, , .		0
174	Decellularized Tissue Engineered Heart Valves: Infiltration, Inflammation and Regeneration?. , 2012, , .		0
175	Subcutaneous Testing of E-spun PCL Patches Suitable for in Situ Heart Valve Tissue Engineering. , 2012, , .		0
176	Decellularized In-Vitro Tissue-Engineered Heart Valves - First In-Vivo Results. , 2012, , .		0
177	PCL Scaffolds and Reduced In-Vitro Cell Expansion to Improve Engineered Valvular Tissue Formation. , 2012, , .		0
178	New Tools for Understanding Extracellular Matrix Remodeling at the Micro-Level in Cardiovascular Tissue Engineering. , 2012, , .		0
179	Influence of Strain and Contact Guidance on Collagen Organization in Engineered Cardiovascular Tissues: Implications for In Situ Tissue Engineering. , 2013, , .		0