Carlijn Bouten

List of Publications by Year in Descending Order

240	10,012	49	91
papers	citations	h-index	g-index

281	11,646	5.5	6.19
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
240	Total energy expenditure is repeatable in adults but not associated with short-term changes in body composition.. *Nature Communications*, **2022**, 13, 99	17.4	0
239	Animal studies for the evaluation of in situ tissue-engineered vascular grafts - a systematic review, evidence map, and meta-analysis.. *Npj Regenerative Medicine*, **2022**, 7, 17	15.8	1
238	Scaffold Geometry-Imposed Anisotropic Mechanical Loading Guides the Evolution of the Mechanical State of Engineered Cardiovascular Tissues .. *Frontiers in Bioengineering and Biotechnology*, **2022**, 10, 796452	5.8	0
237	Engineering tissue morphogenesis: taking it up a Notch.. *Trends in Biotechnology*, **2022**,	15.1	1
236	Substrate Stiffness Determines the Establishment of Apical-Basal Polarization in Renal Epithelial Cells but Not in Tubuloid-Derived Cells.. *Frontiers in Bioengineering and Biotechnology*, **2022**, 10, 820930	5.8	2
235	Tissue-engineered collagenous fibrous cap models to systematically elucidate atherosclerotic plaque rupture.. *Scientific Reports*, **2022**, 12, 5434	4.9	0
234	In-vitro engineered human cerebral tissues mimic pathological circuit disturbances in 3D.. *Communications Biology*, **2022**, 5, 254	6.7	0
233	Pirfenidone Has Anti-fibrotic Effects in a Tissue-Engineered Model of Human Cardiac Fibrosis.. *Frontiers in Cardiovascular Medicine*, **2022**, 9, 854314	5.4	0
232	Engineered patterns of Notch ligands Jag1 and Dll4 elicit differential spatial control of endothelial sprouting. *IScience*, **2022**, 25, 104306	6.1	0
231	Imparting Immunomodulatory Activity to Scaffolds via Biotin-Avidin Interactions. *ACS Biomaterials Science and Engineering*, **2021**,	5.5	1
230	Inconsistency in Graft Outcome of Bilayered Bioresorbable Supramolecular Arterial Scaffolds in Rats. *Tissue Engineering - Part A*, **2021**, 27, 894-904	3.9	4
229	Methods to Model Cardiac Mechanobiology in Health and Disease. *Tissue Engineering - Part C: Methods*, **2021**, 27, 139-151	2.9	7
228	Protein Micropatterning in 2.5D: An Approach to Investigate Cellular Responses in Multi-Cue Environments. *ACS Applied Materials & Interfaces*, **2021**, 13, 25589-25598	9.5	6
227	A Brief History in Cardiac Regeneration, and How the Extra Cellular Matrix May Turn the Tide. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 682342	5.4	0
226	Computationally guided in-vitro vascular growth model reveals causal link between flow oscillations and disorganized neotissue. *Communications Biology*, **2021**, 4, 546	6.7	0
225	Renal Epithelial Cell Responses to Supramolecular Thermoplastic Elastomeric Concave and Convex Structures. *Advanced Materials Interfaces*, **2021**, 8, 2001490	4.6	0
224	A standard calculation methodology for human doubly labeled water studies. *Cell Reports Medicine*, **2021**, 2, 100203	18	21

223	Myocardial Disease and Long-Distance Space Travel: Solving the Radiation Problem. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 631985	5.4	6
222	Advanced Modeling to Study the Paradox of Mechanically Induced Cardiac Fibrosis. *Tissue Engineering - Part C: Methods*, **2021**, 27, 100-114	2.9	2
221	Radiation Induces Valvular Interstitial Cell Calcific Response in an Model of Calcific Aortic Valve Disease. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 687885	5.4	1
220	Daily energy expenditure through the human life course. *Science*, **2021**, 373, 808-812	33.3	43
219	Mechanical Properties of Bioengineered Corneal Stroma. *Advanced Healthcare Materials*, **2021**, 10, e2100972	10.1	3
218	Bioprinting of kidney in vitro models: cells, biomaterials, and manufacturing techniques. *Essays in Biochemistry*, **2021**, 65, 587-602	7.6	6
217	Physical activity and fat-free mass during growth and in later life. *American Journal of Clinical Nutrition*, **2021**, 114, 1583-1589	7	3
216	Renal Biology Driven Macro- and Microscale Design Strategies for Creating an Artificial Proximal Tubule Using Fiber-Based Technologies. *ACS Biomaterials Science and Engineering*, **2021**, 7, 4679-4693	5.5	0
215	Distinct Effects of Heparin and Interleukin-4 Functionalization on Macrophage Polarization and In Situ Arterial Tissue Regeneration Using Resorbable Supramolecular Vascular Grafts in Rats. *Advanced Healthcare Materials*, **2021**, 10, e2101103	10.1	1
214	Inflammatory and regenerative processes in bioresorbable synthetic pulmonary valves up to two years in sheep-Spatiotemporal insights augmented by Raman microspectroscopy. *Acta Biomaterialia*, **2021**, 135, 243-259	10.8	2
213	Immuno-regenerative biomaterials for in situ cardiovascular tissue engineering - Do patient characteristics warrant precision engineering?. *Advanced Drug Delivery Reviews*, **2021**, 178, 113960	18.5	7
212	Transcatheter-Delivered Expandable Bioresorbable Polymeric Graft With Stenting Capacity Induces Vascular Regeneration. *JACC Basic To Translational Science*, **2020**, 5, 1095-1110	8.7	3
211	In Situ Remodeling Overrules Bioinspired Scaffold Architecture of Supramolecular Elastomeric Tissue-Engineered Heart Valves. *JACC Basic To Translational Science*, **2020**, 5, 1187-1206	8.7	14
210	Cellular Contact Guidance Emerges from Gap Avoidance. *Cell Reports Physical Science*, **2020**, 1, 100055	6.1	13
209	Human In Vitro Model Mimicking Material-Driven Vascular Regeneration Reveals How Cyclic Stretch and Shear Stress Differentially Modulate Inflammation and Matrix Deposition. *Advanced Biology*, **2020**, 4, e1900249	3.5	11
208	Imaging the In Vivo Degradation of Tissue Engineering Implants by Use of Supramolecular Radiopaque Biomaterials. *Macromolecular Bioscience*, **2020**, 20, e2000024	5.5	1
207	Computational Characterization of The Dish-In-A-Dish, A High Yield Culture Platform for Endothelial Shear Stress Studies on the Orbital Shaker. *Micromachines*, **2020**, 11,	3.3	3
206	Cellular Geometry Sensing at Different Length Scales and its Implications for Scaffold Design. *Materials*, **2020**, 13,	3.5	26

205	Early cost-utility analysis of tissue-engineered heart valves compared to bioprostheses in the aortic position in elderly patients. *European Journal of Health Economics*, **2020**, 21, 557-572	3.6	6
204	Failure of decellularized porcine small intestinal submucosa as a heart valved conduit. *Journal of Thoracic and Cardiovascular Surgery*, **2020**, 160, e201-e215	1.5	20
203	Pressure-induced collagen degradation in arterial tissue as a potential mechanism for degenerative arterial disease progression. *Journal of the Mechanical Behavior of Biomedical Materials*, **2020**, 109, 103771	4.1	6
202	A Multi-Cue Bioreactor to Evaluate the Inflammatory and Regenerative Capacity of Biomaterials under Flow and Stretch. *Journal of Visualized Experiments*, **2020**,	1.6	4
201	Vascular Tissue Engineering: Pathological Considerations, Mechanisms, and Translational Implications **2020**, 1-41		
200	Heart valve tissue engineering: current preclinical and clinical approaches **2020**, 383-398		
199	Fibrotic aortic valve disease after radiotherapy: an immunohistochemical study in breast cancer and lymphoma patients. *Cardiovascular Pathology*, **2020**, 45, 107176	3.8	6
198	Differential Leaflet Remodeling of Bone‐Marrow Cell Pre-Seeded Versus Nonseeded Bioresorbable Transcatheter Pulmonary Valve Replacements. *JACC Basic To Translational Science*, **2020**, 5, 15-31	8.7	17
197	Integrative Multi-Omics Analysis in Calcific Aortic Valve Disease Reveals a Link to the Formation of Amyloid-Like Deposits. *Cells*, **2020**, 9,	7.9	7
196	Optimization of Anti-kinking Designs for Vascular Grafts Based on Supramolecular Materials. *Frontiers in Materials*, **2020**, 7,	4	7
195	Vascular Tissue Engineering: Pathological Considerations, Mechanisms, and Translational Implications **2020**, 95-134		2
194	Impact of Additives on Mechanical Properties of Supramolecular Electrospun Scaffolds. *ACS Applied Polymer Materials*, **2020**, 2, 3742-3748	4.3	4
193	Annexin A1-dependent tethering promotes extracellular vesicle aggregation revealed with single-extracellular vesicle analysis. *Science Advances*, **2020**, 6,	14.3	27
192	Vimentin regulates Notch signaling strength and arterial remodeling in response to hemodynamic stress. *Scientific Reports*, **2019**, 9, 12415	4.9	38
191	Functional peptide presentation on different hydrogen bonding biomaterials using supramolecular additives. *Biomaterials*, **2019**, 224, 119466	15.6	11
190	What Is the Potential of Tissue-Engineered Pulmonary Valves in Children?. *Annals of Thoracic Surgery*, **2019**, 107, 1845-1853	2.7	10
189	The degradation and performance of electrospun supramolecular vascular scaffolds examined upon in vitro enzymatic exposure. *Acta Biomaterialia*, **2019**, 92, 48-59	10.8	19
188	Entropic Forces Drive Cellular Contact Guidance. *Biophysical Journal*, **2019**, 116, 1994-2008	2.9	25

187	Macrophage-Driven Biomaterial Degradation Depends on Scaffold Microarchitecture. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 87	5.8	45
186	Anti-fibrotic Effects of Cardiac Progenitor Cells in a 3D-Model of Human Cardiac Fibrosis. *Frontiers in Cardiovascular Medicine*, **2019**, 6, 52	5.4	17
185	Increased Cell Traction-Induced Prestress in Dynamically Cultured Microtissues. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 41	5.8	5
184	and Approaches Reveal Novel Insight Into the Ability of Epicardium-Derived Cells to Create Their Own Extracellular Environment. *Frontiers in Cardiovascular Medicine*, **2019**, 6, 81	5.4	3
183	Cell-Perceived Substrate Curvature Dynamically Coordinates the Direction, Speed, and Persistence of Stromal Cell Migration. *Advanced Biology*, **2019**, 3, e1900080	3.5	23
182	Tissue-engineered heart valves **2019**, 123-176		2
181	Hemodynamic loads distinctively impact the secretory profile of biomaterial-activated macrophages - implications for in situ vascular tissue engineering. *Biomaterials Science*, **2019**, 8, 132-147	7.4	24
180	Triple-marker cardiac MRI detects sequential tissue changes of healing myocardium after a hydrogel-based therapy. *Scientific Reports*, **2019**, 9, 19366	4.9	4
179	Cyclic Strain Affects Macrophage Cytokine Secretion and Extracellular Matrix Turnover in Electrospun Scaffolds. *Tissue Engineering - Part A*, **2019**, 25, 1310-1325	3.9	14
178	Layer-specific cell differentiation in bi-layered vascular grafts under flow perfusion. *Biofabrication*, **2019**, 12, 015009	10.5	20
177	Tissue engineering meets immunoengineering: Prospective on personalized in situ tissue engineering strategies. *Current Opinion in Biomedical Engineering*, **2018**, 6, 17-26	4.4	27
176	Modulation of macrophage phenotype and protein secretion via heparin-IL-4 functionalized supramolecular elastomers. *Acta Biomaterialia*, **2018**, 71, 247-260	10.8	45
175	Mechanosensitivity of Jagged-Notch signaling can induce a switch-type behavior in vascular homeostasis. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E3682-E3691	11.5	35
174	The Mechanical Contribution of Vimentin to Cellular Stress Generation. *Journal of Biomechanical Engineering*, **2018**, 140,	2.1	2
173	Mechanobiology of the cell–matrix interplay: Catching a glimpse of complexity via minimalistic models. *Extreme Mechanics Letters*, **2018**, 20, 59-64	3.9	11
172	Growth and remodeling play opposing roles during postnatal human heart valve development. *Scientific Reports*, **2018**, 8, 1235	4.9	13
171	Intrinsic Cell Stress is Independent of Organization in Engineered Cell Sheets. *Cardiovascular Engineering and Technology*, **2018**, 9, 181-192	2.2	6
170	Dual Electrospun Supramolecular Polymer Systems for Selective Cell Migration. *Macromolecular Bioscience*, **2018**, 18, e1800004	5.5	0

169	Strain mediated enzymatic degradation of arterial tissue: Insights into the role of the non-collagenous tissue matrix and collagen crimp. *Acta Biomaterialia*, **2018**, 77, 301-310	10.8	14
168	Can We Grow Valves Inside the Heart? Perspective on Material-based In Situ Heart Valve Tissue Engineering. *Frontiers in Cardiovascular Medicine*, **2018**, 5, 54	5.4	30
167	Engineering a 3D-Bioprinted Model of Human Heart Valve Disease Using Nanoindentation-Based Biomechanics. *Nanomaterials*, **2018**, 8,	5.4	59
166	Spatial patterning of the Notch ligand Dll4 controls endothelial sprouting in vitro. *Scientific Reports*, **2018**, 8, 6392	4.9	11
165	The Future of Tissue Engineering. *Current Opinion in Biomedical Engineering*, **2018**, 6, iii-v	4.4	2
164	Host Response and Neo-Tissue Development during Resorption of a Fast Degrading Supramolecular Electrospun Arterial Scaffold. *Bioengineering*, **2018**, 5,	5.3	16
163	Mesoscale substrate curvature overrules nanoscale contact guidance to direct bone marrow stromal cell migration. *Journal of the Royal Society Interface*, **2018**, 15,	4.1	32
162	Modelling The Combined Effects Of Collagen and Cyclic Strain On Cellular Orientation In Collagenous Tissues. *Scientific Reports*, **2018**, 8, 8518	4.9	13
161	An automated quantitative analysis of cell, nucleus and focal adhesion morphology. *PLoS ONE*, **2018**, 13, e0195201	3.7	15
160	Decoupling the Effect of Shear Stress and Stretch on Tissue Growth and Remodeling in a Vascular Graft. *Tissue Engineering - Part C: Methods*, **2018**, 24, 418-429	2.9	37
159	P142Anti-fibrotic effects of cardiac progenitor cells in a 3D-model of human cardiac fibrosis. *Cardiovascular Research*, **2018**, 114, S37-S37	9.9	
158	Shear stress induces expression, intracellular reorganization and enhanced Notch activation potential of Jagged1. *Integrative Biology (United Kingdom)*, **2018**, 10, 719-726	3.7	16
157	Initial scaffold thickness affects the emergence of a geometrical and mechanical equilibrium in engineered cardiovascular tissues. *Journal of the Royal Society Interface*, **2018**, 15,	4.1	3
156	Predicting and understanding collagen remodeling in human native heart valves during early development. *Acta Biomaterialia*, **2018**, 80, 203-216	10.8	4
155	Microfabricated tuneable and transferable porous PDMS membranes for Organs-on-Chips. *Scientific Reports*, **2018**, 8, 13524	4.9	33
154	A biomimetic microfluidic model to study signalling between endothelial and vascular smooth muscle cells under hemodynamic conditions. *Lab on A Chip*, **2018**, 18, 1607-1620	7.2	58
153	Cellular strain avoidance is mediated by a functional actin cap - observations in an -deficient cell model. *Journal of Cell Science*, **2017**, 130, 779-790	5.3	8
152	In situ heart valve tissue engineering using a bioresorbable elastomeric implant - From material design to 12 months follow-up in sheep. *Biomaterials*, **2017**, 125, 101-117	15.6	161

151	A Bioreactor to Identify the Driving Mechanical Stimuli of Tissue Growth and Remodeling. *Tissue Engineering - Part C: Methods*, **2017**, 23, 377-387	2.9	12
150	Biomaterial-driven in situ cardiovascular tissue engineering-a multi-disciplinary perspective. *Npj Regenerative Medicine*, **2017**, 2, 18	15.8	124
149	Selective regulation of Notch ligands during angiogenesis is mediated by vimentin. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E4574-E4581	11.5	61
148	Supramolecular surface functionalization via catechols for the improvement of cell-material interactions. *Biomaterials Science*, **2017**, 5, 1541-1548	7.4	14
147	Robust Generation of Quiescent Porcine Valvular Interstitial Cell Cultures. *Journal of the American Heart Association*, **2017**, 6,	6	24
146	Aortic calcified particles modulate valvular endothelial and interstitial cells. *Cardiovascular Pathology*, **2017**, 28, 36-45	3.8	7
145	The Effects of Scaffold Remnants in Decellularized Tissue-Engineered Cardiovascular Constructs on the Recruitment of Blood Cells. *Tissue Engineering - Part A*, **2017**, 23, 1142-1151	3.9	8
144	Spheroid three-dimensional culture enhances Notch signaling in cardiac progenitor cells. *MRS Communications*, **2017**, 7, 496-501	2.7	3
143	Lmna knockout mouse embryonic fibroblasts are less contractile than their wild-type counterparts. *Integrative Biology (United Kingdom)*, **2017**, 9, 709-721	3.7	7
142	Mechanically Robust Electrospun Hydrogel Scaffolds Crosslinked via Supramolecular Interactions. *Macromolecular Bioscience*, **2017**, 17, 1700053	5.5	11
141	Current Challenges in Translating Tissue-Engineered Heart Valves. *Current Treatment Options in Cardiovascular Medicine*, **2017**, 19, 71	2.1	17
140	From molecular design to 3D printed life-like materials with unprecedented properties. *Current Opinion in Biomedical Engineering*, **2017**, 2, 43-48	4.4	7
139	Nondestructive mechanical characterization of developing biological tissues using inflation testing. *Journal of the Mechanical Behavior of Biomedical Materials*, **2017**, 74, 438-447	4.1	5
138	Mimicking Cardiac Fibrosis in a Dish: Fibroblast Density Rather than Collagen Density Weakens Cardiomyocyte Function. *Journal of Cardiovascular Translational Research*, **2017**, 10, 116-127	3.3	24
137	Vascular Mechanobiology: Towards Control of In Situ Regeneration. *Cells*, **2017**, 6,	7.9	33
136	Cardiac Progenitor Cells and the Interplay with Their Microenvironment. *Stem Cells International*, **2017**, 2017, 7471582	5	29
135	Development of Non-Cell Adhesive Vascular Grafts Using Supramolecular Building Blocks. *Macromolecular Bioscience*, **2016**, 16, 350-62	5.5	37
134	Heading in the Right Direction: Understanding Cellular Orientation Responses to Complex Biophysical Environments. *Cellular and Molecular Bioengineering*, **2016**, 9, 12-37	3.9	51

133	Genesis and growth of extracellular-vesicle-derived microcalcification in atherosclerotic plaques. *Nature Materials*, **2016**, 15, 335-43	27	198
132	Superior Tissue Evolution in Slow-Degrading Scaffolds for Valvular Tissue Engineering. *Tissue Engineering - Part A*, **2016**, 22, 123-32	3.9	12
131	A membrane-based microfluidic device for mechano-chemical cell manipulation. *Biomedical Microdevices*, **2016**, 18, 31	3.7	9
130	Discoidin Domain Receptor-1 Regulates Calcific Extracellular Vesicle Release in Vascular Smooth Muscle Cell Fibrocalcific Response via Transforming Growth Factor-□Signaling. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2016**, 36, 525-33	9.4	44
129	Age-dependent changes of stress and strain in the human heart valve and their relation with collagen remodeling. *Acta Biomaterialia*, **2016**, 29, 161-169	10.8	39
128	Age-Dependent Changes in Geometry, Tissue Composition and Mechanical Properties of Fetal to Adult Cryopreserved Human Heart Valves. *PLoS ONE*, **2016**, 11, e0149020	3.7	32
127	Conceptual model for early health technology assessment of current and novel heart valve interventions. *Open Heart*, **2016**, 3, e000500	3	15
126	Collagen Matrix Remodeling in Stented Pulmonary Arteries after Transapical Heart Valve Replacement. *Cells Tissues Organs*, **2016**, 201, 159-69	2.1	16
125	Modulation of collagen fiber orientation by strain-controlled enzymatic degradation. *Acta Biomaterialia*, **2016**, 35, 118-26	10.8	30
124	Early in-situ cellularization of a supramolecular vascular graft is modified by synthetic stromal cell-derived factor-1□derived peptides. *Biomaterials*, **2016**, 76, 187-95	15.6	79
123	Cardiomyocyte progenitor cell mechanoresponse unrevealed: strain avoidance and mechanosome development. *Integrative Biology (United Kingdom)*, **2016**, 8, 991-1001	3.7	12
122	Modeling the impact of scaffold architecture and mechanical loading on collagen turnover in engineered cardiovascular tissues. *Biomechanics and Modeling in Mechanobiology*, **2015**, 14, 603-13	3.8	5
121	The evolution of collagen fiber orientation in engineered cardiovascular tissues visualized by diffusion tensor imaging. *PLoS ONE*, **2015**, 10, e0127847	3.7	26
120	In Situ Tissue Engineering of Functional Small-Diameter Blood Vessels by Host Circulating Cells Only. *Tissue Engineering - Part A*, **2015**, 21, 2583-94	3.9	74
119	Hydrolytic and oxidative degradation of electrospun supramolecular biomaterials: In vitro degradation pathways. *Acta Biomaterialia*, **2015**, 27, 21-31	10.8	48
118	Behavior of CMPCs in unidirectional constrained and stress-free 3D hydrogels. *Journal of Molecular and Cellular Cardiology*, **2015**, 87, 79-91	5.8	19
117	Competition between cap and basal actin fiber orientation in cells subjected to contact guidance and cyclic strain. *Scientific Reports*, **2015**, 5, 8752	4.9	21
116	In Vivo Collagen Remodeling in the Vascular Wall of Decellularized Stented Tissue-Engineered Heart Valves. *Tissue Engineering - Part A*, **2015**, 21, 2206-15	3.9	30

115	High-Throughput Screening Assay for the Identification of Compounds Enhancing Collagenous Extracellular Matrix Production by ATDC5 Cells. *Tissue Engineering - Part C: Methods*, **2015**, 21, 726-36	2.9	9
114	Computational and experimental investigation of local stress fiber orientation in uniaxially and biaxially constrained microtissues. *Biomechanics and Modeling in Mechanobiology*, **2014**, 13, 1053-63	3.8	10
113	Degree of scaffold degradation influences collagen (re)orientation in engineered tissues. *Tissue Engineering - Part A*, **2014**, 20, 1747-57	3.9	18
112	How to make a heart valve: from embryonic development to bioengineering of living valve substitutes. *Cold Spring Harbor Perspectives in Medicine*, **2014**, 4, a013912	5.4	49
111	Differential response of endothelial and endothelial colony forming cells on electrospun scaffolds with distinct microfiber diameters. *Biomacromolecules*, **2014**, 15, 821-9	6.9	38
110	The influence of matrix (an)isotropy on cardiomyocyte contraction in engineered cardiac microtissues. *Integrative Biology (United Kingdom)*, **2014**, 6, 422-9	3.7	34
109	Combining tissue repair and tissue engineering; bioactivating implantable cell-free vascular scaffolds. *Heart*, **2014**, 100, 1825-30	5.1	34
108	Synergistic protein secretion by mesenchymal stromal cells seeded in 3D scaffolds and circulating leukocytes in physiological flow. *Biomaterials*, **2014**, 35, 9100-13	15.6	33
107	Mechanics of the pulmonary valve in the aortic position. *Journal of the Mechanical Behavior of Biomedical Materials*, **2014**, 29, 557-67	4.1	12
106	Strain-dependent modulation of macrophage polarization within scaffolds. *Biomaterials*, **2014**, 35, 4919-28	15.6	122
105	Shear flow affects selective monocyte recruitment into MCP-1-loaded scaffolds. *Journal of Cellular and Molecular Medicine*, **2014**, 18, 2176-88	5.6	31
104	Cardiac patching and the regeneration of infarcted myocardium: where do we go from here?. *Future Cardiology*, **2014**, 10, 167-70	1.3	
103	Extracellular vesicles: potential roles in regenerative medicine. *Frontiers in Immunology*, **2014**, 5, 608	8.4	212
102	Computational model predicts cell orientation in response to a range of mechanical stimuli. *Biomechanics and Modeling in Mechanobiology*, **2014**, 13, 227-36	3.8	43
101	Monocytic cells become less compressible but more deformable upon activation. *PLoS ONE*, **2014**, 9, e92814	3.7	12
100	Colorful protein-based fluorescent probes for collagen imaging. *PLoS ONE*, **2014**, 9, e114983	3.7	40
99	Material-based engineering strategies for cardiac regeneration. *Current Pharmaceutical Design*, **2014**, 20, 2057-68	3.3	5
98	Understanding strain-induced collagen matrix development in engineered cardiovascular tissues from gene expression profiles. *Cell and Tissue Research*, **2013**, 352, 727-37	4.2	12

97	Mechanical analysis of ovine and pediatric pulmonary artery for heart valve stent design. *Journal of Biomechanics*, **2013**, 46, 2075-81	2.9	11
96	Strain-induced collagen organization at the micro-level in fibrin-based engineered tissue constructs. *Annals of Biomedical Engineering*, **2013**, 41, 763-74	4.7	38
95	Then and now: hypes and hopes of regenerative medicine. *Trends in Biotechnology*, **2013**, 31, 121-3	15.1	6
94	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	1.6	1
93	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	3.9	42
92	Engineering skeletal muscle tissues from murine myoblast progenitor cells and application of electrical stimulation. *Journal of Visualized Experiments*, **2013**, e4267	1.6	17
91	Increased cardiac myocyte PDE5 levels in human and murine pressure overload hypertrophy contribute to adverse LV remodeling. *PLoS ONE*, **2013**, 8, e58841	3.7	22
90	Matrix production and organization by endothelial colony forming cells in mechanically strained engineered tissue constructs. *PLoS ONE*, **2013**, 8, e73161	3.7	13
89	Sequential use of human-derived medium supplements favours cardiovascular tissue engineering. *Journal of Cellular and Molecular Medicine*, **2012**, 16, 730-9	5.6	3
88	Matrix production and remodeling capacity of cardiomyocyte progenitor cells during in vitro differentiation. *Journal of Molecular and Cellular Cardiology*, **2012**, 53, 497-508	5.8	36
87	Influence of substrate stiffness on circulating progenitor cell fate. *Journal of Biomechanics*, **2012**, 45, 736-44	2.9	31
86	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, 54-8	3.4	36
85	Polymer-based scaffold designs for in situ vascular tissue engineering: controlling recruitment and differentiation behavior of endothelial colony forming cells. *Macromolecular Bioscience*, **2012**, 12, 577-90	5.5	43
84	Experimental investigation of collagen waviness and orientation in the arterial adventitia using confocal laser scanning microscopy. *Biomechanics and Modeling in Mechanobiology*, **2012**, 11, 461-73	3.8	595
83	A mesofluidics-based test platform for systematic development of scaffolds for in situ cardiovascular tissue engineering. *Tissue Engineering - Part C: Methods*, **2012**, 18, 475-85	2.9	18
82	Variation in tissue outcome of ovine and human engineered heart valve constructs: relevance for tissue engineering. *Regenerative Medicine*, **2012**, 7, 59-70	2.5	19
81	Low oxygen concentrations impair tissue development in tissue-engineered cardiovascular constructs. *Tissue Engineering - Part A*, **2012**, 18, 221-31	3.9	8
80	Substrates for cardiovascular tissue engineering. *Advanced Drug Delivery Reviews*, **2011**, 63, 221-41	18.5	206

79	Heart valve tissue regeneration **2011**, 202-224		4
78	Decreased mechanical properties of heart valve tissue constructs cultured in platelet lysate as compared to fetal bovine serum. *Tissue Engineering - Part C: Methods*, **2011**, 17, 607-17	2.9	10
77	Environmental regulation of valvulogenesis: implications for tissue engineering. *European Journal of Cardio-thoracic Surgery*, **2011**, 39, 8-17	3	20
76	Controlling matrix formation and cross-linking by hypoxia in cardiovascular tissue engineering. *Journal of Applied Physiology*, **2010**, 109, 1483-91	3.7	24
75	Platelet-lysate as an autologous alternative for fetal bovine serum in cardiovascular tissue engineering. *Tissue Engineering - Part A*, **2010**, 16, 1317-27	3.9	9
74	Tissue-engineered heart valves develop native-like collagen fiber architecture. *Tissue Engineering - Part A*, **2010**, 16, 1527-37	3.9	33
73	Modeling collagen remodeling. *Journal of Biomechanics*, **2010**, 43, 166-75	2.9	66
72	Cytokine release in tissue-engineered epidermal equivalents after prolonged mechanical loading. *Methods in Molecular Biology*, **2010**, 585, 335-44	1.4	4
71	Straining mode-dependent collagen remodeling in engineered cardiovascular tissue. *Tissue Engineering - Part A*, **2009**, 15, 841-9	3.9	18
70	Quantification of the temporal evolution of collagen orientation in mechanically conditioned engineered cardiovascular tissues. *Annals of Biomedical Engineering*, **2009**, 37, 1263-72	4.7	56
69	Tissue engineering of heart valves: advances and current challenges. *Expert Review of Medical Devices*, **2009**, 6, 259-75	3.5	114
68	Hypoxia induces near-native mechanical properties in engineered heart valve tissue. *Circulation*, **2009**, 119, 290-7	16.7	40
67	Intermittent straining accelerates the development of tissue properties in engineered heart valve tissue. *Tissue Engineering - Part A*, **2009**, 15, 999-1008	3.9	49
66	Translating autologous heart valve tissue engineering from bench to bed. *Tissue Engineering - Part B: Reviews*, **2009**, 15, 307-17	7.9	29
65	Tailoring fiber diameter in electrospun poly(epsilon-caprolactone) scaffolds for optimal cellular infiltration in cardiovascular tissue engineering. *Tissue Engineering - Part A*, **2009**, 15, 437-44	3.9	142
64	The influence of serum-free culture conditions on skeletal muscle differentiation in a tissue-engineered model. *Tissue Engineering - Part A*, **2008**, 14, 161-71	3.9	42
63	Stress related collagen ultrastructure in human aortic valves--implications for tissue engineering. *Journal of Biomechanics*, **2008**, 41, 2612-7	2.9	39
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