K Jane Grande-Allen

List of Publications by Year in Descending Order

166 papers	5,837 citations	41 h-index	72 g-index
177 ext. papers	6,655 ext. citations	5.5 avg, IF	5.7 L-index

#	Paper	IF	Citations
166	The impact of biological factors, anatomy, and mechanical forces on calcification and fibrosis of cardiac and vascular structures **2022**, 1-27		
165	Development of 3D Printed Mitral Valve Constructs for Transcatheter Device Modeling of Tissue and Device Deformation.. *Annals of Biomedical Engineering*, **2022**, 50, 426-439	4.7	0
164	Significance of aortoseptal angle anomalies to left ventricular hemodynamics and subaortic stenosis: A numerical study. *Computers in Biology and Medicine*, **2022**, 105613	7	
163	Differential proteome profile, biological pathways, and network relationships of osteogenic proteins in calcified human aortic valves. *Heart and Vessels*, **2021**, 1	2.1	0
162	Drivers of transcriptional variance in human intestinal epithelial organoids. *Physiological Genomics*, **2021**, 53, 486-508	3.6	2
161	Bioinspired electrospun dECM scaffolds guide cell growth and control the formation of myotubes. *Science Advances*, **2021**, 7,	14.3	6
160	Evaluation of tissue integration of injectable, cell-laden hydrogels of cocultures of mesenchymal stem cells and articular chondrocytes with an ex vivo cartilage explant model. *Biotechnology and Bioengineering*, **2021**, 118, 2958-2966	4.9	2
159	Tumor necrosis factor alpha and interleukin 1 beta suppress myofibroblast activation via nuclear factor kappa B signaling in 3D-cultured mitral valve interstitial cells. *Acta Biomaterialia*, **2021**, 127, 159-168	10.8	1
158	The Immune and Inflammatory Basis of Acquired Pediatric Cardiac Disease. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 701224	5.4	1
157	Protein-Functionalized Poly(ethylene glycol) Hydrogels as Scaffolds for Monolayer Organoid Culture. *Tissue Engineering - Part C: Methods*, **2021**, 27, 12-23	2.9	5
156	Cell-Laden Bioactive Poly(ethylene glycol) Hydrogels for Studying Mesenchymal Stem Cell Behavior in Myocardial Infarct-Stiffness Microenvironments. *Cardiovascular Engineering and Technology*, **2021**, 12, 183-199	2.2	5
155	Computational Assessment of Valvular Dysfunction in Discrete Subaortic Stenosis: A Parametric Study. *Cardiovascular Engineering and Technology*, **2021**, 12, 559	2.2	5
154	A Millifluidic Perfusion Cassette for Studying the Pathogenesis of Enteric Infections Using Ex-Vivo Organoids. *Annals of Biomedical Engineering*, **2021**, 49, 1233-1244	4.7	2
153	Myocardial Disease and Long-Distance Space Travel: Solving the Radiation Problem. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 631985	5.4	6
152	Congenital Heart Disease: An Immunological Perspective. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 701375	5.4	2
151	Effect of substrate stiffness on human intestinal enteroidsSinfectivity by enteroaggregative Escherichia coli. *Acta Biomaterialia*, **2021**, 132, 245-259	10.8	1
150	Poly(ethylene glycol)-Based Coatings for Bioprosthetic Valve Tissues: Toward Restoration of Physiological Behavior.. *ACS Applied Bio Materials*, **2020**, 3, 8352-8360	4.1	1

149	The Ryanodine Receptor Contributes to the Lysophosphatidylcholine-Induced Mineralization in Valvular Interstitial Cells. *Cardiovascular Engineering and Technology*, **2020**, 11, 316-327	2.2	1
148	Extracellular vesicles influence the pulmonary arterial extracellular matrix in congenital diaphragmatic hernia. *Pediatric Pulmonology*, **2020**, 55, 2402-2411	3.5	5
147	Isolation and mutational assessment of pancreatic cancer extracellular vesicles using a microfluidic platform. *Biomedical Microdevices*, **2020**, 22, 23	3.7	17
146	Interfacial Coating Method for Amine-Rich Surfaces using Poly(ethylene glycol) Diacrylate Applied to Bioprosthetic Valve Tissue Models.. *ACS Applied Bio Materials*, **2020**, 3, 1321-1330	4.1	2
145	Models of the Small Intestine: Engineering Challenges and Engineering Solutions. *Tissue Engineering - Part B: Reviews*, **2020**, 26, 313-326	7.9	14
144	Which Biological Properties of Heart Valves Are Relevant to Tissue Engineering?. *Frontiers in Cardiovascular Medicine*, **2020**, 7, 63	5.4	12
143	Ten simple rules for women principal investigators during a pandemic. *PLoS Computational Biology*, **2020**, 16, e1008370	5	2
142	Multimaterial Dual Gradient Three-Dimensional Printing for Osteogenic Differentiation and Spatial Segregation. *Tissue Engineering - Part A*, **2020**, 26, 239-252	3.9	14
141	Chondrogenesis of cocultures of mesenchymal stem cells and articular chondrocytes in poly(l-lysine)-loaded hydrogels. *Journal of Controlled Release*, **2020**, 328, 710-721	11.7	4
140	Mapping the spatial variation of mitral valve elastic properties using air-pulse optical coherence elastography. *Journal of Biomechanics*, **2019**, 93, 52-59	2.9	2
139	Fabrication and Characterization of Electrospun Decellularized Muscle-Derived Scaffolds. *Tissue Engineering - Part C: Methods*, **2019**, 25, 276-287	2.9	27
138	Monitoring Oxygen Levels within Large, Tissue-Engineered Constructs Using Porphyin-Hydrogel Microparticles. *ACS Biomaterials Science and Engineering*, **2019**, 5, 4522-4530	5.5	5
137	Heterogeneous multi-laminar tissue constructs as a platform to evaluate aortic valve matrix-dependent pathogenicity. *Acta Biomaterialia*, **2019**, 97, 420-427	10.8	4
136	Heart valvesSmechanobiology **2019**, 13-39		
135	Synthesis of Injectable, Thermally Responsive, Chondroitin Sulfate-Cross-Linked Poly(-isopropylacrylamide) Hydrogels. *ACS Biomaterials Science and Engineering*, **2019**, 5, 6405-6413	5.5	7
134	Hypoxia Stimulates Synthesis of Neutrophil Gelatinase-Associated Lipocalin in Aortic Valve Disease. *Frontiers in Cardiovascular Medicine*, **2019**, 6, 156	5.4	6
133	Comparing the Role of Mechanical Forces in Vascular and Valvular Calcification Progression. *Frontiers in Cardiovascular Medicine*, **2018**, 5, 197	5.4	26
132	Eliminating Regurgitation Reduces Fibrotic Remodeling of Functional Mitral Regurgitation Conditioned Valves. *Annals of Biomedical Engineering*, **2018**, 46, 670-683	4.7	4

131	Heart valve tissue engineering for valve replacement and disease modeling. *Current Opinion in Biomedical Engineering*, **2018**, 5, 35-41	4.4	11
130	Radiation-Induced Cardiovascular Disease: Mechanisms and Importance of Linear Energy Transfer. *Frontiers in Cardiovascular Medicine*, **2018**, 5, 5	5.4	31
129	Knockout of hyaluronan synthase 1, but not 3, impairs formation of the retrocalcaneal bursa. *Journal of Orthopaedic Research*, **2018**, 36, 2622-2632	3.8	8
128	Left-Ventricular Assist Device Impact on Aortic Valve Mechanics, Proteomics and Ultrastructure. *Annals of Thoracic Surgery*, **2018**, 105, 572-580	2.7	8
127	The Role of Proteoglycans and Glycosaminoglycans in Heart Valve Biomechanics **2018**, 59-79		
126	Discrete Subaortic Stenosis: Perspective Roadmap to a Complex Disease. *Frontiers in Cardiovascular Medicine*, **2018**, 5, 122	5.4	13
125	Engineering biologically extensible hydrogels using photolithographic printing. *Acta Biomaterialia*, **2018**, 75, 52-62	10.8	21
124	Ascorbic acid promotes extracellular matrix deposition while preserving valve interstitial cell quiescence within 3D hydrogel scaffolds. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 1963-1973	4.4	25
123	Dysregulation of hyaluronan homeostasis during aortic valve disease. *Matrix Biology*, **2017**, 62, 40-57	11.4	10
122	3D Printed Modeling of the Mitral Valve for Catheter-Based Structural Interventions. *Annals of Biomedical Engineering*, **2017**, 45, 508-519	4.7	75
121	ZEB1 induces LOXL2-mediated collagen stabilization and deposition in the extracellular matrix to drive lung cancer invasion and metastasis. *Oncogene*, **2017**, 36, 1925-1938	9.2	108
120	Control of 3D EnvironmentRedesign of the Flow Loop Bioreactor to Control Mitral Valve Regurgitation **2017**, 61-74		
119	Regurgitation Hemodynamics Alone Cause Mitral Valve Remodeling Characteristic of Clinical Disease States In Vitro. *Annals of Biomedical Engineering*, **2016**, 44, 954-67	4.7	15
118	Adhesive Peptide Sequences Regulate Valve Interstitial Cell Adhesion, Phenotype and Extracellular Matrix Deposition. *Cellular and Molecular Bioengineering*, **2016**, 9, 479-495	3.9	13
117	Electrospun Polyurethane and Hydrogel Composite Scaffolds as Biomechanical Mimics for Aortic Valve Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2016**, 2, 1546-1558	5.5	52
116	Identifying Behavioral Phenotypes and Heterogeneity in Heart Valve Surface Endothelium. *Cells Tissues Organs*, **2016**, 201, 268-76	2.1	4
115	Remodeling of ECM patch into functional myocardium in an ovine model: A pilot study. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2016**, 104, 1713-1720	3.5	9
114	Extracellular matrix remodeling in wound healing of critical size defects in the mitral valve leaflet. *Heart and Vessels*, **2016**, 31, 1186-95	2.1	4

113	Cancer-Associated Fibroblasts Induce a Collagen Cross-link Switch in Tumor Stroma. *Molecular Cancer Research*, **2016**, 14, 287-95	6.6	114
112	Morphometric analysis of calcification and fibrous layer thickness in carotid endarterectomy tissues. *Computers in Biology and Medicine*, **2016**, 70, 210-219	7	7
111	Differential cell-matrix responses in hypoxia-stimulated aortic versus mitral valves. *Journal of the Royal Society Interface*, **2016**, 13,	4.1	15
110	Aortic Valve Mechanobiology **2016**, 191-205		1
109	Valve Interstitial Cells Act in a Pericyte Manner Promoting Angiogensis and Invasion by Valve Endothelial Cells. *Annals of Biomedical Engineering*, **2016**, 44, 2707-23	4.7	12
108	Hyaluronan Hydrogels for a Biomimetic Spongiosa Layer of Tissue Engineered Heart Valve Scaffolds. *Biomacromolecules*, **2016**, 17, 1766-75	6.9	28
107	Emerging Trends in Heart Valve Engineering: Part IV. Computational Modeling and Experimental Studies. *Annals of Biomedical Engineering*, **2015**, 43, 2314-33	4.7	30
106	Effective Gene Delivery to Valvular Interstitial Cells Using Adeno-Associated Virus Serotypes 2 and 3. *Tissue Engineering - Part C: Methods*, **2015**, 21, 808-15	2.9	3
105	3-Dimensional spatially organized PEG-based hydrogels for an aortic valve co-culture model. *Biomaterials*, **2015**, 67, 354-64	15.6	38
104	Cellular and Extracellular Matrix Basis for Heterogeneity in Mitral Annular Contraction. *Cardiovascular Engineering and Technology*, **2015**, 6, 151-9	2.2	3
103	Heterogeneity of Mitral Leaflet Matrix Composition and Turnover Correlates with Regional Leaflet Strain. *Cardiovascular Engineering and Technology*, **2015**, 6, 141-50	2.2	2
102	Replicating Patient-Specific Severe Aortic Valve Stenosis With Functional 3D Modeling. *Circulation: Cardiovascular Imaging*, **2015**, 8, e003626	3.9	113
101	Development of a heart valve model surface for optimization of surface modifications. *Acta Biomaterialia*, **2015**, 26, 64-71	10.8	6
100	Multilayer three-dimensional filter paper constructs for the culture and analysis of aortic valvular interstitial cells. *Acta Biomaterialia*, **2015**, 13, 199-206	10.8	41
99	Emerging trends in heart valve engineering: Part II. Novel and standard technologies for aortic valve replacement. *Annals of Biomedical Engineering*, **2015**, 43, 844-57	4.7	38
98	Emerging trends in heart valve engineering: Part I. Solutions for future. *Annals of Biomedical Engineering*, **2015**, 43, 833-43	4.7	70
97	Integrating valve-inspired design features into poly(ethylene glycol) hydrogel scaffolds for heart valve tissue engineering. *Acta Biomaterialia*, **2015**, 14, 11-21	10.8	77
96	Emerging trends in heart valve engineering: Part III. Novel technologies for mitral valve repair and replacement. *Annals of Biomedical Engineering*, **2015**, 43, 858-70	4.7	28

95	Not just skin deep: cosmetic and medical applications of injectable hyaluronan and fibrin. *Materials Technology*, **2015**, 30, 206-210	2.1	2
94	Extracellular matrix scaffold as a tubular graft for ascending aorta aneurysm repair. *Journal of Cardiac Surgery*, **2015**, 30, 648-50	1.3	3
93	Application of hydrogels in heart valve tissue engineering. *Journal of Long-Term Effects of Medical Implants*, **2015**, 25, 105-34	0.2	25
92	Laminin Peptide-Immobilized Hydrogels Modulate Valve Endothelial Cell Hemostatic Regulation. *PLoS ONE*, **2015**, 10, e0130749	3.7	22
91	Regulation of valve endothelial cell vasculogenic network architectures with ROCK and Rac inhibitors. *Microvascular Research*, **2015**, 98, 108-18	3.7	2
90	Lysyl hydroxylase 2 induces a collagen cross-link switch in tumor stroma. *Journal of Clinical Investigation*, **2015**, 125, 1147-62	15.9	102
89	Anisotropic poly(ethylene glycol)/polycaprolactone hydrogel-fiber composites for heart valve tissue engineering. *Tissue Engineering - Part A*, **2014**, 20, 2634-45	3.9	75
88	A three-dimensional co-culture model of the aortic valve using magnetic levitation. *Acta Biomaterialia*, **2014**, 10, 173-82	10.8	68
87	Characterization of Dermal Fibroblasts as a Cell Source for Pediatric Tissue Engineered Heart Valves. *Journal of Cardiovascular Development and Disease*, **2014**, 1, 146-162	4.2	4
86	Differential Aortic and Mitral Valve Interstitial Cell Mineralization and the Induction of Mineralization by Lysophosphatidylcholine. *Cardiovascular Engineering and Technology*, **2014**, 5, 371-383	2.2	14
85	Metabolic regulation of collagen gel contraction by porcine aortic valvular interstitial cells. *Journal of the Royal Society Interface*, **2014**, 11, 20140852	4.1	12
84	Age-related changes in aortic valve hemostatic protein regulation. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2014**, 34, 72-80	9.4	42
83	Age and Regional Dependence of Collagen Crimp in Heart Valves. *Conference Proceedings of the Society for Experimental Mechanics*, **2014**, 15-23	0.3	
82	Bioreactor and Biomaterial Platforms for Investigation of Mitral Valve Biomechanics and Mechanobiology **2014**, 95-106		
81	Organ Culture of Porcine Mitral Valves as a Novel Experimental Paradigm. *Cardiovascular Engineering and Technology*, **2013**, 4, 139-150	2.2	4
80	The Tensile and Viscoelastic Properties of Aortic Valve Leaflets Treated with a Hyaluronidase Gradient. *Cardiovascular Engineering and Technology*, **2013**, 4, 151-160	2.2	7
79	Gentamicin Reduces Calcific Nodule Formation by Aortic Valve Interstitial Cells. *Cardiovascular Engineering and Technology*, **2013**, 4, 16-25	2.2	7
78	Fabrication and mechanical evaluation of anatomically-inspired quasilaminate hydrogel structures with layer-specific formulations. *Annals of Biomedical Engineering*, **2013**, 41, 398-407	4.7	39

77	Smad2-dependent glycosaminoglycan elongation in aortic valve interstitial cells enhances binding of LDL to proteoglycans. *Cardiovascular Pathology*, **2013**, 22, 146-55	3.8	19
76	Assembly of a three-dimensional multitype bronchiole coculture model using magnetic levitation. *Tissue Engineering - Part C: Methods*, **2013**, 19, 665-75	2.9	79
75	Biology of Mitral Valve Disease **2013**, 173-185		1
74	Hyaluronan turnover and hypoxic brown adipocytic differentiation are co-localized with ossification in calcified human aortic valves. *Pathology Research and Practice*, **2012**, 208, 642-50	3.4	9
73	Insight into pathologic abnormalities in congenital semilunar valve disease based on advances in understanding normal valve microstructure and extracellular matrix. *Cardiovascular Pathology*, **2012**, 21, 46-58	3.8	14
72	Differentiating the aging of the mitral valve from human and canine myxomatous degeneration. *Journal of Veterinary Cardiology*, **2012**, 14, 31-45	1.9	21
71	Extracellular matrix remodeling and cell phenotypic changes in dysplastic and hemodynamically altered semilunar human cardiac valves. *Cardiovascular Pathology*, **2011**, 20, e157-67	3.8	11
70	Differential proteoglycan and hyaluronan distribution in calcified aortic valves. *Cardiovascular Pathology*, **2011**, 20, 334-42	3.8	53
69	Calcific aortic valve disease: not simply a degenerative process: A review and agenda for research from the National Heart and Lung and Blood Institute Aortic Stenosis Working Group. Executive summary: Calcific aortic valve disease-2011 update. *Circulation*, **2011**, 124, 1783-91	16.7	554
68	Flexural characterization of cell encapsulated PEGDA hydrogels with applications for tissue engineered heart valves. *Acta Biomaterialia*, **2011**, 7, 2467-76	10.8	103
67	Multi-scale Mechanical Characterization of Palmetto Wood using Digital Image Correlation to Develop a Template for Biologically-Inspired Polymer Composites. *Experimental Mechanics*, **2011**, 51, 575-589	2.6	29
66	The heterogeneous biomechanics and mechanobiology of the mitral valve: implications for tissue engineering. *Current Cardiology Reports*, **2011**, 13, 113-20	4.2	38
65	Mitral valvular interstitial cell responses to substrate stiffness depend on age and anatomic region. *Acta Biomaterialia*, **2011**, 7, 75-82	10.8	34
64	Regulation of smooth muscle cell phenotype by glycosaminoglycan identity. *Acta Biomaterialia*, **2011**, 7, 1031-9	10.8	6
63	Elastic fibers in the aortic valve spongiosa: a fresh perspective on its structure and role in overall tissue function. *Acta Biomaterialia*, **2011**, 7, 2101-8	10.8	49
62	Perinatal changes in mitral and aortic valve structure and composition. *Pediatric and Developmental Pathology*, **2010**, 13, 447-58	2.2	8
61	Age-related changes in material behavior of porcine mitral and aortic valves and correlation to matrix composition. *Tissue Engineering - Part A*, **2010**, 16, 867-78	3.9	58
60	Design and validation of a novel splashing bioreactor system for use in mitral valve organ culture. *Annals of Biomedical Engineering*, **2010**, 38, 3280-94	4.7	11

59	A role for decorin in controlling proliferation, adhesion, and migration of murine embryonic fibroblasts. *Journal of Biomedical Materials Research - Part A*, **2010**, 93, 419-28	5.4	44
58	The role of cell biology and leaflet remodeling in the progression of heart valve disease. *Methodist DeBakey Cardiovascular Journal*, **2010**, 6, 2-7	2.1	10
57	Design and physical characterization of a synchronous multivalve aortic valve culture system. *Annals of Biomedical Engineering*, **2010**, 38, 319-25	4.7	8
56	Design and Mechanical Evaluation of a Physiological Mitral Valve Organ Culture System. *Cardiovascular Engineering and Technology*, **2010**, 1, 123-131	2.2	9
55	The Evolution of the Field of Biomechanics Through the Lens of Experimental Mechanics. *Experimental Mechanics*, **2010**, 50, 667-682	2.6	4
54	Functional Coupling of Valvular Interstitial Cells and Collagen Via 21 Integrins in the Mitral Leaflet. *Cellular and Molecular Bioengineering*, **2010**, 3, 428-437	3.9	19
53	Fibronectin-based isolation of valve interstitial cell subpopulations: relevance to valve disease. *Journal of Biomedical Materials Research - Part A*, **2010**, 92, 340-9	5.4	3
52	Bioactive polymer/extracellular matrix scaffolds fabricated with a flow perfusion bioreactor for cartilage tissue engineering. *Biomaterials*, **2010**, 31, 8911-20	15.6	116
51	Functional characterization of fibronectin-separated valve interstitial cell subpopulations in three-dimensional culture. *Journal of Heart Valve Disease*, **2010**, 19, 759-65		1
50	Organ culture as a tool to identify early mechanisms of serotonergic valve disease. *Journal of Heart Valve Disease*, **2010**, 19, 626-35		12
49	Significant changes in mitral valve leaflet matrix composition and turnover with tachycardia-induced cardiomyopathy. *Circulation*, **2009**, 120, S112-9	16.7	30
48	Differential effects of exogenous and endogenous hyaluronan on contraction and strength of collagen gels. *Acta Biomaterialia*, **2009**, 5, 1019-26	10.8	14
47	Effect of cyclic mechanical strain on glycosaminoglycan and proteoglycan synthesis by heart valve cells. *Acta Biomaterialia*, **2009**, 5, 531-40	10.8	42
46	Abundance and location of proteoglycans and hyaluronan within normal and myxomatous mitral valves. *Cardiovascular Pathology*, **2009**, 18, 191-7	3.8	98
45	Synthesis and conformational evaluation of a novel gene delivery vector for human mesenchymal stem cells. *Biomacromolecules*, **2008**, 9, 818-27	6.9	49
44	Mitral valvular interstitial cells demonstrate regional, adhesional, and synthetic heterogeneity. *Cells Tissues Organs*, **2008**, 187, 113-22	2.1	24
43	Aortic elasticity and size in bicuspid aortic valve syndrome. *European Heart Journal*, **2008**, 29, 472-9	9.5	153
42	The effects of mitral regurgitation alone are sufficient for leaflet remodeling. *Circulation*, **2008**, 118, S243-9	16.7	47

41	Glycosaminoglycan composition of the vocal fold lamina propria in relation to function. *Annals of Otology, Rhinology and Laryngology*, **2008**, 117, 371-81	2.1	22
40	Valve proteoglycan content and glycosaminoglycan fine structure are unique to microstructure, mechanical load and age: Relevance to an age-specific tissue-engineered heart valve. *Acta Biomaterialia*, **2008**, 4, 1148-60	10.8	80
39	Influence of cyclic strain and decorin deficiency on 3D cellularized collagen matrices. *Biomaterials*, **2008**, 29, 2740-8	15.6	23
38	Reversible secretion of glycosaminoglycans and proteoglycans by cyclically stretched valvular cells in 3D culture. *Annals of Biomedical Engineering*, **2008**, 36, 1092-103	4.7	31
37	Endogenous overexpression of hyaluronan synthases within dynamically cultured collagen gels: Implications for vascular and valvular disease. *Biomaterials*, **2008**, 29, 2969-76	15.6	9
36	Influence of strain on proteoglycan synthesis by valvular interstitial cells in three-dimensional culture. *Acta Biomaterialia*, **2008**, 4, 88-96	10.8	27
35	Matrix development in self-assembly of articular cartilage. *PLoS ONE*, **2008**, 3, e2795	3.7	111
34	The effect of endogenous overexpression of hyaluronan synthases on material, morphological, and biochemical properties of uncrosslinked collagen biomaterials. *Biomaterials*, **2007**, 28, 5509-17	15.6	4
33	Glycosaminoglycan synthesis and structure as targets for the prevention of calcific aortic valve disease. *Cardiovascular Research*, **2007**, 76, 19-28	9.9	44
32	Synthesis of glycosaminoglycans in differently loaded regions of collagen gels seeded with valvular interstitial cells. *Tissue Engineering*, **2007**, 13, 41-9		41
31	Decorin-transforming growth factor- interaction regulates matrix organization and mechanical characteristics of three-dimensional collagen matrices. *Journal of Biological Chemistry*, **2007**, 282, 35887-98	5.4	108
30	Utility and control of proteoglycans in tissue engineering. *Tissue Engineering*, **2007**, 13, 1893-904		37
29	Utility and Control of Proteoglycans in Tissue Engineering. *Tissue Engineering*, **2007**, 070124172000001		
28	Tissue Engineering of Heart Valves **2007**, 28-1-28-19		
27	The use of collagenase III for the isolation of porcine aortic valvular interstitial cells: rationale and optimization. *Journal of Heart Valve Disease*, **2007**, 16, 175-83		27
26	Age-related changes in collagen synthesis and turnover in porcine heart valves. *Journal of Heart Valve Disease*, **2007**, 16, 672-82		50
25	Review. Hyaluronan: a powerful tissue engineering tool. *Tissue Engineering*, **2006**, 12, 2131-40		315
24	Effects of static and cyclic loading in regulating extracellular matrix synthesis by cardiovascular cells. *Cardiovascular Research*, **2006**, 72, 375-83	9.9	153

23	BIOLOGICAL SYSTEMS AND MATERIALS: A REVIEW OF THE FIELD OF BIOMECHANICS AND THE ROLE OF THE SOCIETY FOR EXPERIMENTAL MECHANICS. *Experimental Techniques*, **2006**, 30, 21-29	1.4	3
22	Synthesis of Glycosaminoglycans in Differently Loaded Regions of Collagen Gels Seeded with Valvular Interstitial Cells. *Tissue Engineering*, **2006**, 061220075423025		
21	Age-related structural changes in cardiac valves: implications for tissue-engineered repairs. *The American Journal of Geriatric Cardiology*, **2006**, 15, 311-5		3
20	Phenotypic characterization of isolated valvular interstitial cell subpopulations. *Journal of Heart Valve Disease*, **2006**, 15, 815-22		22
19	Apparently normal mitral valves in patients with heart failure demonstrate biochemical and structural derangements: an extracellular matrix and echocardiographic study. *Journal of the American College of Cardiology*, **2005**, 45, 54-61	15.1	100
18	Mitral valve stiffening in end-stage heart failure: evidence of an organic contribution to functional mitral regurgitation. *Journal of Thoracic and Cardiovascular Surgery*, **2005**, 130, 783-90	1.5	95
17	Glycosaminoglycans and proteoglycans in normal mitral valve leaflets and chordae: association with regions of tensile and compressive loading. *Glycobiology*, **2004**, 14, 621-33	5.8	112
16	Cell viability mapping within long-term heart valve organ cultures. *Journal of Heart Valve Disease*, **2004**, 13, 290-6		12
15	Loss of chondroitin 6-sulfate and hyaluronan from failed porcine bioprosthetic valves. *Journal of Biomedical Materials Research Part B*, **2003**, 65, 251-9		25
14	Glycosaminoglycan profiles of myxomatous mitral leaflets and chordae parallel the severity of mechanical alterations. *Journal of the American College of Cardiology*, **2003**, 42, 271-7	15.1	116
13	3,4-methylenedioxymethamphetamine (MDMA, "Ecstasy") induces fenfluramine-like proliferative actions on human cardiac valvular interstitial cells in vitro. *Molecular Pharmacology*, **2003**, 63, 1223-9	4.3	233
12	Core protein dependence of epimerization of glucuronosyl residues in galactosaminoglycans. *Journal of Biological Chemistry*, **2002**, 277, 42409-16	5.4	33
11	Mechanisms of aortic valve incompetence: finite-element modeling of Marfan syndrome. *Journal of Thoracic and Cardiovascular Surgery*, **2001**, 122, 946-54	1.5	50
10	Finite-element analysis of aortic valve-sparing: influence of graft shape and stiffness. *IEEE Transactions on Biomedical Engineering*, **2001**, 48, 647-59	5	43
9	Case report: outer sheath rupture may precede complete chordal rupture in fibrotic mitral valve disease. *Journal of Heart Valve Disease*, **2001**, 10, 90-3		5
8	Myxomatous mitral valve chordae. II: Selective elevation of glycosaminoglycan content. *Journal of Heart Valve Disease*, **2001**, 10, 325-32; discussion 332-3		34
7	Re-creation of sinuses is important for sparing the aortic valve: a finite element study. *Journal of Thoracic and Cardiovascular Surgery*, **2000**, 119, 753-63	1.5	158
6	Mechanisms of aortic valve incompetence: finite element modeling of aortic root dilatation. *Annals of Thoracic Surgery*, **2000**, 69, 1851-7	2.7	82

5	Stress variations in the human aortic root and valve: the role of anatomic asymmetry. *Annals of Biomedical Engineering*, **1998**, 26, 534-45	4.7	155
4	Spectral indices of cardiovascular adaptations to short-term simulated microgravity exposure. *Integrative Psychological and Behavioral Science*, **1995**, 30, 201-14		6
3	A novel human enteroid-anaerobe co-culture system to study microbial-host interaction under physiological hypoxia		10
2	Fabricating a Low-Cost, Microscopy-Compatible Mechanical Testing Device. *Experimental Techniques*,1	1.4	
1	Not just skin deep: cosmetic and medical applications of injectable hyaluronan and fibrin. *Materials Technology*,1-10	2.1	