Elena Aikawa

List of Publications by Citations

207 papers	22,790 citations	69 h-index	150 g-index
253 ext. papers	27,812 ext. citations	9.4 avg, IF	6.63 L-index

#	Paper	IF	Citations
207	Minimal information for studies of extracellular vesicles 2018 (MISEV2018): a position statement of the International Society for Extracellular Vesicles and update of the MISEV2014 guidelines. *Journal of Extracellular Vesicles*, **2018**, 7, 1535750	16.4	3642
206	The healing myocardium sequentially mobilizes two monocyte subsets with divergent and complementary functions. *Journal of Experimental Medicine*, **2007**, 204, 3037-47	16.6	1568
205	Identification of splenic reservoir monocytes and their deployment to inflammatory sites. *Science*, **2009**, 325, 612-6	33.3	1481
204	Ly-6Chi monocytes dominate hypercholesterolemia-associated monocytosis and give rise to macrophages in atheromata. *Journal of Clinical Investigation*, **2007**, 117, 195-205	15.9	912
203	Vesiclepedia: a compendium for extracellular vesicles with continuous community annotation. *PLoS Biology*, **2012**, 10, e1001450	9.7	800
202	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
201	Noninvasive vascular cell adhesion molecule-1 imaging identifies inflammatory activation of cells in atherosclerosis. *Circulation*, **2006**, 114, 1504-11	16.7	508
200	Osteogenesis associates with inflammation in early-stage atherosclerosis evaluated by molecular imaging in vivo. *Circulation*, **2007**, 116, 2841-50	16.7	486
199	Nanoparticle PET-CT imaging of macrophages in inflammatory atherosclerosis. *Circulation*, **2008**, 117, 379-87	16.7	460
198	Macrophage-derived matrix vesicles: an alternative novel mechanism for microcalcification in atherosclerotic plaques. *Circulation Research*, **2013**, 113, 72-7	15.7	380
197	Inflammation in atherosclerosis: visualizing matrix metalloproteinase action in macrophages in vivo. *Circulation*, **2006**, 114, 55-62	16.7	356
196	Multimodality molecular imaging identifies proteolytic and osteogenic activities in early aortic valve disease. *Circulation*, **2007**, 115, 377-86	16.7	325
195	Human semilunar cardiac valve remodeling by activated cells from fetus to adult: implications for postnatal adaptation, pathology, and tissue engineering. *Circulation*, **2006**, 113, 1344-52	16.7	319
194	Monocyte accumulation in mouse atherogenesis is progressive and proportional to extent of disease. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 10340-10345	11.5	278
193	EVpedia: a community web portal for extracellular vesicles research. *Bioinformatics*, **2015**, 31, 933-9	7.2	256
192	Arterial and aortic valve calcification abolished by elastolytic cathepsin S deficiency in chronic renal disease. *Circulation*, **2009**, 119, 1785-94	16.7	245
191	Impaired infarct healing in atherosclerotic mice with Ly-6C(hi) monocytosis. *Journal of the American College of Cardiology*, **2010**, 55, 1629-38	15.1	238

190	Tracking the inflammatory response in stroke in vivo by sensing the enzyme myeloperoxidase. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 18584-9	11.5	235
189	Revised microcalcification hypothesis for fibrous cap rupture in human coronary arteries. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 10741-6	11.5	221
188	Optical visualization of cathepsin K activity in atherosclerosis with a novel, protease-activatable fluorescence sensor. *Circulation*, **2007**, 115, 2292-8	16.7	217
187	Molecular imaging insights into early inflammatory stages of arterial and aortic valve calcification. *Circulation Research*, **2011**, 108, 1381-91	15.7	213
186	Chemokine CXCL10 promotes atherogenesis by modulating the local balance of effector and regulatory T cells. *Circulation*, **2006**, 113, 2301-12	16.7	202
185	Genesis and growth of extracellular-vesicle-derived microcalcification in atherosclerotic plaques. *Nature Materials*, **2016**, 15, 335-43	27	198
184	Active adaptation of the tethered mitral valve: insights into a compensatory mechanism for functional mitral regurgitation. *Circulation*, **2009**, 120, 334-42	16.7	198
183	Adventitial MSC-like Cells Are Progenitors of Vascular Smooth Muscle Cells and Drive Vascular Calcification in Chronic Kidney Disease. *Cell Stem Cell*, **2016**, 19, 628-642	18	189
182	Endothelial to Mesenchymal Transition in Cardiovascular Disease: JACC State-of-the-Art Review. *Journal of the American College of Cardiology*, **2019**, 73, 190-209	15.1	189
181	Calcific aortic valve disease: a consensus summary from the Alliance of Investigators on Calcific Aortic Valve Disease. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2014**, 34, 2387-93	9.4	185
180	Mitral valve disease--morphology and mechanisms. *Nature Reviews Cardiology*, **2015**, 12, 689-710	14.8	172
179	Inhibition of bone morphogenetic protein signaling reduces vascular calcification and atherosclerosis. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2012**, 32, 613-22	9.4	169
178	Matrix metalloproteinase-13/collagenase-3 deletion promotes collagen accumulation and organization in mouse atherosclerotic plaques. *Circulation*, **2005**, 112, 2708-15	16.7	169
177	18F-4V for PET-CT imaging of VCAM-1 expression in atherosclerosis. *JACC: Cardiovascular Imaging*, **2009**, 2, 1213-22	8.4	166
176	Fluorescence tomography and magnetic resonance imaging of myocardial macrophage infiltration in infarcted myocardium in vivo. *Circulation*, **2007**, 115, 1384-91	16.7	163
175	Real-time catheter molecular sensing of inflammation in proteolytically active atherosclerosis. *Circulation*, **2008**, 118, 1802-9	16.7	162
174	Activatable magnetic resonance imaging agent reports myeloperoxidase activity in healing infarcts and noninvasively detects the antiinflammatory effects of atorvastatin on ischemia-reperfusion injury. *Circulation*, **2008**, 117, 1153-60	16.7	158
173	Arterial and aortic valve calcification inversely correlates with osteoporotic bone remodelling: a role for inflammation. *European Heart Journal*, **2010**, 31, 1975-84	9.5	152

172	Oxazine conjugated nanoparticle detects in vivo hypochlorous acid and peroxynitrite generation. *Journal of the American Chemical Society*, **2009**, 131, 15739-44	16.4	151
171	Hybrid in vivo FMT-CT imaging of protease activity in atherosclerosis with customized nanosensors. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2009**, 29, 1444-51	9.4	150
170	Indocyanine green enables near-infrared fluorescence imaging of lipid-rich, inflamed atherosclerotic plaques. *Science Translational Medicine*, **2011**, 3, 84ra45	17.5	143
169	Sortilin mediates vascular calcification via its recruitment into extracellular vesicles. *Journal of Clinical Investigation*, **2016**, 126, 1323-36	15.9	141
168	Dual channel optical tomographic imaging of leukocyte recruitment and protease activity in the healing myocardial infarct. *Circulation Research*, **2007**, 100, 1218-25	15.7	132
167	In vivo detection of Staphylococcus aureus endocarditis by targeting pathogen-specific prothrombin activation. *Nature Medicine*, **2011**, 17, 1142-6	50.5	125
166	Notch ligand delta-like 4 blockade attenuates atherosclerosis and metabolic disorders. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E1868-77	11.5	121
165	PARP9 and PARP14 cross-regulate macrophage activation via STAT1 ADP-ribosylation. *Nature Communications*, **2016**, 7, 12849	17.4	120
164	Cyclic strain induces dual-mode endothelial-mesenchymal transformation of the cardiac valve. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 19943-8	11.5	120
163	Human pulmonary valve progenitor cells exhibit endothelial/mesenchymal plasticity in response to vascular endothelial growth factor-A and transforming growth factor-beta2. *Circulation Research*, **2006**, 99, 861-9	15.7	118
162	Inhibition of atherogenesis in BLT1-deficient mice reveals a role for LTB4 and BLT1 in smooth muscle cell recruitment. *Circulation*, **2005**, 112, 578-86	16.7	117
161	Early photon tomography allows fluorescence detection of lung carcinomas and disease progression in mice in vivo. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 19126-31	11.5	113
160	Cellular Imaging of Inflammation in Atherosclerosis Using Magnetofluorescent Nanomaterials. *Molecular Imaging*, **2006**, 5, 7290.2006.00009	3.7	112
159	In vivo monitoring of function of autologous engineered pulmonary valve. *Journal of Thoracic and Cardiovascular Surgery*, **2010**, 139, 723-31	1.5	110
158	Characterization of human atherosclerotic plaques by intravascular magnetic resonance imaging. *Circulation*, **2005**, 112, 2324-31	16.7	110
157	Spatiotemporal Multi-Omics Mapping Generates a Molecular Atlas of the Aortic Valve and Reveals Networks Driving Disease. *Circulation*, **2018**, 138, 377-393	16.7	102
156	Mitral valve endothelial cells with osteogenic differentiation potential. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2011**, 31, 598-607	9.4	102
155	Role of extracellular vesicles in de novo mineralization: an additional novel mechanism of cardiovascular calcification. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2013**, 33, 1753-8	9.4	100

154	Cardiovascular calcification: an inflammatory disease. *Circulation Journal*, **2011**, 75, 1305-13	2.9	99
153	Lipoprotein(a) and Oxidized Phospholipids Promote Valve Calcification in Patients With Aortic Stenosis. *Journal of the American College of Cardiology*, **2019**, 73, 2150-2162	15.1	97
152	Valvular interstitial cells suppress calcification of valvular endothelial cells. *Atherosclerosis*, **2015**, 242, 251-260	3.1	97
151	Myeloperoxidase-targeted imaging of active inflammatory lesions in murine experimental autoimmune encephalomyelitis. *Brain*, **2008**, 131, 1123-33	11.2	96
150	Flow Perturbation Mediates Neutrophil Recruitment and Potentiates Endothelial Injury via TLR2 in Mice: Implications for Superficial Erosion. *Circulation Research*, **2017**, 121, 31-42	15.7	94
149	Small entities with large impact: microcalcifications and atherosclerotic plaque vulnerability. *Current Opinion in Lipidology*, **2014**, 25, 327-32	4.4	90
148	Potential drug targets for calcific aortic valve disease. *Nature Reviews Cardiology*, **2014**, 11, 218-31	14.8	89
147	Selective inhibition of matrix metalloproteinase-13 increases collagen content of established mouse atherosclerosis. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2011**, 31, 2464-72	9.4	89
146	Noninvasive Molecular Imaging of Disease Activity in Atherosclerosis. *Circulation Research*, **2016**, 119, 330-40	15.7	89
145	Diffusion spectrum MRI tractography reveals the presence of a complex network of residual myofibers in infarcted myocardium. *Circulation: Cardiovascular Imaging*, **2009**, 2, 206-12	3.9	87
144	Detection of Aggregation-Competent Tau in Neuron-Derived Extracellular Vesicles. *International Journal of Molecular Sciences*, **2018**, 19,	6.3	86
143	Molecular MRI of cardiomyocyte apoptosis with simultaneous delayed-enhancement MRI distinguishes apoptotic and necrotic myocytes in vivo: potential for midmyocardial salvage in acute ischemia. *Circulation: Cardiovascular Imaging*, **2009**, 2, 460-7	3.9	82
142	Fibroblast activation protein is induced by inflammation and degrades type I collagen in thin-cap fibroatheromata. *European Heart Journal*, **2011**, 32, 2713-22	9.5	80
141	The role of organ level conditioning on the promotion of engineered heart valve tissue development in-vitro using mesenchymal stem cells. *Biomaterials*, **2010**, 31, 1114-25	15.6	75
140	Cardiovascular calcification: artificial intelligence and big data accelerate mechanistic discovery. *Nature Reviews Cardiology*, **2019**, 16, 261-274	14.8	74
139	Molecular imaging of innate immune cell function in transplant rejection. *Circulation*, **2009**, 119, 1925-32	16.7	70
138	Calcific aortic valve stenosis: hard disease in the heart: A biomolecular approach towards diagnosis and treatment. *European Heart Journal*, **2018**, 39, 2618-2624	9.5	69
137	Combined magnetic resonance and fluorescence imaging of the living mouse brain reveals glioma response to chemotherapy. *NeuroImage*, **2009**, 45, 360-9	7.9	67

136	MicroRNA in cardiovascular calcification: focus on targets and extracellular vesicle delivery mechanisms. *Circulation Research*, **2013**, 112, 1073-84	15.7	65
135	Uremic Toxin Indoxyl Sulfate Promotes Proinflammatory Macrophage Activation Via the Interplay of OATP2B1 and Dll4-Notch Signaling. *Circulation*, **2019**, 139, 78-96	16.7	65
134	Extracellular vesicles in cardiovascular calcification: expanding current paradigms. *Journal of Physiology*, **2016**, 594, 2895-903	3.9	63
133	Cellular imaging of inflammation in atherosclerosis using magnetofluorescent nanomaterials. *Molecular Imaging*, **2006**, 5, 85-92	3.7	63
132	Extracellular Vesicles As Mediators of Cardiovascular Calcification. *Frontiers in Cardiovascular Medicine*, **2017**, 4, 78	5.4	62
131	Transglutaminase activity in acute infarcts predicts healing outcome and left ventricular remodelling: implications for FXIII therapy and antithrombin use in myocardial infarction. *European Heart Journal*, **2008**, 29, 445-54	9.5	62
130	Endothelial progenitor cells as a sole source for ex vivo seeding of tissue-engineered heart valves. *Tissue Engineering - Part A*, **2010**, 16, 257-67	3.9	61
129	Statins suppress apolipoprotein CIII-induced vascular endothelial cell activation and monocyte adhesion. *European Heart Journal*, **2013**, 34, 615-24	9.5	60
128	Engineering a 3D-Bioprinted Model of Human Heart Valve Disease Using Nanoindentation-Based Biomechanics. *Nanomaterials*, **2018**, 8,	5.4	59
127	A single injection of gain-of-function mutant PCSK9 adeno-associated virus vector induces cardiovascular calcification in mice with no genetic modification. *Atherosclerosis*, **2016**, 251, 109-118	3.1	58
126	Dynamin-Related Protein 1 Inhibition Attenuates Cardiovascular Calcification in the Presence of Oxidative Stress. *Circulation Research*, **2017**, 121, 220-233	15.7	57
125	Progenitor cells confer plasticity to cardiac valve endothelium. *Journal of Cardiovascular Translational Research*, **2011**, 4, 710-9	3.3	56
124	F-Fluoride Signal Amplification Identifies Microcalcifications Associated With Atherosclerotic Plaque Instability in Positron Emission Tomography/Computed Tomography Images. *Circulation: Cardiovascular Imaging*, **2019**, 12, e007835	3.9	56
123	Myocardial Infarction Alters Adaptation of the Tethered Mitral Valve. *Journal of the American College of Cardiology*, **2016**, 67, 275-87	15.1	55
122	Effect of Losartan on Mitral Valve Changes After Myocardial Infarction. *Journal of the American College of Cardiology*, **2017**, 70, 1232-1244	15.1	55
121	Directing valvular interstitial cell myofibroblast-like differentiation in a hybrid hydrogel platform. *Advanced Healthcare Materials*, **2015**, 4, 121-30	10.1	52
120	Mitral Valve Adaptation to Isolated Annular Dilation: Insights Into the Mechanism of Atrial Functional Mitral Regurgitation. *JACC: Cardiovascular Imaging*, **2019**, 12, 665-677	8.4	52
119	Simulation of early calcific aortic valve disease in a 3D platform: A role for myofibroblast differentiation. *Journal of Molecular and Cellular Cardiology*, **2016**, 94, 13-20	5.8	51

118	Roles and Regulation of Extracellular Vesicles in Cardiovascular Mineral Metabolism. *Frontiers in Cardiovascular Medicine*, **2018**, 5, 187	5.4	51
117	Cardiovascular calcification: current controversies and novel concepts. *Cardiovascular Pathology*, **2015**, 24, 207-12	3.8	48
116	Molecular MRI detects low levels of cardiomyocyte apoptosis in a transgenic model of chronic heart failure. *Circulation: Cardiovascular Imaging*, **2009**, 2, 468-75	3.9	48
115	Genetically engineered resistance for MMP collagenases promotes abdominal aortic aneurysm formation in mice infused with angiotensin II. *Laboratory Investigation*, **2009**, 89, 315-26	5.9	48
114	Selective cathepsin S inhibition attenuates atherosclerosis in apolipoprotein E-deficient mice with chronic renal disease. *American Journal of Pathology*, **2015**, 185, 1156-66	5.8	47
113	Sortilin and Its Multiple Roles in Cardiovascular and Metabolic Diseases. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2018**, 38, 19-25	9.4	47
112	Elastogenesis at the onset of human cardiac valve development. *Development (Cambridge)*, **2013**, 140, 2345-53	6.6	45
111	Pioglitazone suppresses inflammation in vivo in murine carotid atherosclerosis: novel detection by dual-target fluorescence molecular imaging. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2010**, 30, 1933-9	9.4	45
110	Notch signaling in cardiovascular disease and calcification. *Current Cardiology Reviews*, **2008**, 4, 148-56	2.4	45
109	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
108	CD45 Expression in Mitral Valve Endothelial Cells After Myocardial Infarction. *Circulation Research*, **2016**, 119, 1215-1225	15.7	43
107	Expression of the familial cardiac valvular dystrophy gene, filamin-A, during heart morphogenesis. *Developmental Dynamics*, **2010**, 239, 2118-27	2.9	42
106	Detection of macrophage activity in atherosclerosis in vivo using multichannel, high-resolution laser scanning fluorescence microscopy. *Journal of Biomedical Optics*, **2006**, 11, 021009	3.5	40
105	Enrichment of calcifying extracellular vesicles using density-based ultracentrifugation protocol. *Journal of Extracellular Vesicles*, **2014**, 3, 25129	16.4	35
104	Healing and remodeling of bioengineered pulmonary artery patches implanted in sheep. *Cardiovascular Pathology*, **2007**, 16, 277-82	3.8	35
103	Interferon-Released by Activated CD8 T Lymphocytes Impairs the Calcium Resorption Potential of Osteoclasts in Calcified Human Aortic Valves. *American Journal of Pathology*, **2017**, 187, 1413-1425	5.8	34
102	Intravital molecular imaging of small-diameter tissue-engineered vascular grafts in mice: a feasibility study. *Tissue Engineering - Part C: Methods*, **2010**, 16, 597-607	2.9	34
101	Chronic hypoxia activates the Akt and beta-catenin pathways in human macrophages. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2009**, 29, 1664-70	9.4	34

100	Serum Sortilin Associates With Aortic Calcification and Cardiovascular Risk in Men. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2017**, 37, 1005-1011	9.4	33
99	Simplified syntheses of complex multifunctional nanomaterials. *Chemical Communications*, **2008**, 4792-4	5.8	33
98	Giving Calcification Its Due: Recognition of a Diverse Disease: A First Attempt to Standardize the Field. *Circulation Research*, **2017**, 120, 270-273	15.7	33
97	Cystathionine γlyase accelerates osteoclast differentiation: identification of a novel regulator of osteoclastogenesis by proteomic analysis. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2014**, 34, 626-34	9.4	31
96	The osteoclast-associated receptor (OSCAR) is a novel receptor regulated by oxidized low-density lipoprotein in human endothelial cells. *Endocrinology*, **2011**, 152, 4915-26	4.8	31
95	Visualizing novel concepts of cardiovascular calcification. *Trends in Cardiovascular Medicine*, **2013**, 23, 71-9	6.9	30
94	Annexin A1-dependent tethering promotes extracellular vesicle aggregation revealed with single-extracellular vesicle analysis. *Science Advances*, **2020**, 6,	14.3	27
93	Standardization of Human Calcific Aortic Valve Disease Modeling Reveals Passage-Dependent Calcification. *Frontiers in Cardiovascular Medicine*, **2019**, 6, 49	5.4	26
92	New insights into mitral valve dystrophy: a Filamin-A genotype-phenotype and outcome study. *European Heart Journal*, **2018**, 39, 1269-1277	9.5	26
91	Revisiting cardiovascular calcification: A multifaceted disease requiring a multidisciplinary approach. *Seminars in Cell and Developmental Biology*, **2015**, 46, 68-77	7.5	25
90	Extracellular vesicles in cardiovascular homeostasis and disease. *Current Opinion in Cardiology*, **2018** , 33, 290-297	2.1	25
89	Dimerization of sortilin regulates its trafficking to extracellular vesicles. *Journal of Biological Chemistry*, **2018**, 293, 4532-4544	5.4	25
88	Mitral Leaflet Changes Following Myocardial Infarction: Clinical Evidence for Maladaptive Valvular Remodeling. *Circulation: Cardiovascular Imaging*, **2017**, 10,	3.9	24
87	Innate and adaptive immunity in cardiovascular calcification. *Atherosclerosis*, **2020**, 306, 59-67	3.1	22
86	Vasculitis: molecular imaging by targeting the inflammatory enzyme myeloperoxidase. *Radiology*, **2012**, 262, 181-90	20.5	22
85	Zooming in on the genesis of atherosclerotic plaque microcalcifications. *Journal of Physiology*, **2016** , 594, 2915-27	3.9	22
84	In vitro 3D model and miRNA drug delivery to target calcific aortic valve disease. *Clinical Science*, **2017**, 131, 181-195	6.5	21
83	S100A9-RAGE Axis Accelerates Formation of Macrophage-Mediated Extracellular Vesicle Microcalcification in Diabetes Mellitus. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2020**, 40, 1838-1853	9.4	21

82	Unbiased discovery of in vivo imaging probes through in vitro profiling of nanoparticle libraries. *Integrative Biology (United Kingdom)*, **2009**, 1, 311-7	3.7	20
81	The antiproliferative cytostatic effects of a self-activating viridin prodrug. *Molecular Cancer Therapeutics*, **2009**, 8, 1666-75	6.1	19
80	Elastomeric Fibrous Hybrid Scaffold Supports In Vitro and In Vivo Tissue Formation. *Advanced Functional Materials*, **2017**, 27, 1606614	15.6	19
79	Histopathological assessment of calcification and inflammation of calcific aortic valves from patients with and without diabetes mellitus. *Histology and Histopathology*, **2017**, 32, 293-306	1.4	18
78	Attenuated Mitral Leaflet Enlargement Contributes to Functional Mitral Regurgitation After Myocardial Infarction. *Journal of the American College of Cardiology*, **2020**, 75, 395-405	15.1	16
77	Cathepsin S As an Inhibitor of Cardiovascular Inflammation and Calcification in Chronic Kidney Disease. *Frontiers in Cardiovascular Medicine*, **2017**, 4, 88	5.4	15
76	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
75	Comparative Histopathological Analysis of Mitral Valves in Barlow Disease and Fibroelastic Deficiency. *Seminars in Thoracic and Cardiovascular Surgery*, **2016**, 28, 757-767	1.7	14
74	Nitric oxide prevents aortic valve calcification by S-nitrosylation of USP9X to activate NOTCH signaling. *Science Advances*, **2021**, 7,	14.3	12
73	Calcification of Vascular Smooth Muscle Cells and Imaging of Aortic Calcification and Inflammation. *Journal of Visualized Experiments*, **2016**,	1.6	11
72	ApoC-III is a novel inducer of calcification in human aortic valves. *Journal of Biological Chemistry*, **2021**, 296, 100193	5.4	11
71	Sheep-Specific Immunohistochemical Panel for the Evaluation of Regenerative and Inflammatory Processes in Tissue-Engineered Heart Valves. *Frontiers in Cardiovascular Medicine*, **2018**, 5, 105	5.4	11
70	Pitavastatin Reduces Inflammation in Atherosclerotic Plaques in Apolipoprotein E-Deficient Mice with Late Stage Renal Disease. *PLoS ONE*, **2015**, 10, e0138047	3.7	10
69	A novel quantitative approach for eliminating sample-to-sample variation using a hue saturation value analysis program. *PLoS ONE*, **2014**, 9, e89627	3.7	10
68	Multi-Omics Approaches to Define Calcific Aortic Valve Disease Pathogenesis. *Circulation Research*, **2021**, 128, 1371-1397	15.7	10
67	Harnessing Single-Cell RNA Sequencing to Better Understand How Diseased Cells Behave the Way They Do in Cardiovascular Disease. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2021**, 41, 585-600	9.4	10
66	Transcriptional control of intestinal cholesterol absorption, adipose energy expenditure and lipid handling by Sortilin. *Scientific Reports*, **2018**, 8, 9006	4.9	9
65	Rheumatic Heart Valve Disease Pathophysiology and Underlying Mechanisms. *Frontiers in Cardiovascular Medicine*, **2020**, 7, 612716	5.4	9

64	CROT (Carnitine O-Octanoyltransferase) Is a Novel Contributing Factor in Vascular Calcification via Promoting Fatty Acid Metabolism and Mitochondrial Dysfunction. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2021**, 41, 755-768	9.4	9
63	Retinoids Repress Human Cardiovascular Cell Calcification With Evidence for Distinct Selective Retinoid Modulator Effects. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2020**, 40, 656-669	9.4	8
62	Circulating Extracellular Vesicles As Biomarkers and Drug Delivery Vehicles in Cardiovascular Diseases. *Biomolecules*, **2021**, 11,	5.9	8
61	Current Trends and Future Perspectives of State-of-the-Art Proteomics Technologies Applied to Cardiovascular Disease Research. *Circulation Journal*, **2016**, 80, 1674-83	2.9	7
60	Cardiovascular inflammation. *International Journal of Inflammation*, **2012**, 2012, 904608	6.4	7
59	Calcific aortic valve disease: from molecular and cellular mechanisms to medical therapy. *European Heart Journal*, **2021**,	9.5	7
58	Quantification of Calcified Particles in Human Valve Tissue Reveals Asymmetry of Calcific Aortic Valve Disease Development. *Frontiers in Cardiovascular Medicine*, **2016**, 3, 44	5.4	7
57	Innate and adaptive immunity: the understudied driving force of heart valve disease. *Cardiovascular Research*, **2021**, 117, 2506-2524	9.9	7
56	Calcific and Degenerative Heart Valve Disease **2014**, 161-180		6
55	Cardiovascular Inflammation 2012: Reactive Oxygen Species, SUMOylation, and Biomarkers in Cardiovascular Inflammation. *International Journal of Inflammation*, **2013**, 2013, 953463	6.4	6
54	2020 Jeffrey M. Hoeg Award Lecture: Calcifying Extracellular Vesicles as Building Blocks of Microcalcifications in Cardiovascular Disorders. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2021**, 41, 117-127	9.4	6
53	Dynamin-related protein 1 inhibition reduces hepatic PCSK9 secretion. *Cardiovascular Research*, **2021**, 117, 2340-2353	9.9	6
52	Systems Approach to Discovery of Therapeutic Targets for Vein Graft Disease: PPARPivotally Regulates Metabolism, Activation, and Heterogeneity of Macrophages and Lesion Development. *Circulation*, **2021**, 143, 2454-2470	16.7	5
51	The Transcriptional Signature of Growth in Human Fetal Aortic Valve Development. *Annals of Thoracic Surgery*, **2018**, 106, 1834-1840	2.7	5
50	Aortic valve calcification predicts all-cause mortality independent of coronary calcification and severe stenosis. *Atherosclerosis*, **2020**, 307, 16-20	3.1	4
49	Nanoanalytical analysis of bisphosphonate-driven alterations of microcalcifications using a 3D hydrogel system and in vivo mouse model. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	4
48	Methods for the identification and characterization of extracellular vesicles in cardiovascular studies - from exosomes to microvesicles.. *Cardiovascular Research*, **2022**,	9.9	4
47	-acetylglucosamine-1-Phosphate Transferase Suppresses Lysosomal Hydrolases in Dysfunctional Osteoclasts: A Potential Mechanism for Vascular Calcification. *Journal of Cardiovascular Development and Disease*, **2015**, 2, 31-47	4.2	3

46	Immunohistochemistry **2011**, 277-290		3
45	Lipoprotein(a) Induces Vesicular Cardiovascular Calcification Revealed With Single-Extracellular Vesicle Analysis.. *Frontiers in Cardiovascular Medicine*, **2022**, 9, 778919	5.4	3
44	Role of Extracellular Vesicles in the Pathogenesis of Vascular Damage.. *Hypertension*, **2022**, HYPERTENSIONAHA1211795	8.3	3
43	Mitral Regurgitation After Percutaneous Mitral Valvuloplasty: Insights Into Mechanisms and Impact on Clinical Outcomes. *JACC: Cardiovascular Imaging*, **2020**, 13, 2513-2526	8.4	3
42	International Society for Extracellular Vesicles: Second Annual Meeting, 17-20 April 2013, Boston, MA (ISEV 2013). *Journal of Extracellular Vesicles*, **2013**, 2, 23070	16.4	2
41	Optical Molecular Imaging of Inflammation and Calcification in Atherosclerosis. *Current Cardiovascular Imaging Reports*, **2010**, 3, 12-17	0.7	2
40	Conserved and Divergent Modulation of Calcification in Atherosclerosis and Aortic Valve Disease by Tissue Extracellular Vesicles		2
39	The Developmental Origin of Calcific Aortic Stenosis.. *New England Journal of Medicine*, **2022**, 386, 1372-1374	59.2	2
38	A disease-driver population within interstitial cells of human calcific aortic valves identified via single-cell and proteomic profiling.. *Cell Reports*, **2022**, 39, 110685	10.6	2
37	Molecular Imaging of Macrophages in Atherosclerosis. *Current Cardiovascular Imaging Reports*, **2012**, 5, 45-52	0.7	1
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