Manu O Platt

List of Publications by Year
in descending order

85	2,871	201674 27	175258 52
papers	citations	h-index	g-index

87	87	87	4322
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Bone Morphogenic Protein 4 Produced in Endothelial Cells by Oscillatory Shear Stress Induces Monocyte Adhesion by Stimulating Reactive Oxygen Species Production From a Nox1-Based NADPH Oxidase. Circulation Research, 2004, 95, 773-779.	4.5	350
2	Identification of Therapeutic Covariant MicroRNA Clusters in Hypoxia-Treated Cardiac Progenitor Cell Exosomes Using Systems Biology. Circulation Research, 2015, 116, 255-263.	4.5	328
3	Sickle Cell Biomechanics. Annual Review of Biomedical Engineering, 2010, 12, 345-367.	12.3	239
4	Magnesium as a biodegradable and bioabsorbable material for medical implants. Jom, 2009, 61, 31-34.	1.9	206
5	Experimental, Systems, and Computational Approaches to Understanding the MicroRNA-Mediated Reparative Potential of Cardiac Progenitor Cellâ€“Derived Exosomes From Pediatric Patients. Circulation Research, 2017, 120, 701-712.	4.5	141
6	Expression of cathepsin K is regulated by shear stress in cultured endothelial cells and is increased in endothelium in human atherosclerosis. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H1479-H1486.	3.2	104
7	Tumor cellâ€“organized fibronectin maintenance of a dormant breast cancer population. Science Advances, 2020, 6, eaaz4157.	10.3	92
8	Acid sphingomyelinase is activated in sickle cell erythrocytes and contributes to inflammatory microparticle generation in SCD. Blood, 2014, 124, 1941-1950.	1.4	70
9	Circulating exosomes derived from transplanted progenitor cells aid the functional recovery of ischemic myocardium. Science Translational Medicine, 2019, 11, .	12.4	69
10	Laminar Shear Stress Inhibits Cathepsin L Activity in Endothelial Cells. Arteriosclerosis, Thrombosis, and Vascular Biology, 2006, 26, 1784-1790.	2.4	67
11	Sustained epidermal growth factor receptor levels and activation by tethered ligand binding enhances osteogenic differentiation of multiâ€potent marrow stromal cells. Journal of Cellular Physiology, 2009, 221, 306-317.	4.1	64
12	Age-Dependent Effect of Pediatric Cardiac Progenitor Cells After Juvenile Heart Failure. Stem Cells Translational Medicine, 2016, 5, 883-892.	3.3	60
13	Crohnâ€™s disease: A review of treatment options and current research. Cellular Immunology, 2013, 286, 45-52.	3.0	57
14	Manipulating substrate and pH in zymography protocols selectively distinguishes cathepsins K, L, S, and V activity in cells and tissues. Archives of Biochemistry and Biophysics, 2011, 516, 52-57.	3.0	53
15	Muscadine grape skin extract can antagonize Snail-cathepsin L-mediated invasion, migration and osteoclastogenesis in prostate and breast cancer cells. Carcinogenesis, 2015, 36, 1019-1027.	2.8	48
16	Multiple sites on <scp>SARSâ€CoV</scp>â€2 spike protein are susceptible to proteolysis by cathepsins B, K, L, S, and V. Protein Science, 2021, 30, 1131-1143.	7.6	47
17	VEGF internalization is not required for VEGFR-2 phosphorylation in bioengineered surfaces with covalently linked VEGF. Integrative Biology (United Kingdom), 2011, 3, 887.	1.3	46
18	Multipathway Kinase Signatures of Multipotent Stromal Cells Are Predictive for Osteogenic Differentiation. Stem Cells, 2009, 27, 2804-2814.	3.2	45

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19	Detection of femtomole quantities of mature cathepsin K with zymography. Analytical Biochemistry, 2010, 401, 91-98.	2.4	41
20	Multiplex Zymography Captures Stage-specific Activity Profiles of Cathepsins K, L, and S in Human Breast, Lung, and Cervical Cancer. Journal of Translational Medicine, 2011, 9, 109.	4.4	41
21	Cyclic pressure and shear stress regulate matrix metalloproteinases and cathepsin activity in porcine aortic valves. Journal of Heart Valve Disease, 2006, 15, 622-9.	0.5	40
22	Tumor necrosis factor alpha stimulates cathepsin K and V activity via juxtacrine monocyteâ€“endothelial cell signaling and JNK activation. Molecular and Cellular Biochemistry, 2012, 367, 65-72.	3.1	34
23	Heat Shock and Cold Shock in Deinococcus radiodurans. Cell Biochemistry and Biophysics, 2004, 40, 277-288.	1.8	33
24	MMP-mediated mesenchymal morphogenesis of pluripotent stem cell aggregates stimulated by gelatin methacrylate microparticle incorporation. Biomaterials, 2016, 76, 66-75.	11.4	32
25	Sickle Cell Disease Activates Peripheral Blood Mononuclear Cells to Induce Cathepsins K and V Activity in Endothelial Cells. Anemia, 2012, 2012, 1-7.	1.7	30
26	Patient specific proteolytic activity of monocyte-derived macrophages and osteoclasts predicted with temporal kinase activation states during differentiation. Integrative Biology (United Kingdom), 2012, 4, 1459.	1.3	29
27	Cathepsin S Cannibalism of Cathepsin K as a Mechanism to Reduce Type I Collagen Degradation. Journal of Biological Chemistry, 2012, 287, 27723-27730.	3.4	29
28	Endothelial cells and cathepsins: Biochemical and biomechanical regulation. Biochimie, 2016, 122, 314-323.	2.6	29
29	Endothelial Dysfunction, Arterial Stiffening, and Intima-Media Thickening in Large Arteries from HIV-1 Transgenic Mice. Annals of Biomedical Engineering, 2013, 41, 682-693.	2.5	27
30	Long-Term Cryopreservation and Revival of Tissue-Engineered Skeletal Muscle. Tissue Engineering - Part A, 2019, 25, 1023-1036.	3.1	25
31	Monocyte-derived macrophage assisted breast cancer cell invasion as a personalized, predictive metric to score metastatic risk. Scientific Reports, 2015, 5, 13855.	3.3	23
32	Investigating the Life Expectancy and Proteolytic Degradation of Engineered Skeletal Muscle Biological Machines. Scientific Reports, 2017, 7, 3775.	3.3	21
33	Azidothymidine (AZT) leads to arterial stiffening and intima-media thickening in mice. Journal of Biomechanics, 2013, 46, 1540-1547.	2.1	19
34	Differential cathepsin responses to inhibitor-induced feedback: E-64 and cystatin C elevate active cathepsin S and suppress active cathepsin L in breast cancer cells. International Journal of Biochemistry and Cell Biology, 2016, 79, 199-208.	2.8	19
35	Original Research: Sickle cell anemia and pediatric strokes: Computational fluid dynamics analysis in the middle cerebral artery. Experimental Biology and Medicine, 2016, 241, 755-765.	2.4	19
36	Predicting Functional Responses of Progenitor Cell Exosome Potential with Computational Modeling. Stem Cells Translational Medicine, 2019, 8, 1212-1221.	3.3	18

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37	Cathepsin Protease Inhibition Reduces Endometriosis Lesion Establishment. Reproductive Sciences, 2016, 23, 623-629.	2.5	16
38	Microarchitectural and mechanical characterization of the sickle bone. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 48, 220-228.	3.1	15
39	Supraspinatus tendon overuse results in degenerative changes to tendon insertion region and adjacent humeral cartilage in a rat model. Journal of Orthopaedic Research, 2017, 35, 1910-1918.	2.3	15
40	Metabolomics and cytokine profiling of mesenchymal stromal cells identify markers predictive of T-cell suppression. Cytotherapy, 2022, 24, 137-148.	0.7	15
41	Cathepsins in Rotator Cuff Tendinopathy: Identification in Human Chronic Tears and Temporal Induction in a Rat Model. Annals of Biomedical Engineering, 2015, 43, 2036-2046.	2.5	14
42	Development of a Platform for Studying 3D Astrocyte Mechanobiology: Compression of Astrocytes in Collagen Gels. Annals of Biomedical Engineering, 2018, 46, 365-374.	2.5	14
43	Human cathepsins K, L, and S: Related proteases, but unique fibrinolytic activity. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 1925-1932.	2.4	13
44	We exist. We are your peers.. Nature Reviews Materials, 2020, 5, 783-784.	48.7	13
45	Reassessing enzyme kinetics: Considering protease-as-substrate interactions in proteolytic networks. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3307-3318.	7.1	12
46	Computational predictions of cysteine cathepsinâ€mediated fibrinogen proteolysis. Protein Science, 2018, 27, 714-724.	7.6	11
47	Sequential, but not Concurrent, Incubation of Cathepsin K and L with Type I Collagen Results in Extended Proteolysis. Scientific Reports, 2019, 9, 5399.	3.3	10
48	Fullâ€thickness rotator cuff tear in rat results in distinct temporal expression of multiple proteases in tendon, muscle, and cartilage. Journal of Orthopaedic Research, 2019, 37, 490-502.	2.3	9
49	Systematic Optimization of Multiplex Zymography Protocol to Detect Active Cathepsins K, L, S, and V in Healthy and Diseased Tissue: Compromise Among Limits of Detection, Reduced Time, and Resources. Molecular Biotechnology, 2013, 54, 1038-1047.	2.4	8
50	Pro-Atherogenic Shear Stress and HIV Proteins Synergistically Upregulate Cathepsin K in Endothelial Cells. Annals of Biomedical Engineering, 2014, 42, 1185-1194.	2.5	8
51	PACMANS: A bioinformatically informed algorithm to predict, design, and disrupt proteaseâ€onâ€protease hydrolysis. Protein Science, 2017, 26, 880-890.	7.6	8
52	Computational imaging analysis of glycated fibrin gels reveals aggregated and anisotropic structures. Journal of Biomedical Materials Research - Part A, 2017, 105, 2191-2198.	4.0	8
53	Co-Emergence of Specialized Endothelial Cells from Embryonic Stem Cells. Stem Cells and Development, 2018, 27, 326-335.	2.1	8
54	Biomechanical and biochemical regulation of cathepsin K expression in endothelial cells converge at AP-1 and NF-Î²B. Biological Chemistry, 2016, 397, 459-468.	2.5	7

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55	Implementation and evaluation of a biotechnology research experience for African-American high school students. Evaluation and Program Planning, 2019, 72, 162-169.	1.6	7
56	Sickle Cell Anemia Mediates Carotid Artery Expansive Remodeling That Can Be Prevented by Inhibition of JNK (c-Jun N-Terminal Kinase). Arteriosclerosis, Thrombosis, and Vascular Biology, 2020, 40, 1220-1230.	2.4	7
57	Cysteine cathepsins are altered by flow within an engineered in vitro microvascular niche. APL Bioengineering, 2020, 4, 046102.	6.2	7
58	Low-Cost Method to Monitor Patient Adherence to HIV Antiretroviral Therapy Using Multiplex Cathepsin Zymography. Molecular Biotechnology, 2016, 58, 56-64.	2.4	6
59	Efavirenz treatment causes arterial stiffening in apolipoprotein E-null mice. Journal of Biomechanics, 2015, 48, 2176-2180.	2.1	5
60	Sickle cell disease promotes sex-dependent pathological bone loss through enhanced cathepsin proteolytic activity in mice. Blood Advances, 2022, 6, 1381-1393.	5.2	5
61	Experimental and Imaging Techniques for Examining Fibrin Clot Structures in Normal and Diseased States. Journal of Visualized Experiments, 2015, , e52019.	0.3	4
62	Computational imaging analysis of fibrin matrices with the inclusion of erythrocytes from homozygous SS blood reveals agglomerated and amorphous structures. Journal of Thrombosis and Thrombolysis, 2017, 43, 43-51.	2.1	4
63	Dynamic Model of Protease State and Inhibitor Trafficking to Predict Protease Activity in Breast Cancer Cells. Cellular and Molecular Bioengineering, 2019, 12, 275-288.	2.1	4
64	Using Statistical Modeling to Understand and Predict Pediatric Stem Cell Function. Circulation Genomic and Precision Medicine, 2019, 12, e002403.	3.6	4
65	From GRID to gridlock: the relationship between scientific biomedical breakthroughs and HIV/AIDS policy in the US Congress. Journal of the International AIDS Society, 2013, 16, 18446.	3.0	3
66	Implementation of a Biomedical Engineering Research Experience for Africanâ€“American High School Students at a Tier One Research University. Journal of Biomechanical Engineering, 2018, 140, .	1.3	3
67	Molecular insights into the irreversible mechanical behavior of sickle hemoglobin. Journal of Biomolecular Structure and Dynamics, 2019, 37, 1270-1281.	3.5	3
68	Age-dependent characterization of carotid and cerebral artery geometries in a transgenic mouse model of sickle cell anemia using ultrasound and microcomputed tomography. Blood Cells, Molecules, and Diseases, 2020, 85, 102486.	1.4	3
69	Novel in vivo and in vitro techniques to image and model the cerebral vasculature in sickle cell disease. Blood Cells, Molecules, and Diseases, 2017, 67, 114-119.	1.4	2
70	Genetic Mutations Associated with Hormone-Positive Breast Cancer in a Small Cohort of Ethiopian Women. Annals of Biomedical Engineering, 2021, 49, 1900-1908.	2.5	2
71	Abstract C60: Snail transcription factor contributes to bone metastasis in prostate and breast cancer cells. , 2014, , .		1
72	Cathepsins and Other Proteases in Tumor Angiogenesis. , 2013, , 297-339.		1

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73	Fibrinolytic Activity of Cysteine Cathepsins and Role of Fibrin as a Reservoir to Sustain Proteolysis. FASEB Journal, 2018, 32, 143.6.	0.5	1
74	OSCILLATORY SHEAR STRESS (OS) UPREGULATES CATHEPSIN EXPRESSION WHILE INHIBITING CYSTATIN C EXPRESSION IN ENDOTHELIAL CELLS (EC) - IMPLICATION IN ATHEROSCLEROSIS. Cardiovascular Pathology, 2004, 13, 155.	1.6	0
75	Laminar shear stress inhibits cathepsin L activity in endothelial cells. Vascular Pharmacology, 2006, 45, e54-e55.	2.1	0
76	T-cell phosphokinome as a fingerprint of effective graft versus leukemia. Frontiers in Bioscience - Elite, 2012, E4, 721-733.	1.8	0
77	Bone Microenvironment Tissue Surrogates Engineered for Reporting of Metastasized Breast Cancer Osteolytic Activity. Materials Research Society Symposia Proceedings, 2014, 1625, 1.	0.1	0
78	Multiplex Cathepsin Zymography to Detect Amounts of Active Cathepsins K, L, S, and V. Methods in Molecular Biology, 2017, 1626, 239-252.	0.9	0
79	Laminar shear stress inhibits cathepsin L activity in endothelial cells (EC). FASEB Journal, 2006, 20, .	0.5	0
80	The Mechanical and Structural Effects of HIV Proteins on Murine Carotid Arteries. , 2011, , .		0
81	T-cell phosphokinome as a fingerprint of effective graft versus leukemia. Frontiers in Bioscience - Elite, 2012, E4, 721.	1.8	0
82	The Mechanical and Structural Changes in Murine Arteries due to the Antiretroviral Drug Azidothymidine (AZT). , 2012, , .		0
83	Abstract C57: Snail transcription factor can regulate cathepsin L activity in prostate carcinomas. , 2014, , .		0
84	Abstract 4105: Cathepsin L inhibition reverts epithelial mesenchymal transition in prostate and breast cancer cells. , 2015, , .		0
85	Pharmacological Protease Inhibitor Preserves Proteolytic Activity In Breast Cancer Cells: Computational Models To Probe Unexpected Cellular Responses. FASEB Journal, 2018, 32, 895.1.	0.5	0