Stephen F Vatner

List of Publications by Year
in descending order

128 papers	7,631 citations	53660 45 h-index	51492 86 g-index
131 all docs	131 docs citations	131 times ranked	9650 citing authors

#	Article	IF	Citations
1	Autophagy in chronically ischemic myocardium. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 13807-13812.	3.3	490
2	Hibernating Myocardium. New England Journal of Medicine, 1998, 339, 173-181.	13.9	420
3	Cardiovascular Control Mechanisms in the Conscious State. New England Journal of Medicine, 1975, 293, 970-976.	13.9	415
4	Type 5 Adenylyl Cyclase Disruption Increases Longevity and Protects Against Stress. Cell, 2007, 130, 247-258.	13.5	311
5	Short Communication: Vascular Smooth Muscle Cell Stiffness As a Mechanism for Increased Aortic Stiffness With Aging. Circulation Research, 2010, 107, 615-619.	2.0	275
6	Activation of Mst1 causes dilated cardiomyopathy by stimulating apoptosis without compensatory ventricular myocyte hypertrophy. Journal of Clinical Investigation, 2003, 111, 1463-1474.	3.9	244
7	Inhibition of endogenous thioredoxin in the heart increases oxidative stress and cardiac hypertrophy. Journal of Clinical Investigation, 2003, 112, 1395-1406.	3.9	223
8	Adverse Effects of Chronic Endogenous Sympathetic Drive Induced by Cardiac G _{sÎ±} Overexpression. Circulation Research, 1996, 78, 517-524.	2.0	215
9	Echocardiography in Mice. Current Protocols in Mouse Biology, 2011, 1, 71-83.	1.2	211
10	Aging Increases Aortic MMP-2 Activity and Angiotensin II in Nonhuman Primates. Hypertension, 2003, 41, 1308-1316.	1.3	209
11	Activation of the Cardiac Proteasome During Pressure Overload Promotes Ventricular Hypertrophy. Circulation, 2006, 114, 1821-1828.	1.6	195
12	Mechanism of Impaired Myocardial Function During Progressive Coronary Stenosis in Conscious Pigs. Circulation Research, 1995, 76, 479-488.	2.0	184
13	Î²-Arrestin1 Knockout Mice Appear Normal but Demonstrate Altered Cardiac Responses to Î²-Adrenergic Stimulation. Circulation Research, 1997, 81, 1021-1026.	2.0	184
14	Disruption of type 5 adenylyl cyclase gene preserves cardiac function against pressure overload. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 9986-9990.	3.3	183
15	Apoptosis of Cardiac Myocytes in GsÎ± Transgenic Mice. Circulation Research, 1999, 84, 34-42.	2.0	160
16	Improvement of Cardiac Function by a Cardiac Myosin Activator in Conscious Dogs With Systolic Heart Failure. Circulation: Heart Failure, 2010, 3, 522-527.	1.6	144
17	Increased vascular smooth muscle cell stiffness: a novel mechanism for aortic stiffness in hypertension. American Journal of Physiology - Heart and Circulatory Physiology, 2013, 305, H1281-H1287.	1.5	142
18	Inhibition of endogenous thioredoxin in the heart increases oxidative stress and cardiac hypertrophy. Journal of Clinical Investigation, 2003, 112, 1395-1406.	3.9	128

#	Article	IF	Citations
19	Extent of Regulation of the Heart's Contractile State in the Conscious Dog by Alteration in the Frequency of Contraction. Journal of Clinical Investigation, 1973, 52, 1187-1194.	3.9	124
20	Program of Cell Survival Underlying Human and Experimental Hibernating Myocardium. Circulation Research, 2004, 95, 433-440.	2.0	123
21	Effects of Halothane on Left Ventricular Function and Distribution of Regional Blood Flow in Dogs and Primates. Circulation Research, 1974, 34, 155-167.	2.0	122
22	Healthful aging mediated by inhibition of oxidative stress. Ageing Research Reviews, 2020, 64, 101194.	5.0	118
23	Type 5 Adenylyl Cyclase Disruption Alters Not Only Sympathetic But Also Parasympathetic and Calcium-Mediated Cardiac Regulation. Circulation Research, 2003, 93, 364-371.	2.0	109
24	Augmented Vascular Smooth Muscle Cell Stiffness and Adhesion When Hypertension Is Superimposed on Aging. Hypertension, 2015, 65, 370-377.	1.3	109
25	â€œSmooth Muscle Cell Stiffness Syndromeâ€â€”Revisiting the Structural Basis of Arterial Stiffness. Frontiers in Physiology, 2015, 6, 335.	1.3	107
26	Disruption of Type 5 Adenylyl Cyclase Enhances Desensitization of Cyclic Adenosine Monophosphate Signal and Increases Akt Signal With Chronic Catecholamine Stress. Circulation, 2007, 116, 1776-1783.	1.6	101
27	Caloric restriction reduces growth of mammary tumors and metastases. Carcinogenesis, 2011, 32, 1381-1387.	1.3	90
28	Mechanism of Gender-Specific Differences in Aortic Stiffness With Aging in Nonhuman Primates. Circulation, 2007, 116, 669-676.	1.6	89
29	Proteasome inhibition decreases cardiac remodeling after initiation of pressure overload. American Journal of Physiology - Heart and Circulatory Physiology, 2008, 295, H1385-H1393.	1.5	88
30	Heart Rate and Electrocardiography Monitoring in Mice. Current Protocols in Mouse Biology, 2011, 1, 123-139.	1.2	88
31	H11 Kinase Prevents Myocardial Infarction by Preemptive Preconditioning of the Heart. Circulation Research, 2006, 98, 280-288.	2.0	82
32	Type 5 Adenylyl Cyclase Increases Oxidative Stress by Transcriptional Regulation of Manganese Superoxide Dismutase via the SIRT1/FoxO3a Pathway. Circulation, 2013, 127, 1692-1701.	1.6	82
33	Myocardial apoptosis in heart disease: does the emperor have clothes?. Basic Research in Cardiology, 2016, 111, 31.	2.5	69
34	Effects of cardiac depression and of anesthesia on the myocardial action of a cardiac glycoside. Journal of Clinical Investigation, 1971, 50, 2585-2595.	3.9	68
35	Coronary vascular mechanisms involved in decompensation from hypertrophy to heart failure. Journal of the American College of Cardiology, 1993, 22, A34-A40.	1.2	67
36	Sympathetic and parasympathetic components of reflex tachycardia induced by hypotension in conscious dogs with and without heart failure. Cardiovascular Research, 1974, 8, 153-161.	1.8	66

#	Article	IF	Citations
37	Apoptosis predominates in nonmyocytes in heart failure. American Journal of Physiology - Heart and Circulatory Physiology, 2009, 297, H785-H791.	1.5	65
38	Modulation of Î²-adrenergic receptor signaling in heart failure and longevity: targeting adenylyl cyclase type 5. Heart Failure Reviews, 2010, 15, 495-512.	1.7	60
39	Cardiac GsÎ±overexpression enhances L-type calcium channels through an adenylyl cyclase independent pathway. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 9669-9674.	3.3	58
40	Inhibition of p38Î± MAPK rescues cardiomyopathy induced by overexpressed Î²2-adrenergic receptor, but not Î²1-adrenergic receptor. Journal of Clinical Investigation, 2007, 117, 1335-1343.	3.9	53
41	Insights into cardioprotection obtained from study of cellular Ca2+ handling in myocardium of true hibernating mammals. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 286, H2219-H2228.	1.5	52
42	Best anesthetics for assessing left ventricular systolic function by echocardiography in mice. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 308, H1525-H1529.	1.5	52
43	Delayed Enhanced Nitric Oxideâ€"Mediated Coronary Vasodilation Following Brief Ischemia and Prolonged Reperfusion in Conscious Dogs. Circulation Research, 1997, 81, 53-59.	2.0	51
44	Ineffective Perfusion-Contraction Matching in Conscious, Chronically Instrumented Pigs With an Extended Period of Coronary Stenosis. Circulation Research, 1998, 82, 1199-1205.	2.0	49
45	Vascular Stiffness in Aging and Disease. Frontiers in Physiology, 2021, 12, 762437.	1.3	48
46	Calorie restriction can reverse, as well as prevent, aging cardiomyopathy. Age, 2013, 35, 2177-2182.	3.0	47
47	Adenylyl cyclase type 5 in cardiac disease, metabolism, and aging. American Journal of Physiology - Heart and Circulatory Physiology, 2013, 305, H1-H8.	1.5	47
48	Increased apoptosis and myocyte enlargement with decreased cardiac mass; distinctive features of the aging male, but not female, monkey heart. Journal of Molecular and Cellular Cardiology, 2007, 43, 487-491.	0.9	46
49	Extracellular Matrix Disarray as a Mechanism for Greater Abdominal Versus Thoracic Aortic Stiffness With Aging in Primates. Arteriosclerosis, Thrombosis, and Vascular Biology, 2016, 36, 700-706.	1.1	45
50	Repetitive Ischemia by Coronary Stenosis Induces a Novel Window of Ischemic Preconditioning. Circulation, 2008, 118, 1961-1969.	1.6	44
51	Obligatory Role of Cardiac Nerves and Î± 1 -Adrenergic Receptors for the Second Window of Ischemic Preconditioning in Conscious Pigs. Circulation Research, 2006, 99, 1270-1276.	2.0	43
52	Sex-specific regulation of gene expression in the aging monkey aorta. Physiological Genomics, 2007, 29, 169-180.	1.0	43
53	Adenylyl cyclase type 5 protein expression during cardiac development and stress. American Journal of Physiology - Heart and Circulatory Physiology, 2009, 297, H1776-H1782.	1.5	43
54	Prevention of heart failure in mice by an antiviral agent that inhibits type 5 cardiac adenylyl cyclase. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 302, H2622-H2628.	1.5	43

#	Article	IF	Citations
55	Molecular mechanisms mediating preconditioning following chronic ischemia differ from those in classical second window. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 299, H752-H762.	1.5	36
56	Enhanced longevity and metabolism by brown adipose tissue with disruption of the regulator of G protein signaling 14. Aging Cell, 2018, 17, e12751.	3.0	35
57	Mechanisms of sex differences in exercise capacity. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2019, 316, R832-R838.	0.9	32
58	Cyclosporine Reduces Left Ventricular Mass with Chronic Aortic Banding in Mice, Which Could be due to Apoptosis and Fibrosis. Journal of Molecular and Cellular Cardiology, 2001, 33, 1505-1514.	0.9	31
59	Overexpression of Cardiomyocyte Î± _{1A} -Adrenergic Receptors Attenuates Postinfarct Remodeling by Inducing Angiogenesis Through Heterocellular Signaling. Arteriosclerosis, Thrombosis, and Vascular Biology, 2015, 35, 2451-2459.	1.1	31
60	Gender differences on the effects of aging on cardiac and peripheral adrenergic stimulation in old conscious monkeys. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 285, H527-H534.	1.5	30
61	Nitric oxide-dependent vasodilation maintains blood flow in true hibernating myocardium. Journal of Molecular and Cellular Cardiology, 2003, 35, 931-935.	0.9	29
62	Common mechanisms for calorie restriction and adenylyl cyclase type 5 knockout models of longevity. Aging Cell, 2012, 11, 1110-1120.	3.0	27
63	Effects of Chronic Heart Failure on the Inotropic Response of the Right Ventricle of the Conscious Dog to a Cardiac Glycoside and to Tachycardia. Circulation, 1974, 50, 728-734.	1.6	26
64	Nitric oxide, an important regulator of perfusion-contraction matching in conscious pigs. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 279, H451-H456.	1.5	26
65	Effects of cardiac overexpression of type 6 adenylyl cyclase affects on the response to chronic pressure overload. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 299, H707-H712.	1.5	25
66	Inhibition of Adenylyl Cyclase Type 5 Increases Longevity and Healthful Aging through Oxidative Stress Protection. Oxidative Medicine and Cellular Longevity, 2015, 2015, 1-13.	1.9	25
67	Adenylyl Cyclase Type 5 Disruption Prolongs Longevity and Protects the Heart Against Stress. Circulation Journal, 2009, 73, 195-200.	0.7	23
68	Mst1 inhibition rescues Î²1-adrenergic cardiomyopathy by reducing myocyte necrosis and non-myocyte apoptosis rather than myocyte apoptosis. Basic Research in Cardiology, 2015, 110, 7.	2.5	22
69	Adenylyl Cyclase Type 5 Deficiency Protects Against Diet-Induced Obesity and Insulin Resistance. Diabetes, 2015, 64, 2636-2645.	0.3	20
70	Blockade of EMAP II protects cardiac function after chronic myocardial infarction by inducing angiogenesis. Journal of Molecular and Cellular Cardiology, 2015, 79, 224-231.	0.9	20
71	Secreted frizzled-related protein 2, a novel mechanism to induce myocardial ischemic protection through angiogenesis. Basic Research in Cardiology, 2020, 115, 48.	2.5	20
72	Paradoxically Enhanced Endothelin-B Receptorâ€"Mediated Vasoconstriction in Conscious Old Monkeys. Circulation, 2001, 103, 2382-2386.	1.6	19

#	Article	IF	Citations
73	Novel mechanisms for caspase inhibition protecting cardiac function with chronic pressure overload. Basic Research in Cardiology, 2013, 108, 324.	2.5	18
74	Apoptosis in severe, compensated pressure overload predominates in nonmyocytes and is related to the hypertrophy but not function. American Journal of Physiology - Heart and Circulatory Physiology, 2011, 300, H1062-H1068.	1.5	17
75	Myocardial ischemic protection in natural mammalian hibernation. Basic Research in Cardiology, 2015, 110, 9.	2.5	17
76	Hsp22 overexpression induces myocardial hypertrophy, senescence and reduced life span through enhanced oxidative stress. Free Radical Biology and Medicine, 2019, 137, 194-200.	1.3	17
77	A Food and Drug Administration-Approved Antiviral Agent that Inhibits Adenylyl Cyclase Type 5 Protects the Ischemic Heart Even When Administered after Reperfusion. Journal of Pharmacology and Experimental Therapeutics, 2016, 357, 331-336.	1.3	16
78	â€˜Reduced malignancy as a mechanism for longevity in mice with adenylyl cyclase type 5 disruptionâ€™. Aging Cell, 2014, 13, 102-110.	3.0	15
79	Why So Few New Cardiovascular Drugs Translate to the Clinics. Circulation Research, 2016, 119, 714-717.	2.0	15
80	Disruption of type 5 adenylyl cyclase prevents Î²-adrenergic receptor cardiomyopathy: A novel approach to Î²-adrenergic receptor blockade. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H1521-H1528.	1.5	14
81	Disruption of adenylyl cyclase type 5 mimics exercise training. Basic Research in Cardiology, 2017, 112, 59.	2.5	14
82	Type 5 adenylyl cyclase disruption leads to enhanced exercise performance. Aging Cell, 2015, 14, 1075-1084.	3.0	13
83	Antioxidant defense and protection against cardiac arrhythmias: lessons from a mammalian hibernator (the woodchuck). FASEB Journal, 2018, 32, 4229-4240.	0.2	12
84	Second window of preconditioning normalizes palmitate use for oxidation and improves function during low-flow ischaemia. Cardiovascular Research, 2011, 92, 394-400.	1.8	11
85	Mechanisms of increased vascular stiffness down the aortic tree in aging, premenopausal female monkeys. American Journal of Physiology - Heart and Circulatory Physiology, 2020, 319, H222-H234.	1.5	11
86	A novel adenylyl cyclase type 5 inhibitor that reduces myocardial infarct size even when administered after coronary artery reperfusion. Journal of Molecular and Cellular Cardiology, 2018, 121, 13-15.	0.9	10
87	Adaptation to exercise-induced stress is not dependent on cardiomyocyte Î±1A-adrenergic receptors. Journal of Molecular and Cellular Cardiology, 2021, 155, 78-87.	0.9	9
88	Proteomic Mechanisms of Cardioprotection during Mammalian Hibernation in Woodchucks, <i>Marmota Monax</i>. Journal of Proteome Research, 2013, 12, 4221-4229.	1.8	8
89	Rats are protected from the stress of chronic pressure overload compared with mice. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2020, 318, R894-R900.	0.9	3
90	Minority investigators lack NIH funding. Science, 2017, 356, 1018-1019.	6.0	2

#	ARTICLE	IF	CITATIONS
91	Secreted frizzled protein 3 is a novel cardioprotective mechanism unique to the clinically relevant fourth window of ischemic preconditioning. American Journal of Physiology - Heart and Circulatory Physiology, 2021, 320, H798-H804.	1.5	2
92	Reply to â€œLetter to the Editor: Mechanisms of sex differences in exercise capacityâ€. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2020, 318, R158-R159.	0.9	1
93	Abstract 11568: The Role of the Microbiome in the Improved Exercise Performance in the Regulator of G Protein Signaling 14 (rgs14) Knock Out (KO) Mice. Circulation, 2021, 144, .	1.6	1
94	A Three-Decade Dialectic With Circulation Research. Circulation Research, 2003, 92, 939-940.	2.0	0
95	Reply to: â€œLetter to the editor: Ketamine-only versus isoflurane effects on murine cardiac function: comparison at similar depths of anesthesia?â€. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 309, H2161-H2161.	1.5	0
96	Reply to â€œLetter to the editor: When what you see may not be what you get: prudent considerations of anesthetics for murine echocardiographyâ€. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 308, H1614-H1614.	1.5	0
97	Response to Letter to the Editor on "Does Vidarabine Mediate Cardioprotection via Inhibition of AC5?". Journal of Pharmacology and Experimental Therapeutics, 2016, 358, 244-245.	1.3	0
98	Increased expression of genes promoting cell survival after myocardial infarction in monkeys. FASEB Journal, 2006, 20, A1190.	0.2	0
99	Differential Role of p38Î± in the Cardiomyopathy Induced by Either Î² 1 â€•or Î² 2 â€Adrenergic Receptor Overexpression. FASEB Journal, 2006, 20, A311.	0.2	0
100	Species Differences in Collagen Expression in Aging Aorta. FASEB Journal, 2007, 21, A904.	0.2	0
101	Characterization of a Novel Cardiac Isoform of the Cell Cycleâ€related Kinase. FASEB Journal, 2008, 22, 588.1.	0.2	0
102	Ischemic Myocardial Protection In Transgenic Mice With Cardiac Î± 1A â€Adrenergic Receptor Overexpression. FASEB Journal, 2008, 22, 730.31.	0.2	0
103	Type 5 Adenylyl Cyclase Disruption Increases Longevity, Food Intake and Exercise Capacity. FASEB Journal, 2008, 22, 831.2.	0.2	0
104	Regional Difference of Increased Stiffness and Extra Cellular Matrix in Aging Monkey Aorta. FASEB Journal, 2009, 23, 774.10.	0.2	0
105	The Level of Cardiac Specific Overexpression of Adenylyl Cyclase Type 2 Dictates the Response to Chronic Pressure Overload. FASEB Journal, 2009, 23, 577.2.	0.2	0
106	Gender Differences in Cardiac Responses to Catecholamine Stress in Caloric Restricted Mice. FASEB Journal, 2010, 24, 588.3.	0.2	0
107	Downâ€regulation of MnSOD via Sirt1/FoxO3a complex increase oxidative stress with cardiac overexpression of Type 5 Adenylyl Cyclase. FASEB Journal, 2010, 24, 1001.16.	0.2	0
108	Increases in Vascular Smooth Muscle Stiffness with Aging. FASEB Journal, 2010, 24, .	0.2	0

#	Article	IF	Citations
109	Atomic force microscope studies demonstrate increased vascular smooth muscle cell stiffness associated with aging. FASEB Journal, 2010, 24, .	0.2	0
110	Transgenic Rats with Cardiac Overexpression of alpha1A Adrenergic Receptors are protected from Myocardial Ischemia by a Nitric Oxide Mechanism. FASEB Journal, 2010, 24, 1036.9.	0.2	0
111	A Unique Model of Compensated Severe Pressure Overload Cardiac Hypertrophy in Rats. FASEB Journal, 2010, 24, 1029.14.	0.2	0
112	Atomic force microscope studies demonstrate enhanced beta1â€integrin adhesion as a factor assocatiated with ageâ€related increases in vascular smooth muscle stiffness. FASEB Journal, 2011, 25, .	0.2	0
113	Inhibition of Adenylyl Cyclase Type 5 Protects Against Obesity and Diabetes. FASEB Journal, 2011, 25, 1095.17.	0.2	0
114	Dissociation between Changes in Metabolism and Blood Flow During Coronary Artery Stenosis. FASEB Journal, 2011, 25, 1023.8.	0.2	0
115	Are contraction and adhesion activated simultaneously by Angiotensin II in vascular smooth muscle?. FASEB Journal, 2011, 25, 1115.27.	0.2	0
116	Cardiacâ€specific Overexpression of the Î± 1A â€Adrenergic Receptor in Rats: a Model of Enhanced Cardiac Contractility and Autonomically Decreased Heart Rate. FASEB Journal, 2011, 25, 1099.7.	0.2	0
117	Subendocardial Coronary Reserve as a Mechanism for the Preserved Cardiac Function in Rats vs Mice with Chronic Pressure Overload. FASEB Journal, 2011, 25, 1025.8.	0.2	0
118	Increased angiogenesis as a mechanism for the preserved cardiac function in rats with chronic pressure overload. FASEB Journal, 2012, 26, 1054.17.	0.2	0
119	Enhanced Exercise Capacity in Adenylyl Cyclase Type 5 Knockout Mimics Chronic Exercise Training. FASEB Journal, 2012, 26, .	0.2	0
120	Mechanisms Protecting Chronic Pressure Overload by Apoptosis Inhibition. FASEB Journal, 2012, 26, 1065.3.	0.2	0
121	Isolated Vascular Smooth Muscle Stiffness as a Common Mechanism to the Increased Aortic Stiffness of Aging and Hypertension. FASEB Journal, 2013, 27, lb687.	0.2	0
122	Abstract 18134: Cardiomyocyte Overexpression of the alpha1A-Adrenergic Receptor in the Rat Protects Post-Infarct Heart Failure through Angiogenesis and the MEK-ERK Pathway. Circulation, 2014, 130, .	1.6	0
123	Reduced Oxidative Stress as a Mechanism for Increased Longevity, Exercise and Heart Failure Protection with Adenylyl Cyclase Type 5 Inhibition. , 2016, , 147-161.		0
124	Adverse Cardiac Effects Due to Cardiac Specific Disruption of the Nuclear Receptor Corepressor 1 (NCOR1). FASEB Journal, 2018, 32, 848.2.	0.2	0
125	Aortic Stiffness Increases More in the Abdominal Than the Thoracic Aorta in Aging Female Monkeys. FASEB Journal, 2019, 33, 693.15.	0.2	0
126	A Novel Drug to Reduce Myocardial Infarct Size, Even When Administered After Coronary Artery Reperfusion. FASEB Journal, 2019, 33, 817.2.	0.2	0

#	Article	IF	Citations
127	Exercise Capacity Mediated by the Gut Microbiome. FASEB Journal, 2022, 36, .	0.2	0
128	Abstract 246: Thoracic versus Abdominal Aortic Stiffness in Young and Old Non-Human Primates. Arteriosclerosis, Thrombosis, and Vascular Biology, 2015, 35, .	1.1	0