

Stephen F Vatner

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

120
papers

6,385
citations

43
h-index

79
g-index

131
ext. papers

7,006
ext. citations

8.6
avg, IF

5.28
L-index

#	Paper	IF	Citations
120	Autophagy in chronically ischemic myocardium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 13807-12	11.5	447
119	Cardiovascular control mechanisms in the conscious state. <i>New England Journal of Medicine</i> , 1975 , 293, 970-6	59.2	375
118	Hibernating myocardium. <i>New England Journal of Medicine</i> , 1998 , 339, 173-81	59.2	365
117	Type 5 adenylyl cyclase disruption increases longevity and protects against stress. <i>Cell</i> , 2007 , 130, 247-58	36.2	282
116	Short communication: vascular smooth muscle cell stiffness as a mechanism for increased aortic stiffness with aging. <i>Circulation Research</i> , 2010 , 107, 615-9	15.7	219
115	Activation of Mst1 causes dilated cardiomyopathy by stimulating apoptosis without compensatory ventricular myocyte hypertrophy. <i>Journal of Clinical Investigation</i> , 2003 , 111, 1463-74	15.9	202
114	Inhibition of endogenous thioredoxin in the heart increases oxidative stress and cardiac hypertrophy. <i>Journal of Clinical Investigation</i> , 2003 , 112, 1395-1406	15.9	200
113	Aging increases aortic MMP-2 activity and angiotensin II in nonhuman primates. <i>Hypertension</i> , 2003 , 41, 1308-16	8.5	185
112	Adverse effects of chronic endogenous sympathetic drive induced by cardiac GS alpha overexpression. <i>Circulation Research</i> , 1996 , 78, 517-24	15.7	176
111	Activation of the cardiac proteasome during pressure overload promotes ventricular hypertrophy. <i>Circulation</i> , 2006 , 114, 1821-8	16.7	171
110	Disruption of type 5 adenylyl cyclase gene preserves cardiac function against pressure overload. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 9986-90	11.5	166
109	beta-Arrestin1 knockout mice appear normal but demonstrate altered cardiac responses to beta-adrenergic stimulation. <i>Circulation Research</i> , 1997 , 81, 1021-6	15.7	155
108	Mechanism of impaired myocardial function during progressive coronary stenosis in conscious pigs. Hibernation versus stunning?. <i>Circulation Research</i> , 1995 , 76, 479-88	15.7	153
107	Echocardiography in Mice. <i>Current Protocols in Mouse Biology</i> , 2011 , 1, 71-83	1.1	149
106	Apoptosis of cardiac myocytes in Gsalpha transgenic mice. <i>Circulation Research</i> , 1999 , 84, 34-42	15.7	145
105	Improvement of cardiac function by a cardiac Myosin activator in conscious dogs with systolic heart failure. <i>Circulation: Heart Failure</i> , 2010 , 3, 522-7	7.6	117
104	Increased vascular smooth muscle cell stiffness: a novel mechanism for aortic stiffness in hypertension. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2013 , 305, H1281-7	5.2	116

103	Extent of regulation of the heart's contractile state in the conscious dog by alteration in the frequency of contraction. <i>Journal of Clinical Investigation</i> , 1973 , 52, 1187-94	15.9	107
102	Program of cell survival underlying human and experimental hibernating myocardium. <i>Circulation Research</i> , 2004 , 95, 433-40	15.7	106
101	Effects of halothane on left ventricular function and distribution of regional blood flow in dogs and primates. <i>Circulation Research</i> , 1974 , 34, 155-67	15.7	105
100	Inhibition of endogenous thioredoxin in the heart increases oxidative stress and cardiac hypertrophy. <i>Journal of Clinical Investigation</i> , 2003 , 112, 1395-406	15.9	105
99	Type 5 adenylyl cyclase disruption alters not only sympathetic but also parasympathetic and calcium-mediated cardiac regulation. <i>Circulation Research</i> , 2003 , 93, 364-71	15.7	96
98	Disruption of type 5 adenylyl cyclase enhances desensitization of cyclic adenosine monophosphate signal and increases Akt signal with chronic catecholamine stress. <i>Circulation</i> , 2007 , 116, 1776-83	16.7	93
97	Mechanism of gender-specific differences in aortic stiffness with aging in nonhuman primates. <i>Circulation</i> , 2007 , 116, 669-76	16.7	79
96	Proteasome inhibition decreases cardiac remodeling after initiation of pressure overload. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2008 , 295, H1385-93	5.2	77
95	Augmented vascular smooth muscle cell stiffness and adhesion when hypertension is superimposed on aging. <i>Hypertension</i> , 2015 , 65, 370-7	8.5	76
94	"Smooth Muscle Cell Stiffness Syndrome"-Revisiting the Structural Basis of Arterial Stiffness. <i>Frontiers in Physiology</i> , 2015 , 6, 335	4.6	75
93	Caloric restriction reduces growth of mammary tumors and metastases. <i>Carcinogenesis</i> , 2011 , 32, 1381-74.6	7.4	74
92	Type 5 adenylyl cyclase increases oxidative stress by transcriptional regulation of manganese superoxide dismutase via the SIRT1/FoxO3a pathway. <i>Circulation</i> , 2013 , 127, 1692-701	16.7	71
91	H11 kinase prevents myocardial infarction by preemptive preconditioning of the heart. <i>Circulation Research</i> , 2006 , 98, 280-8	15.7	71
90	Heart Rate and Electrocardiography Monitoring in Mice. <i>Current Protocols in Mouse Biology</i> , 2011 , 1, 123-139	6.3	63
89	Effects of cardiac depression and of anesthesia on the myocardial action of a cardiac glycoside. <i>Journal of Clinical Investigation</i> , 1971 , 50, 2585-95	15.9	63
88	Apoptosis predominates in nonmyocytes in heart failure. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2009 , 297, H785-91	5.2	57
87	Coronary vascular mechanisms involved in decompensation from hypertrophy to heart failure. <i>Journal of the American College of Cardiology</i> , 1993 , 22, 34A-40A	15.1	57
86	Cardiac G α overexpression enhances L-type calcium channels through an adenylyl cyclase independent pathway. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998 , 95, 9669-74	11.5	55

85	Myocardial apoptosis in heart disease: does the emperor have clothes?. <i>Basic Research in Cardiology</i> , 2016 , 111, 31	11.8	53
84	Sympathetic and parasympathetic components of reflex tachycardia induced by hypotension in conscious dogs with and without heart failure. <i>Cardiovascular Research</i> , 1974 , 8, 153-61	9.9	52
83	Inhibition of p38 alpha MAPK rescues cardiomyopathy induced by overexpressed beta 2-adrenergic receptor, but not beta 1-adrenergic receptor. <i>Journal of Clinical Investigation</i> , 2007 , 117, 1335-43	15.9	51
82	Insights into cardioprotection obtained from study of cellular Ca ²⁺ handling in myocardium of true hibernating mammals. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2004 , 286, H2219-28	5.2	48
81	Modulation of beta-adrenergic receptor signaling in heart failure and longevity: targeting adenylyl cyclase type 5. <i>Heart Failure Reviews</i> , 2010 , 15, 495-512	5	47
80	Ineffective perfusion-contraction matching in conscious, chronically instrumented pigs with an extended period of coronary stenosis. <i>Circulation Research</i> , 1998 , 82, 1199-205	15.7	45
79	Repetitive ischemia by coronary stenosis induces a novel window of ischemic preconditioning. <i>Circulation</i> , 2008 , 118, 1961-9	16.7	44
78	Calorie restriction can reverse, as well as prevent, aging cardiomyopathy. <i>Age</i> , 2013 , 35, 2177-82		43
77	Increased apoptosis and myocyte enlargement with decreased cardiac mass; distinctive features of the aging male, but not female, monkey heart. <i>Journal of Molecular and Cellular Cardiology</i> , 2007 , 43, 487-91	5.8	43
76	Adenylyl cyclase type 5 protein expression during cardiac development and stress. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2009 , 297, H1776-82	5.2	41
75	Adenylyl cyclase type 5 in cardiac disease, metabolism, and aging. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2013 , 305, H1-8	5.2	40
74	Prevention of heart failure in mice by an antiviral agent that inhibits type 5 cardiac adenylyl cyclase. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2012 , 302, H2622-8	5.2	40
73	Delayed enhanced nitric oxide-mediated coronary vasodilation following brief ischemia and prolonged reperfusion in conscious dogs. <i>Circulation Research</i> , 1997 , 81, 53-9	15.7	40
72	Best anesthetics for assessing left ventricular systolic function by echocardiography in mice. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2015 , 308, H1525-9	5.2	39
71	Healthful aging mediated by inhibition of oxidative stress. <i>Ageing Research Reviews</i> , 2020 , 64, 101194	12	39
70	Sex-specific regulation of gene expression in the aging monkey aorta. <i>Physiological Genomics</i> , 2007 , 29, 169-80	3.6	38
69	Obligatory role of cardiac nerves and alpha1-adrenergic receptors for the second window of ischemic preconditioning in conscious pigs. <i>Circulation Research</i> , 2006 , 99, 1270-6	15.7	36
68	Extracellular Matrix Disarray as a Mechanism for Greater Abdominal Versus Thoracic Aortic Stiffness With Aging in Primates. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2016 , 36, 700-6	9.4	32

67	Molecular mechanisms mediating preconditioning following chronic ischemia differ from those in classical second window. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2010 , 299, H752-62	5.2	30
66	Cyclosporine reduces left ventricular mass with chronic aortic banding in mice, which could be due to apoptosis and fibrosis. <i>Journal of Molecular and Cellular Cardiology</i> , 2001 , 33, 1505-14	5.8	30
65	Common mechanisms for calorie restriction and adenylyl cyclase type 5 knockout models of longevity. <i>Aging Cell</i> , 2012 , 11, 1110-20	9.9	26
64	Gender differences on the effects of aging on cardiac and peripheral adrenergic stimulation in old conscious monkeys. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2003 , 285, H527-34	5.2	25
63	Overexpression of Cardiomyocyte β A-Adrenergic Receptors Attenuates Postinfarct Remodeling by Inducing Angiogenesis Through Heterocellular Signaling. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2015 , 35, 2451-9	9.4	24
62	Effects of cardiac overexpression of type 6 adenylyl cyclase affects on the response to chronic pressure overload. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2010 , 299, H707-12	5.2	24
61	Nitric oxide-dependent vasodilation maintains blood flow in true hibernating myocardium. <i>Journal of Molecular and Cellular Cardiology</i> , 2003 , 35, 931-5	5.8	23
60	Enhanced longevity and metabolism by brown adipose tissue with disruption of the regulator of G protein signaling 14. <i>Aging Cell</i> , 2018 , 17, e12751	9.9	21
59	Effects of chronic heart failure on the inotropic response of the right ventricle of the conscious dog to a cardiac glycoside and to tachycardia. <i>Circulation</i> , 1974 , 50, 728-34	16.7	21
58	Nitric oxide, an important regulator of perfusion-contraction matching in conscious pigs. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2000 , 279, H451-6	5.2	20
57	Adenylyl cyclase type 5 disruption prolongs longevity and protects the heart against stress. <i>Circulation Journal</i> , 2009 , 73, 195-200	2.9	19
56	Inhibition of adenylyl cyclase type 5 increases longevity and healthful aging through oxidative stress protection. <i>Oxidative Medicine and Cellular Longevity</i> , 2015 , 2015, 250310	6.7	18
55	Paradoxically enhanced endothelin-B receptor-mediated vasoconstriction in conscious old monkeys. <i>Circulation</i> , 2001 , 103, 2382-6	16.7	18
54	Adenylyl Cyclase Type 5 Deficiency Protects Against Diet-Induced Obesity and Insulin Resistance. <i>Diabetes</i> , 2015 , 64, 2636-45	0.9	17
53	Novel mechanisms for caspase inhibition protecting cardiac function with chronic pressure overload. <i>Basic Research in Cardiology</i> , 2013 , 108, 324	11.8	17
52	Mechanisms of sex differences in exercise capacity. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2019 , 316, R832-R838	3.2	16
51	Blockade of EMAP II protects cardiac function after chronic myocardial infarction by inducing angiogenesis. <i>Journal of Molecular and Cellular Cardiology</i> , 2015 , 79, 224-31	5.8	16
50	Myocardial ischemic protection in natural mammalian hibernation. <i>Basic Research in Cardiology</i> , 2015 , 110, 9	11.8	15

49	A Food and Drug Administration-Approved Antiviral Agent that Inhibits Adenylyl Cyclase Type 5 Protects the Ischemic Heart Even When Administered after Reperfusion. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2016 , 357, 331-6	4.7	15
48	Mst1 inhibition rescues β -adrenergic cardiomyopathy by reducing myocyte necrosis and non-myocyte apoptosis rather than myocyte apoptosis. <i>Basic Research in Cardiology</i> , 2015 , 110, 7	11.8	15
47	Apoptosis in severe, compensated pressure overload predominates in nonmyocytes and is related to the hypertrophy but not function. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2011 , 300, H1062-8	5.2	15
46	Why So Few New Cardiovascular Drugs Translate to the Clinics. <i>Circulation Research</i> , 2016 , 119, 714-7	15.7	14
45	Disruption of adenylyl cyclase type 5 mimics exercise training. <i>Basic Research in Cardiology</i> , 2017 , 112, 59	11.8	13
44	Secreted Frizzled-related protein 2, a novel mechanism to induce myocardial ischemic protection through angiogenesis. <i>Basic Research in Cardiology</i> , 2020 , 115, 48	11.8	13
43	Reduced malignancy as a mechanism for longevity in mice with adenylyl cyclase type 5 disruption. <i>Aging Cell</i> , 2014 , 13, 102-10	9.9	13
42	Disruption of type 5 adenylyl cyclase prevents β -adrenergic receptor cardiomyopathy: a novel approach to β -adrenergic receptor blockade. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2014 , 307, H1521-8	5.2	13
41	Type 5 adenylyl cyclase disruption leads to enhanced exercise performance. <i>Aging Cell</i> , 2015 , 14, 1075-84	9.9	11
40	Second window of preconditioning normalizes palmitate use for oxidation and improves function during low-flow ischaemia. <i>Cardiovascular Research</i> , 2011 , 92, 394-400	9.9	9
39	Proteomic mechanisms of cardioprotection during mammalian hibernation in woodchucks, <i>Marmota monax</i> . <i>Journal of Proteome Research</i> , 2013 , 12, 4221-9	5.6	8
38	Hsp22 overexpression induces myocardial hypertrophy, senescence and reduced life span through enhanced oxidative stress. <i>Free Radical Biology and Medicine</i> , 2019 , 137, 194-200	7.8	7
37	Antioxidant defense and protection against cardiac arrhythmias: lessons from a mammalian hibernator (the woodchuck). <i>FASEB Journal</i> , 2018 , 32, 4229-4240	0.9	7
36	A novel adenylyl cyclase type 5 inhibitor that reduces myocardial infarct size even when administered after coronary artery reperfusion. <i>Journal of Molecular and Cellular Cardiology</i> , 2018 , 121, 13-15	5.8	7
35	Vascular Stiffness in Aging and Disease.. <i>Frontiers in Physiology</i> , 2021 , 12, 762437	4.6	6
34	Mechanisms of increased vascular stiffness down the aortic tree in aging, premenopausal female monkeys. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2020 , 319, H222-H234	5.2	5
33	Adaptation to exercise-induced stress is not dependent on cardiomyocyte β -adrenergic receptors. <i>Journal of Molecular and Cellular Cardiology</i> , 2021 , 155, 78-87	5.8	4
32	Rats are protected from the stress of chronic pressure overload compared with mice. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2020 , 318, R894-R900	3.2	2

31	Reply to "Letter to the Editor: Mechanisms of sex differences in exercise capacity". <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2020 , 318, R158-R159	3.2	1
30	Secreted frizzled protein 3 is a novel cardioprotective mechanism unique to the clinically relevant fourth window of ischemic preconditioning. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2021 , 320, H798-H804	5.2	0
29	Minority investigators lack NIH funding. <i>Science</i> , 2017 , 356, 1018-1019	33.3	
28	Response to Letter to the Editor on "Does Vidarabine Mediate Cardioprotection via Inhibition of AC5?". <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2016 , 358, 244-5	4.7	
27	Reply to: "Letter to the editor: Ketamine-only versus isoflurane effects on murine cardiac function: comparison at similar depths of anesthesia?". <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2015 , 309, H2161	5.2	
26	Reply to "Letter to the editor: When what you see may not be what you get: prudent considerations of anesthetics for murine echocardiography". <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2015 , 308, H1614	5.2	
25	A Three-Decade Dialectic With Circulation Research. <i>Circulation Research</i> , 2003 , 92, 939-940	15.7	
24	Increased expression of genes promoting cell survival after myocardial infarction in monkeys. <i>FASEB Journal</i> , 2006 , 20, A1190	0.9	
23	Differential Role of p38 β in the Cardiomyopathy Induced by Either β 1- or β 2-Adrenergic Receptor Overexpression. <i>FASEB Journal</i> , 2006 , 20, A311	0.9	
22	Species Differences in Collagen Expression in Aging Aorta. <i>FASEB Journal</i> , 2007 , 21, A904	0.9	
21	Characterization of a Novel Cardiac Isoform of the Cell Cycle-related Kinase. <i>FASEB Journal</i> , 2008 , 22, 588.1	0.9	
20	Ischemic Myocardial Protection In Transgenic Mice With Cardiac β 1A-Adrenergic Receptor Overexpression. <i>FASEB Journal</i> , 2008 , 22, 730.31	0.9	
19	Type 5 Adenylyl Cyclase Disruption Increases Longevity, Food Intake and Exercise Capacity. <i>FASEB Journal</i> , 2008 , 22, 831.2	0.9	
18	Adverse Cardiac Effects Due to Cardiac Specific Disruption of the Nuclear Receptor Corepressor 1 (NCOR1). <i>FASEB Journal</i> , 2018 , 32, 848.2	0.9	
17	Aortic Stiffness Increases More in the Abdominal Than the Thoracic Aorta in Aging Female Monkeys. <i>FASEB Journal</i> , 2019 , 33, 693.15	0.9	
16	A Novel Drug to Reduce Myocardial Infarct Size, Even When Administered After Coronary Artery Reperfusion. <i>FASEB Journal</i> , 2019 , 33, 817.2	0.9	
15	Reduced Oxidative Stress as a Mechanism for Increased Longevity, Exercise and Heart Failure Protection with Adenylyl Cyclase Type 5 Inhibition 2016 , 147-161		
14	Regional Difference of Increased Stiffness and Extra Cellular Matrix in Aging Monkey Aorta. <i>FASEB Journal</i> , 2009 , 23, 774.10	0.9	

- 13 The Level of Cardiac Specific Overexpression of Adenylyl Cyclase Type 2 Dictates the Response to Chronic Pressure Overload. *FASEB Journal*, **2009**, 23, 577.2 0.9
- 12 Gender Differences in Cardiac Responses to Catecholamine Stress in Caloric Restricted Mice. *FASEB Journal*, **2010**, 24, 588.3 0.9
- 11 Down-regulation of MnSOD via Sirt1/FoxO3a complex increase oxidative stress with cardiac overexpression of Type 5 Adenylyl Cyclase. *FASEB Journal*, **2010**, 24, 1001.16 0.9
- 10 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 0.9
- 9 A Unique Model of Compensated Severe Pressure Overload Cardiac Hypertrophy in Rats. *FASEB Journal*, **2010**, 24, 1029.14 0.9
- 8 Inhibition of Adenylyl Cyclase Type 5 Protects Against Obesity and Diabetes. *FASEB Journal*, **2011**, 25, 1095.17 0.9
- 7 Dissociation between Changes in Metabolism and Blood Flow During Coronary Artery Stenosis. *FASEB Journal*, **2011**, 25, 1023.8 0.9
- 6 Are contraction and adhesion activated simultaneously by Angiotensin II in vascular smooth muscle?. *FASEB Journal*, **2011**, 25, 1115.27 0.9
- 5 Cardiac-specific Overexpression of the α 1A-Adrenergic Receptor in Rats: a Model of Enhanced Cardiac Contractility and Autonomically Decreased Heart Rate. *FASEB Journal*, **2011**, 25, 1099.7 0.9
- 4 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 0.9
- 3 Increased angiogenesis as a mechanism for the preserved cardiac function in rats with chronic pressure overload. *FASEB Journal*, **2012**, 26, 1054.17 0.9
- 2 Mechanisms Protecting Chronic Pressure Overload by Apoptosis Inhibition. *FASEB Journal*, **2012**, 26, 1065.3 0.9
- 1 Isolated Vascular Smooth Muscle Stiffness as a Common Mechanism to the Increased Aortic Stiffness of Aging and Hypertension. *FASEB Journal*, **2013**, 27, lb687 0.9