Pieter P De Tombe

List of Publications by Year
in descending order

124 papers	6,271 citations	44069 48 h-index	71685 76 g-index
124 all docs	124 docs citations	124 times ranked	4591 citing authors

#	Article	IF	Citations
1	Functional consequences of caspase activation in cardiac myocytes. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 6252-6256.	7.1	337
2	Titin Isoform Switch in Ischemic Human Heart Disease. Circulation, 2002, 106, 1333-1341.	1.6	316
3	Approximate Model of Cooperative Activation and Crossbridge Cycling in Cardiac Muscle Using Ordinary Differential Equations. Biophysical Journal, 2008, 95, 2368-2390.	0.5	304
4	Myofilament length dependent activation. Journal of Molecular and Cellular Cardiology, 2010, 48, 851-858.	1.9	237
5	Identification of a Functionally Critical Protein Kinase C Phosphorylation Residue of Cardiac Troponin T. Journal of Biological Chemistry, 2003, 278, 35135-35144.	3.4	170
6	Titin strain contributes to the Frankâ€“Starling law of the heart by structural rearrangements of both thin- and thick-filament proteins. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2306-2311.	7.1	154
7	Augmented Protein Kinase C-Î±â€“Induced Myofilament Protein Phosphorylation Contributes to Myofilament Dysfunction in Experimental Congestive Heart Failure. Circulation Research, 2007, 101, 195-204.	4.5	143
8	Myofilament Calcium Sensitivity in Skinned Rat Cardiac Trabeculae. Circulation Research, 2002, 90, 59-65.	4.5	136
9	Troponin I in the murine myocardium: influence on length-dependent activation and interfilament spacing. Journal of Physiology, 2003, 547, 951-961.	2.9	127
10	Protein Kinase A Does Not Alter Economy of Force Maintenance in Skinned Rat Cardiac Trabeculae. Circulation Research, 1995, 76, 734-741.	4.5	124
11	Myofilament lattice spacing as a function of sarcomere length in isolated rat myocardium. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 279, H2568-H2573.	3.2	117
12	Cooperative activation in cardiac muscle: impact of sarcomere length. American Journal of Physiology - Heart and Circulatory Physiology, 2002, 282, H1055-H1062.	3.2	107
13	Lengthâ€dependent activation in three striated muscle types of the rat. Journal of Physiology, 2002, 544, 225-236.	2.9	107
14	The Troponin C G159D Mutation Blunts Myofilament Desensitization Induced by Troponin I Ser23/24 Phosphorylation. Circulation Research, 2007, 100, 1486-1493.	4.5	107
15	Intracellular Localization and Functional Effects of P21-Activated Kinase-1 (Pak1) in Cardiac Myocytes. Circulation Research, 2004, 94, 194-200.	4.5	106
16	Impact of Î²-myosin heavy chain isoform expression on cross-bridge cycling kinetics. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 288, H896-H903.	3.2	105
17	Restoration of Resting Sarcomere Length After Uniaxial Static Strain Is Regulated by Protein Kinase CÎµ and Focal Adhesion Kinase. Circulation Research, 2004, 94, 642-649.	4.5	101
18	Ablation of Ventricular Myosin Regulatory Light Chain Phosphorylation in Mice Causes Cardiac Dysfunction in Situ and Affects Neighboring Myofilament Protein Phosphorylation. Journal of Biological Chemistry, 2009, 284, 5097-5106.	3.4	98

#	ARTICLE	IF	CITATIONS
19	Blebbistatin: use as inhibitor of muscle contraction. Pflugers Archiv European Journal of Physiology, 2008, 455, 995-1005.	2.8	96
20	Functional Effects of Rho-Kinaseâ€"Dependent Phosphorylation of Specific Sites on Cardiac Troponin. Circulation Research, 2005, 96, 740-747.	4.5	90
21	Frank-Starling law of the heart and the cellular mechanisms of length-dependent activation. Pflugers Archiv European Journal of Physiology, 2002, 445, 305-310.	2.8	89
22	Altered contractile function in heart failure. Cardiovascular Research, 1998, 37, 367-380.	3.8	88
23	p38-MAPK Induced Dephosphorylation of Î±-Tropomyosin Is Associated With Depression of Myocardial Sarcomeric Tension and ATPase Activity. Circulation Research, 2007, 100, 408-415.	4.5	86
24	Correlation Between Myofilament Response to Ca ²⁺ and Altered Dynamics of Contraction and Relaxation in Transgenic Cardiac Cells That Express Î²-Tropomyosin. Circulation Research, 1999, 84, 745-751.	4.5	80
25	Impact of temperature on crossâ€bridge cycling kinetics in rat myocardium. Journal of Physiology, 2007, 584, 591-600.	2.9	76
26	Cardiac thin filament regulation. Pflugers Archiv European Journal of Physiology, 2008, 457, 37-46.	2.8	76
27	Decreased Myocyte Tension Development and Calcium Responsiveness in Rat Right Ventricular Pressure Overload. Circulation, 1997, 95, 2312-2317.	1.6	73
28	Depressed cardiac myofilament function in human diabetes mellitus. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 289, H2478-H2483.	3.2	72
29	Cardiac myosin binding protein-C: redefining its structure and function. Biophysical Reviews, 2012, 4, 93-106.	3.2	71
30	Cardiac resynchronization sensitizes the sarcomere to calcium by reactivating GSK-3Î². Journal of Clinical Investigation, 2014, 124, 129-139.	8.2	71
31	Expression of slow skeletal troponin I in adult transgenic mouse heart muscle reduces the force decline observed during acidic conditions. Journal of Physiology, 2001, 536, 863-870.	2.9	70
32	Molecular and Integrated Biology of Thin Filament Protein Phosphorylation in Heart Muscle. Annals of the New York Academy of Sciences, 2004, 1015, 39-52.	3.8	69
33	Troponin phosphorylation and myofilament Ca2+-sensitivity in heart failure: Increased or decreased?. Journal of Molecular and Cellular Cardiology, 2008, 45, 603-607.	1.9	69
34	Cardiac myofilaments: mechanics and regulation. Journal of Biomechanics, 2003, 36, 721-730.	2.1	67
35	Approaches to modeling crossbridges and calcium-dependent activation in cardiac muscle. Progress in Biophysics and Molecular Biology, 2004, 85, 179-195.	2.9	65
36	Myofilament calcium sensitivity does not affect cross-bridge activation-relaxation kinetics. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2007, 292, R1129-R1136.	1.8	61

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37	Ising Model of Cardiac Thin Filament Activation with Nearest-Neighbor Cooperative Interactions. Biophysical Journal, 2003, 84, 897-909.	0.5	58
38	Left ventricular myofilament dysfunction in rat experimental hypertrophy and congestive heart failure. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 291, H2344-H2353.	3.2	58
39	Frequency-dependent myofilament Ca2+desensitization in failing rat myocardium. Journal of Physiology, 2007, 582, 695-709.	2.9	58
40	Haploinsufficiency of MYBPC3 exacerbates the development of hypertrophic cardiomyopathy in heterozygous mice. Journal of Molecular and Cellular Cardiology, 2015, 79, 234-243.	1.9	58
41	Cross-bridge kinetics in rat myocardium: effect of sarcomere length and calcium activation. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 279, H779-H790.	3.2	57
42	Actin Capping Protein. Circulation Research, 2002, 90, 1299-1306.	4.5	56
43	Myosin head orientation: a structural determinant for the Frank-Starling relationship. American Journal of Physiology - Heart and Circulatory Physiology, 2011, 300, H2155-H2160.	3.2	56
44	Integration of Cardiac Myofilament Activity and Regulation with Pathways Signaling Hypertrophy and Failure. Annals of Biomedical Engineering, 2000, 28, 991-1001.	2.5	55
45	Troponin I serines 43/45 and regulation of cardiac myofilament function. American Journal of Physiology - Heart and Circulatory Physiology, 2002, 283, H1215-H1224.	3.2	54
46	Expression of Slow Skeletal Troponin I in Hearts of Phospholamban Knockout Mice Alters the Relaxant Effect of Î2-Adrenergic Stimulation. Circulation Research, 2002, 90, 882-888.	4.5	52
47	Depressed cardiac tension cost in experimental diabetes is due to altered myosin heavy chain isoform expression. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 287, H408-H413.	3.2	52
48	Pathogenesis of Hypertrophic Cardiomyopathy is Mutation Rather Than Disease Specific: A Comparison of the Cardiac Troponin T E163R and R92Q Mouse Models. Journal of the American Heart Association, 2017, 6, .	3.7	51
49	Cardiac Troponin I Threonine 144. Circulation Research, 2007, 101, 1081-1083.	4.5	50
50	Impact of titin isoform on length dependent activation and cross-bridge cycling kinetics in rat skeletal muscle. Biochimica Et Biophysica Acta - Molecular Cell Research, 2013, 1833, 804-811.	4.1	50
51	Cardiac Myosin-binding Protein C and Troponin-I Phosphorylation Independently Modulate Myofilament Length-dependent Activation. Journal of Biological Chemistry, 2015, 290, 29241-29249.	3.4	48
52	Impact of osmotic compression on sarcomere structure and myofilament calcium sensitivity of isolated rat myocardium. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 291, H1847-H1855.	3.2	47
53	The Role of Thin Filament Cooperativity in Cardiac Length-Dependent Calcium Activation. Biophysical Journal, 2010, 99, 2978-2986.	0.5	47
54	Cardiac muscle mechanics: Sarcomere length matters. Journal of Molecular and Cellular Cardiology, 2016, 91, 148-150.	1.9	45

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55	Delivery and visualization of proteins conjugated to quantum dots in cardiac myocytes. Journal of Molecular and Cellular Cardiology, 2008, 45, 853-856.	1.9	40
56	Removal of the Cardiac Troponin I N-terminal Extension Improves Cardiac Function in Aged Mice. Journal of Biological Chemistry, 2010, 285, 19688-19698.	3.4	40
57	Differential contribution of cardiac sarcomeric proteins in the myofibrillar force response to stretch. Pflugers Archiv European Journal of Physiology, 2008, 457, 25-36.	2.8	39
58	Myocardial Infarction-induced N-terminal Fragment of Cardiac Myosin-binding Protein C (cMyBP-C) Impairs Myofilament Function in Human Myocardium. Journal of Biological Chemistry, 2014, 289, 8818-8827.	3.4	39
59	Protein kinase A does not alter unloaded velocity of sarcomere shortening in skinned rat cardiac trabeculae. American Journal of Physiology - Heart and Circulatory Physiology, 1997, 273, H2415-H2422.	3.2	38
60	Myofilament Calcium Sensitivity: Consequences of the Effective Concentration of Troponin I. Frontiers in Physiology, 2016, 7, 632.	2.8	37
61	Increased Cross-bridge Cycling Kinetics after Exchange of C-terminal Truncated Troponin I in Skinned Rat Cardiac Muscle. Journal of Biological Chemistry, 2008, 283, 15114-15121.	3.4	35
62	Restrictive Cardiomyopathy Troponin I R145W Mutation Does Not Perturb Myofilament Length-dependent Activation in Human Cardiac Sarcomeres. Journal of Biological Chemistry, 2016, 291, 21817-21828.	3.4	35
63	Phenotyping cardiomyopathy in adult zebrafish. Progress in Biophysics and Molecular Biology, 2018, 138, 116-125.	2.9	35
64	Review focus series: sarcomeric proteins as key elements in integrated control of cardiac function. Cardiovascular Research, 2007, 77, 616-618.	3.8	32
65	Pathogenic properties of the N-terminal region of cardiac myosin binding protein-C in vitro. Journal of Muscle Research and Cell Motility, 2012, 33, 17-30.	2.0	32
66	Cardiac troponin I tyrosine 26 phosphorylation decreases myofilament Ca2+ sensitivity and accelerates deactivation. Journal of Molecular and Cellular Cardiology, 2014, 76, 257-264.	1.9	32
67	Pacemaker-induced transient asynchrony suppresses heart failure progression. Science Translational Medicine, 2015, 7, 319ra207.	12.4	31
68	The Frank-Starling mechanism is not mediated by changes in rate of cross-bridge detachment. American Journal of Physiology - Heart and Circulatory Physiology, 1997, 273, H2428-H2435.	3.2	30
69	Control of cardiac myofilament activation and PKC-Î²II signaling through the actin capping protein, CapZ. Journal of Molecular and Cellular Cardiology, 2006, 41, 537-543.	1.9	29
70	Myosin Binding Protein C in the Heart. Circulation Research, 2006, 98, 1234-1236.	4.5	27
71	Remodelling of adult cardiac tissue subjected to physiological and pathological mechanical load <i>in vitro</i>. Cardiovascular Research, 2022, 118, 814-827.	3.8	24
72	Glass microneedles for force measurements: a finite-element analysis model. Pflugers Archiv European Journal of Physiology, 2009, 457, 1415-1422.	2.8	23

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73	Expression of tropomyosin-Îº induces dilated cardiomyopathy and depresses cardiac myofilament tension by mechanisms involving cross-bridge dependent activation and altered tropomyosin phosphorylation. Journal of Muscle Research and Cell Motility, 2011, 31, 315-322.	2.0	23
74	Myofilament Length-Dependent Activation Develops within 5Âms in Guinea-Pig Myocardium. Biophysical Journal, 2012, 103, L13-L15.	0.5	23
75	Green Tea Catechin Normalizes the Enhanced Ca ²⁺ Sensitivity of Myofilaments Regulated by a Hypertrophic Cardiomyopathyâ€"Associated Mutation in Human Cardiac Troponin I (K206I). Circulation: Cardiovascular Genetics, 2015, 8, 765-773.	5.1	23
76	R-CEPIA1er as a new tool to directly measure sarcoplasmic reticulum [Ca] in ventricular myocytes. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 311, H268-H275.	3.2	23
77	Beneficial effects of SR33805 in failing myocardium. Cardiovascular Research, 2011, 91, 412-419.	3.8	22
78	Acute Inotropic and Lusitropic Effects of Cardiomyopathic R9C Mutation of Phospholamban. Journal of Biological Chemistry, 2015, 290, 7130-7140.	3.4	21
79	Interfilament Spacing Is Preserved during Sarcomere Length Isometric Contractions in Rat Cardiac Trabeculae. Biophysical Journal, 2007, 92, L73-L75.	0.5	20
80	The naked mole-rat exhibits an unusual cardiac myofilament protein profile providing new insights into heart function of this naturally subterranean rodent. Pflugers Archiv European Journal of Physiology, 2017, 469, 1603-1613.	2.8	20
81	Titin and the Developing Heart. Circulation Research, 2004, 94, 860-862.	4.5	19
82	Novel approaches to determine contractile function of the isolated adult zebrafish ventricular cardiac myocyte. Journal of Physiology, 2014, 592, 1949-1956.	2.9	19
83	Exploring cardiac biophysical properties. Global Cardiology Science & Practice, 2015, 2015, 10.	0.4	19
84	Intact myocardial preparations reveal intrinsic transmural heterogeneity in cardiac mechanics. Journal of Molecular and Cellular Cardiology, 2020, 141, 11-16.	1.9	18
85	The velocity of cardiac sarcomere shortening: mechanisms and implications. Journal of Muscle Research and Cell Motility, 2012, 33, 431-437.	2.0	17
86	The Role of Dyadic Organization in Regulation of Sarcoplasmic Reticulum Ca2+ Handling during Rest in Rabbit Ventricular Myocytes. Biophysical Journal, 2014, 106, 1902-1909.	0.5	17
87	Increased Energy Demand during Adrenergic Receptor Stimulation Contributes to Ca 2+ Wave Generation. Biophysical Journal, 2015, 109, 1583-1591.	0.5	17
88	Amino terminus of cardiac myosin binding protein-C regulates cardiac contractility. Journal of Molecular and Cellular Cardiology, 2021, 156, 33-44.	1.9	17
89	Effects of a myofilament calcium sensitizer on left ventricular systolic and diastolic function in rats with volume overload heart failure. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H1605-H1617.	3.2	16
90	Titin-truncating mutations associated with dilated cardiomyopathy alter length-dependent activation and its modulation via phosphorylation. Cardiovascular Research, 2022, 118, 241-253.	3.8	16

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91	Cardiomyocyte-specific expression of CRNK, the C-terminal domain of PYK2, maintains ventricular function and slows ventricular remodeling in a mouse model of dilated cardiomyopathy. Journal of Molecular and Cellular Cardiology, 2014, 72, 281-291.	1.9	13
92	Altered myofilament structure and function in dogs with Duchenne muscular dystrophy cardiomyopathy. Journal of Molecular and Cellular Cardiology, 2018, 114, 345-353.	1.9	11
93	Chronic highâ€dose testosterone treatment: impact on rat cardiac contractile biology. Physiological Reports, 2019, 7, e14192.	1.7	11
94	Nuclear accumulation of myocyte muscle LIM protein is regulated by heme oxygenase 1 and correlates with cardiac function in the transition to failure. Journal of Physiology, 2016, 594, 3287-3305.	2.9	10
95	Myosin light chain phosphorylation to the rescue. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9148-9149.	7.1	9
96	Myosin light chain phosphorylation, novel targets to repair a broken heart?. Cardiovascular Research, 2016, 111, 5-7.	3.8	9
97	Suppression of cardiomyocyte functions by Î²-CTX isolated from the Thai king cobra (Ophiophagus) Tj ETQq1 1 0.784314 rgBT /Overlock Diseases, 2020, 26, e20200005.	1.4	8
98	Impact of titin strain on the cardiac slow force response. Progress in Biophysics and Molecular Biology, 2017, 130, 281-287.	2.9	7
99	Editorial. Cardiovascular Research, 1998, 40, 440-443.	3.8	6
100	Rapid large-scale purification of myofilament proteins using a cleavable His6-tag. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 309, H1509-H1515.	3.2	4
101	Frank's law of the heart: Found in translation. Journal of Molecular and Cellular Cardiology, 2018, 121, 33-35.	1.9	4
102	Some rat: A very special rat with a rather special titin. Journal of Molecular and Cellular Cardiology, 2008, 44, 976-978.	1.9	3
103	Acute inhibitory effect of alphaâ€mangostin on sarcoplasmic reticulum calciumâ€ATPase and myocardial relaxation. Journal of Biochemical and Molecular Toxicology, 2017, 31, e21942.	3.0	3
104	SPATIALLY-COMPRESSED CARDIAC MYOFILAMENT MODELS GENERATE HYSTERESIS THAT IS NOT FOUND IN REAL MUSCLE. , 2007, , .		3
105	Suppression of myofilament cross-bridge kinetic in the heart of orchidectomized rats. Life Sciences, 2020, 261, 118342.	4.3	2
106	Sarcomeric mutations in cardiac diseases. Pflugers Archiv European Journal of Physiology, 2019, 471, 659-660.	2.8	1
107	Toward an understanding of the regulation of myofibrillar function. Journal of General Physiology, 2019, 151, 1-2.	1.9	1
108	Scientists on the Spot: Myocardium and myofilaments. Cardiovascular Research, 2020, 116, e96-e97.	3.8	1

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109	Cardiac Troponin I Threonine 144 phosphorylation: impact on myofilament function. Biophysical Journal, 2009, 96, 501a.	0.5	0
110	Reply to Smith letter: Controversy persists after over 100 years of the Frankâ€"Starling mechanism. Journal of Molecular and Cellular Cardiology, 2010, 49, 709.	1.9	0
111	Altered Cross-Bridge Relaxation Kinetics in Guinea Pig Cardiac Hypertrophy. Biophysical Journal, 2012, 102, 352a.	0.5	0
112	Cardiac Thin Filament Activation Modulation by Stretch. Biophysical Journal, 2013, 104, 453a.	0.5	0
113	Inhibition of Camp-Dependent PKA Activates Î²2-Adrenergic Receptor Stimulation of Cytosolic Phospholipase A2 via Raf-1/Mek/Erk and Ip3-Dependent Ca2+ Signaling in Atrial Myocytes. Biophysical Journal, 2014, 106, 305a.	0.5	0
114	Cardiac Troponin I Ser-23/24 and Tyr-26 Phosphorylation Crosstalk. Biophysical Journal, 2015, 108, 597a-598a.	0.5	0
115	Nitrosylation of RyR2 Prevents Activation of Ca Waves Induced by Redox-Mediated Intersubunit Cross-Linking. Biophysical Journal, 2016, 110, 270a.	0.5	0
116	Negative inotropic mechanisms of Î²-cardiotoxin in cardiomyocytes by depression of myofilament ATPase activity without activation of the classical Î²-adrenergic pathway. Scientific Reports, 2021, 11, 21154.	3.3	0
117	Calciumâ€dependent protein kinase C alpha and the frequencyâ€dependent increase in phosphorylation of troponin I in failing hearts. FASEB Journal, 2008, 22, 751.14.	0.5	0
118	Evidence That The Overexpression Of The Inducible Heat Shock Protein 70 In Mouse Improves Recovery Of Skeletal Muscle From Atrophy. FASEB Journal, 2011, 25, 1050.3.	0.5	0
119	Abstract 20232: Haploinsufficiency of MYBPC3 in the Development of Hypertrophic Cardiomyopathy. Circulation, 2014, 130, .	1.6	0
120	Abstract 12646: Oxidation-Dependent Phosphomimetic Effect of a Human Heart Failure Mutation of Phospholamban. Circulation, 2014, 130, .	1.6	0
121	Abstract 19086: Myofilament Proteins of the Naked Mole-rat Heart Reflect Low Basal Species Cardiac Function. Circulation, 2014, 130, .	1.6	0
122	Abstract 10889: Treating Heart Failure With Preserved Ejection Fraction Through Troponin I Phospho-mimicry. Circulation, 2015, 132, .	1.6	0
123	Which way to grow? Force over time may be the heartâ€™s Dao de jing. Global Cardiology Science & Practice, 2016, 2016, e201621.	0.4	0
124	Truncation of the N-terminus of cardiac troponin I initiates adaptive remodeling of the myocardial proteosome via phosphorylation of mechano-sensitive signaling pathways. Molecular and Cellular Biochemistry, 2022, , 1.	3.1	0