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	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
2	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
3	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
4	Amino terminus of cardiac myosin binding protein-C regulates cardiac contractility. Journal of Molecular and Cellular Cardiology, 2021, 156, 33-44.	1.9	17
5	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
6	Scientists on the Spot: Myocardium and myofilaments. Cardiovascular Research, 2020, 116, e96-e97.	3.8	1
7	Suppression of myofilament cross-bridge kinetic in the heart of orchidectomized rats. Life Sciences, 2020, 261, 118342.	4.3	2
8	Intact myocardial preparations reveal intrinsic transmural heterogeneity in cardiac mechanics. Journal of Molecular and Cellular Cardiology, 2020, 141, 11-16.	1.9	18
9	Suppression of cardiomyocyte functions by Î²-CTX isolated from the Thai king cobra (Ophiophagus) Tj ETQq1 1 0.784314 rgBT /Overl Diseases, 2020, 26, e20200005.	1.4	8
10	Chronic highâ€dose testosterone treatment: impact on rat cardiac contractile biology. Physiological Reports, 2019, 7, e14192.	1.7	11
11	Sarcomeric mutations in cardiac diseases. Pflugers Archiv European Journal of Physiology, 2019, 471, 659-660.	2.8	1
12	Toward an understanding of the regulation of myofibrillar function. Journal of General Physiology, 2019, 151, 1-2.	1.9	1
13	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
14	Frank's law of the heart: Found in translation. Journal of Molecular and Cellular Cardiology, 2018, 121, 33-35.	1.9	4
15	Phenotyping cardiomyopathy in adult zebrafish. Progress in Biophysics and Molecular Biology, 2018, 138, 116-125.	2.9	35
16	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
17	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
18	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

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19	Impact of titin strain on the cardiac slow force response. Progress in Biophysics and Molecular Biology, 2017, 130, 281-287.	2.9	7
20	Myofilament Calcium Sensitivity: Consequences of the Effective Concentration of Troponin I. Frontiers in Physiology, 2016, 7, 632.	2.8	37
21	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
22	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
23	Myosin light chain phosphorylation, novel targets to repair a broken heart?. Cardiovascular Research, 2016, 111, 5-7.	3.8	9
24	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
25	Nitrosylation of RyR2 Prevents Activation of Ca Waves Induced by Redox-Mediated Intersubunit Cross-Linking. Biophysical Journal, 2016, 110, 270a.	0.5	0
26	Cardiac muscle mechanics: Sarcomere length matters. Journal of Molecular and Cellular Cardiology, 2016, 91, 148-150.	1.9	45
27	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
28	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
29	Cardiac Troponin I Ser-23/24 and Tyr-26 Phosphorylation Crosstalk. Biophysical Journal, 2015, 108, 597a-598a.	0.5	0
30	Exploring cardiac biophysical properties. Global Cardiology Science & Practice, 2015, 2015, 10.	0.4	19
31	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
32	Pacemaker-induced transient asynchrony suppresses heart failure progression. Science Translational Medicine, 2015, 7, 319ra207.	12.4	31
33	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
34	Acute Inotropic and Lusitropic Effects of Cardiomyopathic R9C Mutation of Phospholamban. Journal of Biological Chemistry, 2015, 290, 7130-7140.	3.4	21
35	Increased Energy Demand during Adrenergic Receptor Stimulation Contributes to Ca 2+ Wave Generation. Biophysical Journal, 2015, 109, 1583-1591.	0.5	17
36	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

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37	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
38	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
39	Abstract 10889: Treating Heart Failure With Preserved Ejection Fraction Through Troponin I Phospho-mimicry. Circulation, 2015, 132, .	1.6	0
40	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
41	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
42	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
43	Novel approaches to determine contractile function of the isolated adult zebrafish ventricular cardiac myocyte. Journal of Physiology, 2014, 592, 1949-1956.	2.9	19
44	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
45	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
46	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
47	Cardiac resynchronization sensitizes the sarcomere to calcium by reactivating GSK-3Î². Journal of Clinical Investigation, 2014, 124, 129-139.	8.2	71
48	Abstract 20232: Haploinsufficiency of MYBPC3 in the Development of Hypertrophic Cardiomyopathy. Circulation, 2014, 130, .	1.6	0
49	Abstract 12646: Oxidation-Dependent Phosphomimetic Effect of a Human Heart Failure Mutation of Phospholamban. Circulation, 2014, 130, .	1.6	0
50	Abstract 19086: Myofilament Proteins of the Naked Mole-rat Heart Reflect Low Basal Species Cardiac Function. Circulation, 2014, 130, .	1.6	0
51	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
52	Cardiac Thin Filament Activation Modulation by Stretch. Biophysical Journal, 2013, 104, 453a.	0.5	0
53	The velocity of cardiac sarcomere shortening: mechanisms and implications. Journal of Muscle Research and Cell Motility, 2012, 33, 431-437.	2.0	17
54	Myofilament Length-Dependent Activation Develops within 5Âµs in Guinea-Pig Myocardium. Biophysical Journal, 2012, 103, L13-L15.	0.5	23

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55	Altered Cross-Bridge Relaxation Kinetics in Guinea Pig Cardiac Hypertrophy. Biophysical Journal, 2012, 102, 352a.	0.5	0
56	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
57	Cardiac myosin binding protein-C: redefining its structure and function. Biophysical Reviews, 2012, 4, 93-106.	3.2	71
58	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
59	Beneficial effects of SR33805 in failing myocardium. Cardiovascular Research, 2011, 91, 412-419.	3.8	22
60	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
61	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
62	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
63	The Role of Thin Filament Cooperativity in Cardiac Length-Dependent Calcium Activation. Biophysical Journal, 2010, 99, 2978-2986.	0.5	47
64	Myofilament length dependent activation. Journal of Molecular and Cellular Cardiology, 2010, 48, 851-858.	1.9	237
65	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
66	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
67	Glass microneedles for force measurements: a finite-element analysis model. Pflugers Archiv European Journal of Physiology, 2009, 457, 1415-1422.	2.8	23
68	Cardiac Troponin I Threonine 144 phosphorylation: impact on myofilament function. Biophysical Journal, 2009, 96, 501a.	0.5	0
69	Blebbistatin: use as inhibitor of muscle contraction. Pflugers Archiv European Journal of Physiology, 2008, 455, 995-1005.	2.8	96
70	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
71	Cardiac thin filament regulation. Pflugers Archiv European Journal of Physiology, 2008, 457, 37-46.	2.8	76
72	Approximate Model of Cooperative Activation and Crossbridge Cycling in Cardiac Muscle Using Ordinary Differential Equations. Biophysical Journal, 2008, 95, 2368-2390.	0.5	304

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73	Some rat: A very special rat with a rather special titin. Journal of Molecular and Cellular Cardiology, 2008, 44, 976-978.	1.9	3
74	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
75	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
76	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
77	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
78	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
79	Review focus series: sarcomeric proteins as key elements in integrated control of cardiac function. Cardiovascular Research, 2007, 77, 616-618.	3.8	32
80	The Troponin C G159D Mutation Blunts Myofilament Desensitization Induced by Troponin I Ser23/24 Phosphorylation. Circulation Research, 2007, 100, 1486-1493.	4.5	107
81	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
82	Cardiac Troponin I Threonine 144. Circulation Research, 2007, 101, 1081-1083.	4.5	50
83	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
84	Interfilament Spacing Is Preserved during Sarcomere Length Isometric Contractions in Rat Cardiac Trabeculae. Biophysical Journal, 2007, 92, L73-L75.	0.5	20
85	Frequency-dependent myofilament Ca2+desensitization in failing rat myocardium. Journal of Physiology, 2007, 582, 695-709.	2.9	58
86	Impact of temperature on crossâ€bridge cycling kinetics in rat myocardium. Journal of Physiology, 2007, 584, 591-600.	2.9	76
87	SPATIALLY-COMPRESSED CARDIAC MYOFILAMENT MODELS GENERATE HYSTERESIS THAT IS NOT FOUND IN REAL MUSCLE. , 2007, , .		3
88	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
89	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
90	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

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91	Myosin Binding Protein C in the Heart. Circulation Research, 2006, 98, 1234-1236.	4.5	27
92	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
93	Depressed cardiac myofilament function in human diabetes mellitus. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 289, H2478-H2483.	3.2	72
94	Functional Effects of Rho-Kinaseâ€"Dependent Phosphorylation of Specific Sites on Cardiac Troponin. Circulation Research, 2005, 96, 740-747.	4.5	90
95	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
96	Intracellular Localization and Functional Effects of P21-Activated Kinase-1 (Pak1) in Cardiac Myocytes. Circulation Research, 2004, 94, 194-200.	4.5	106
97	Titin and the Developing Heart. Circulation Research, 2004, 94, 860-862.	4.5	19
98	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
99	Approaches to modeling crossbridges and calcium-dependent activation in cardiac muscle. Progress in Biophysics and Molecular Biology, 2004, 85, 179-195.	2.9	65
100	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
101	Cardiac myofilaments: mechanics and regulation. Journal of Biomechanics, 2003, 36, 721-730.	2.1	67
102	Ising Model of Cardiac Thin Filament Activation with Nearest-Neighbor Cooperative Interactions. Biophysical Journal, 2003, 84, 897-909.	0.5	58
103	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
104	Troponin I in the murine myocardium: influence on length-dependent activation and interfilament spacing. Journal of Physiology, 2003, 547, 951-961.	2.9	127
105	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
106	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
107	Myofilament Calcium Sensitivity in Skinned Rat Cardiac Trabeculae. Circulation Research, 2002, 90, 59-65.	4.5	136
108	Actin Capping Protein. Circulation Research, 2002, 90, 1299-1306.	4.5	56

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109	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
110	Titin Isoform Switch in Ischemic Human Heart Disease. Circulation, 2002, 106, 1333-1341.	1.6	316
111	Cooperative activation in cardiac muscle: impact of sarcomere length. American Journal of Physiology - Heart and Circulatory Physiology, 2002, 282, H1055-H1062.	3.2	107
112	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
113	Lengthâ€dependent activation in three striated muscle types of the rat. Journal of Physiology, 2002, 544, 225-236.	2.9	107
114	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
115	Integration of Cardiac Myofilament Activity and Regulation with Pathways Signaling Hypertrophy and Failure. Annals of Biomedical Engineering, 2000, 28, 991-1001.	2.5	55
116	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
117	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
118	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
119	Altered contractile function in heart failure. Cardiovascular Research, 1998, 37, 367-380.	3.8	88
120	Editorial. Cardiovascular Research, 1998, 40, 440-443.	3.8	6
121	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
122	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
123	Decreased Myocyte Tension Development and Calcium Responsiveness in Rat Right Ventricular Pressure Overload. Circulation, 1997, 95, 2312-2317.	1.6	73
124	Protein Kinase A Does Not Alter Economy of Force Maintenance in Skinned Rat Cardiac Trabeculae. Circulation Research, 1995, 76, 734-741.	4.5	124