Henk Granzier

List of Publications by Year
in descending order

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107	10,455	28242	32815
papers	citations	55 h-index	100 g-index

110	110	110	9427
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Complete Gene Sequence of Titin, Expression of an Unusual â‰ˆ700-kDa Titin Isoform, and Its Interaction With Obscurin Identify a Novel Z-Line to I-Band Linking System. Circulation Research, 2001, 89, 1065-1072.	2.0	593
2	Mutations of TTN, encoding the giant muscle filament titin, cause familial dilated cardiomyopathy. Nature Genetics, 2002, 30, 201-204.	9.4	526
3	Calcium-dependent molecular spring elements in the giant protein titin. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 13716-13721.	3.3	352
4	Identification of muscle specific ring finger proteins as potential regulators of the titin kinase domain. Journal of Molecular Biology, 2001, 306, 717-726.	2.0	350
5	Series of Exon-Skipping Events in the Elastic Spring Region of Titin as the Structural Basis for Myofibrillar Elastic Diversity. Circulation Research, 2000, 86, 1114-1121.	2.0	327
6	Developmental Control of Titin Isoform Expression and Passive Stiffness in Fetal and Neonatal Myocardium. Circulation Research, 2004, 94, 505-513.	2.0	299
7	Muscle assembly: a titanic achievement?. Current Opinion in Cell Biology, 1999, 11, 18-25.	2.6	296
8	The Muscle Ankyrin Repeat Proteins: CARP, ankrd2/Arpp and DARP as a Family of Titin Filament-based Stress Response Molecules. Journal of Molecular Biology, 2003, 333, 951-964.	2.0	296
9	The NH2 Terminus of Titin Spans the Z-Disc: Its Interaction with a Novel 19-kD Ligand (T-cap) Is Required for Sarcomeric Integrity. Journal of Cell Biology, 1998, 143, 1013-1027.	2.3	285
10	MURF-1 and MURF-2 Target a Specific Subset of Myofibrillar Proteins Redundantly: Towards Understanding MURF-dependent Muscle Ubiquitination. Journal of Molecular Biology, 2005, 350, 713-722.	2.0	270
11	Genetic Variation in Titin in Arrhythmogenic Right Ventricular Cardiomyopathyâ€“Overlap Syndromes. Circulation, 2011, 124, 876-885.	1.6	263
12	Myopalladin, a Novel 145-Kilodalton Sarcomeric Protein with Multiple Roles in Z-Disc and I-Band Protein Assemblies. Journal of Cell Biology, 2001, 153, 413-428.	2.3	250
13	Titin Extensibility In Situ: Entropic Elasticity of Permanently Folded and Permanently Unfolded Molecular Segments. Journal of Cell Biology, 1998, 140, 853-859.	2.3	238
14	PKC Phosphorylation of Titinâ€™s PEVK Element. Circulation Research, 2009, 105, 631-638.	2.0	238
15	Cardiac Titin. Circulation, 2010, 121, 2137-2145.	1.6	214
16	Nebulin regulates thin filament length, contractility, and Z-disk structure in vivo. EMBO Journal, 2006, 25, 3843-3855.	3.5	208
17	Changes in Titin and Collagen Underlie Diastolic Stiffness Diversity of Cardiac Muscle. Journal of Molecular and Cellular Cardiology, 2000, 32, 2151-2161.	0.9	198
18	Cardiac titin: an adjustable multiâ€functional spring. Journal of Physiology, 2002, 541, 335-342.	1.3	197

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19	Titin is a Target of Matrix Metalloproteinase-2. Circulation, 2010, 122, 2039-2047.	1.6	177
20	Recessive truncating titin gene, TTN , mutations presenting as centronuclear myopathy. Neurology, 2013, 81, 1205-1214.	1.5	177
21	Changes in Titin Isoform Expression in Pacing-Induced Cardiac Failure Give Rise to Increased Passive Muscle Stiffness. Circulation, 2002, 106, 1384-1389.	1.6	152
22	Experimentally Increasing Titin Compliance in a Novel Mouse Model Attenuates the Frank-Starling Mechanism But Has a Beneficial Effect on Diastole. Circulation, 2014, 129, 1924-1936.	1.6	143
23	Molecular Mechanics of Cardiac Titin's PEVK and N2B Spring Elements. Journal of Biological Chemistry, 2002, 277, 11549-11558.	1.6	141
24	Characterization of nebulette and nebulin and emerging concepts of their roles for vertebrate Z-discs. Journal of Molecular Biology, 1998, 282, 111-123.	2.0	139
25	Cardiac titin: Structure, functions and role in disease. Clinica Chimica Acta, 2007, 375, 1-9.	0.5	120
26	Conditional Expression of Mutant M-line Titins Results in Cardiomyopathy with Altered Sarcomere Structure. Journal of Biological Chemistry, 2003, 278, 6059-6065.	1.6	118
27	The Mechanically Active Domain of Titin in Cardiac Muscle. Circulation Research, 1995, 77, 856-861.	2.0	116
28	Structureâ€“function relations of the giant elastic protein titin in striated and smooth muscle cells. Muscle and Nerve, 2007, 36, 740-755.	1.0	115
29	Passive tension of rat skeletal soleus muscle fibers: effects of unloading conditions. Journal of Applied Physiology, 2002, 92, 1465-1472.	1.2	108
30	The sensitive giant: the role of titin-based stretch sensing complexes in the heart. Trends in Cell Biology, 2004, 14, 119-126.	3.6	104
31	Tuning the molecular giant titin through phosphorylation: Role in health and disease. Trends in Cardiovascular Medicine, 2013, 23, 165-171.	2.3	99
32	Experimentally Increasing the Compliance of Titin Through RNA Binding Motif-20 (RBM20) Inhibition Improves Diastolic Function In a Mouse Model of Heart Failure With Preserved Ejection Fraction. Circulation, 2016, 134, 1085-1099.	1.6	98
33	Congenital Titinopathy: Comprehensive characterization and pathogenic insights. Annals of Neurology, 2018, 83, 1105-1124.	2.8	93
34	A Spring Tale: New Facts on Titin Elasticity. Biophysical Journal, 1998, 75, 2613-2614.	0.2	92
35	Structural and functional studies of titinâ€™s fn3 modules reveal conserved surface patterns and binding to myosin S1 - a possible role in the frank-starling mechanism of the heart. Journal of Molecular Biology, 2001, 313, 431-447.	2.0	91
36	Modulation of Muscle Atrophy, Fatigue and MLC Phosphorylation by MuRF1 as Indicated by Hindlimb Suspension Studies on MuRF1-KO Mice. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-9.	3.0	90

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37	A Review of the Giant Protein Titin in Clinical Molecular Diagnostics of Cardiomyopathies. Frontiers in Cardiovascular Medicine, 2016, 3, 21.	1.1	90
38	Molecular Dissection of N2B Cardiac Titinâ€™s Extensibility. Biophysical Journal, 1999, 77, 3189-3196.	0.2	89
39	Stress-induced dilated cardiomyopathy in a knock-in mouse model mimicking human titin-based disease. Journal of Molecular and Cellular Cardiology, 2009, 47, 352-358.	0.9	87
40	Thick-Filament Strain and Interfilament Spacing in Passive Muscle: Effect of Titin-Based Passive Tension. Biophysical Journal, 2011, 100, 1499-1508.	0.2	87
41	Dynamic distribution of muscle-specific calpain in mice has a key role in physical-stress adaptation and is impaired in muscular dystrophy. Journal of Clinical Investigation, 2010, 120, 2672-2683.	3.9	85
42	Extensibility of Isoforms of Cardiac Titin: Variation in Contour Length of Molecular Subsegments Provides a Basis for Cellular Passive Stiffness Diversity. Biophysical Journal, 2000, 79, 3226-3234.	0.2	84
43	Different Molecular Mechanics Displayed by Titin's Constitutively and Differentially Expressed Tandem Ig Segments. Journal of Structural Biology, 2002, 137, 248-258.	1.3	83
44	Induction and Myofibrillar Targeting of CARP, and Suppression of the Nkx2.5 Pathway in the MDM Mouse with Impaired Titin-based Signaling. Journal of Molecular Biology, 2004, 336, 145-154.	2.0	83
45	Expression of Distinct Classes of Titin Isoforms in Striated and Smooth Muscles by Alternative Splicing, and Their Conserved Interaction with Filamins. Journal of Molecular Biology, 2006, 362, 664-681.	2.0	80
46	The giant protein titin regulates the length of the striated muscle thick filament. Nature Communications, 2017, 8, 1041.	5.8	79
47	Telethonin Deficiency Is Associated With Maladaptation to Biomechanical Stress in the Mammalian Heart. Circulation Research, 2011, 109, 758-769.	2.0	78
48	MuRF1 is a muscle fiber-type II associated factor and together with MuRF2 regulates type-II fiber trophicity and maintenance. Journal of Structural Biology, 2010, 170, 344-353.	1.3	75
49	Mouse intact cardiac myocyte mechanics: cross-bridge and titin-based stress in unactivated cells. Journal of General Physiology, 2011, 137, 81-91.	0.9	73
50	Nebulin, a major player in muscle health and disease. FASEB Journal, 2011, 25, 822-829.	0.2	73
51	Titin-based modulation of active tension and interfilament lattice spacing in skinned rat cardiac muscle. Pflugers Archiv European Journal of Physiology, 2005, 449, 449-457.	1.3	71
52	Titin: Physiological Function and Role in Cardiomyopathy and Failure. Heart Failure Reviews, 2005, 10, 211-223.	1.7	70
53	Identification of a novel frameshift mutation in the giant muscle filament titin in a large Australian family with dilated cardiomyopathy. Journal of Molecular Medicine, 2006, 84, 478-483.	1.7	64
54	Hypothyroidism leads to increased collagen-based stiffness and re-expression of large cardiac titin isoforms with high compliance. Journal of Molecular and Cellular Cardiology, 2007, 42, 186-195.	0.9	62

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55	Hyperphosphorylation of Mouse Cardiac Titin Contributes to Transverse Aortic Constriction-Induced Diastolic Dysfunction. Circulation Research, 2011, 109, 858-866.	2.0	59
56	Tuning Passive Mechanics through Differential Splicing of Titin during Skeletal Muscle Development. Biophysical Journal, 2009, 97, 2277-2286.	0.2	58
57	Titinâ€based mechanosensing modulates muscle hypertrophy. Journal of Cachexia, Sarcopenia and Muscle, 2018, 9, 947-961.	2.9	58
58	Cardiac Hypertrophy and Reduced Contractility in Hearts Deficient in the Titin Kinase Region. Circulation, 2007, 115, 743-751.	1.6	57
59	A comparative proteome analysis of human metaphase chromosomes isolated from two different cell lines reveals a set of conserved chromosome-associated proteins. Genes To Cells, 2007, 12, 269-284.	0.5	52
60	Single Molecule Force Spectroscopy of the Cardiac Titin N2B Element. Journal of Biological Chemistry, 2009, 284, 13914-13923.	1.6	50
61	Dimerization of the cardiac ankyrin protein CARP: Implications for MARP titin-based signaling. Journal of Muscle Research and Cell Motility, 2006, 26, 401-408.	0.9	49
62	Reducing RBM20 activity improves diastolic dysfunction and cardiac atrophy. Journal of Molecular Medicine, 2016, 94, 1349-1358.	1.7	48
63	Thick-Filament Extensibility in Intact SkeletalÂMuscle. Biophysical Journal, 2018, 115, 1580-1588.	0.2	48
64	Titin-based mechanosensing and signaling: role in diaphragm atrophy during unloading?. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2011, 300, L161-L166.	1.3	47
65	A missense variant in the titin gene in Doberman pinscher dogs with familial dilated cardiomyopathy and sudden cardiac death. Human Genetics, 2019, 138, 515-524.	1.8	47
66	Differential splicing of the large sarcomeric protein nebulin during skeletal muscle development. Journal of Structural Biology, 2010, 170, 325-333.	1.3	46
67	Titin mutations and muscle disease. Pflugers Archiv European Journal of Physiology, 2019, 471, 673-682.	1.3	42
68	Increased myocardial stiffness due to cardiac titin isoform switching in a mouse model of volume overload limits eccentric remodeling. Journal of Molecular and Cellular Cardiology, 2015, 79, 104-114.	0.9	41
69	Mechanical Properties of Titin Isoforms. Advances in Experimental Medicine and Biology, 2000, 481, 283-304.	0.8	41
70	Functional genomics of chicken, mouse, and human titin supports splice diversity as an important mechanism for regulating biomechanics of striated muscle. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2007, 293, R557-R567.	0.9	39
71	Single Molecule Force Spectroscopy on Titin Implicates Immunoglobulin Domain Stability as a Cardiac Disease Mechanism*. Journal of Biological Chemistry, 2013, 288, 5303-5315.	1.6	38
72	The effects of PKCÎ± phosphorylation on the extensibility of titinâ€™s PEVK element. Journal of Structural Biology, 2010, 170, 270-277.	1.3	33

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73	Titin-based stiffening of muscle fibers in Ehlers-Danlos Syndrome. Journal of Applied Physiology, 2012, 112, 1157-1165.	1.2	33
74	Thin filament length in the cardiac sarcomere varies with sarcomere length but is independent of titin and nebulin. Journal of Molecular and Cellular Cardiology, 2016, 97, 286-294.	0.9	32
75	Alternative Splicing of Titin Restores Diastolic Function in an HFpEF-Like Genetic Murine Model () Tj ETQq1 1 0.784314 rgBT /Overlock	2.0	31
76	Role of Titin in Skeletal Muscle Function and Disease. Advances in Experimental Medicine and Biology, 2010, 682, 105-122.	0.8	31
77	Altered Contractility of Skeletal Muscle in Mice Deficient in Titinâ€™s M-Band Region. Journal of Molecular Biology, 2009, 393, 10-26.	2.0	30
78	Phosphorylating Titinâ€™s Cardiac N2B Element by ERK2 or CaMKIIÎ´ Lowers the Single Molecule and Cardiac Muscle Force. Biophysical Journal, 2015, 109, 2592-2601.	0.2	30
79	Restoring force development by titin/connectin and assessment of Ig domain unfolding. Journal of Muscle Research and Cell Motility, 2006, 26, 307-317.	0.9	27
80	Titin as a modular spring: emerging mechanisms for elasticity control by titin in cardiac physiology and pathophysiology. Journal of Muscle Research and Cell Motility, 2002, 23, 457-470.	0.9	25
81	Titin-Isoform Dependence of Titin-Actin Interaction and Its Regulation by S100A1/<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mtext>Ca</mml:mtext><mml:mrow><mml:mtext>	3.0	23
82	Fast Skeletal Muscle Troponin Activation Increases Force of Mouse Fast Skeletal Muscle and Ameliorates Weakness Due to Nebulin-Deficiency. PLoS ONE, 2013, 8, e55861.	1.1	25
83	Mechanics on Myocardium Deficient in the N2B Region of Titin: The Cardiac-Unique Spring Element Improves Efficiency of the Cardiac Cycle. Biophysical Journal, 2011, 101, 1385-1392.	0.2	24
84	Titin: An endosarcomeric protein that modulates myocardial stiffness in DCM. Journal of Cardiac Failure, 2002, 8, S276-S286.	0.7	23
85	Effect of diastolic pressure on MLC2v phosphorylation in the rat left ventricle. Archives of Biochemistry and Biophysics, 2006, 456, 216-223.	1.4	22
86	Nebulin and Lmod2 are critical for specifying thin-filament length in skeletal muscle. Science Advances, 2020, 6, .	4.7	22
87	Molecular Tools for the Study of Titinâ€™s Differential Expression. Advances in Experimental Medicine and Biology, 2000, 481, 35-52.	0.8	21
88	Effect of exercise on passive myocardial stiffness in mice with diastolic dysfunction. Journal of Molecular and Cellular Cardiology, 2017, 108, 24-33.	0.9	19
89	Titin splicing regulates cardiotoxicity associated with calpain 3 gene therapy for limb-girdle muscular dystrophy type 2A. Science Translational Medicine, 2019, 11, .	5.8	19
90	Exploration of pathomechanisms triggered by a single-nucleotide polymorphism in titin's I-band: the cardiomyopathy-linked mutation T2580I. Open Biology, 2016, 6, 160114.	1.5	17

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91	Reduced passive force in skeletal muscles lacking protein arginylation. American Journal of Physiology - Cell Physiology, 2016, 310, C127-C135.	2.1	17
92	Deletion of obscurin immunoglobulin domains Ig58/59 leads to age-dependent cardiac remodeling and arrhythmia. Basic Research in Cardiology, 2020, 115, 60.	2.5	17
93	Muscle ankyrin repeat protein 1 (MARP1) locks titin to the sarcomeric thin filament and is a passive force regulator. Journal of General Physiology, 2021, 153, .	0.9	17
94	Novex-3, the tiny titin of muscle. Biophysical Reviews, 2017, 9, 201-206.	1.5	16
95	Single-Molecule Force Spectroscopy on the N2A Element of Titin: Effects of Phosphorylation and CARP. Frontiers in Physiology, 2020, 11, 173.	1.3	16
96	Deleting nebulin's C-terminus reveals its importance to sarcomeric structure and function and is sufficient to invoke nemaline myopathy. Human Molecular Genetics, 2019, 28, 1709-1725.	1.4	15
97	Titin as a modular spring: emerging mechanisms for elasticity control by titin in cardiac physiology and pathophysiology. , 2003, , 457-471.		15
98	Triggering typical nemaline myopathy with compound heterozygous nebulin mutations reveals myofilament structural changes as pathomechanism. Nature Communications, 2020, 11, 2699.	5.8	11
99	From Connecting Filaments to Co-Expression of Titin Isoforms. Advances in Experimental Medicine and Biology, 2000, 481, 405-418.	0.8	10
100	The number of Z-repeats and super-repeats in nebulin greatly varies across vertebrates and scales with animal size. Journal of General Physiology, 2021, 153, .	0.9	7
101	In vivo characterization of skeletal muscle function in nebulinâ€deficient mice. Muscle and Nerve, 2020, 61, 416-424.	1.0	6
102	Adaptations in Titinâ€™s Spring Elements in Normal and Cardiomyopathic Hearts. Advances in Experimental Medicine and Biology, 2003, 538, 517-531.	0.8	6
103	Softening the Stressed Giant Titin in Diabetes Mellitus. Circulation Research, 2018, 123, 315-317.	2.0	3
104	Shortening the thick filament by partial deletion of titin's C-zone alters cardiac function by reducing the operating sarcomere length range. Journal of Molecular and Cellular Cardiology, 2022, 165, 103-114.	0.9	2
105	Titin M-line insertion sequence 7 is required for proper cardiac function in mice. Journal of Cell Science, 2021, 134, .	1.2	1
106	Gas Exchange, Alveolar. , 2012, , 351-355.		0
107	Matrix metalloproteinaseâ€2 coâ€localizes with titin in cardiac myocytes and contributes to its proteolysis in ischemiaâ€reperfusion injury. FASEB Journal, 2009, 23, 812.11.	0.2	0