Gerhard Meissner

List of Publications by Year
in descending order

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99 papers	10,002 citations	53794 45 h-index	42399 92 g-index

99 all docs	99 docs citations	99 times ranked	5773 citing authors

#	Article	IF	Citations
1	Activation of the Cardiac Calcium Release Channel (Ryanodine Receptor) by Poly-S-Nitrosylation. Science, 1998, 279, 234-237.	12.6	945
2	Physiology of Nitric Oxide in Skeletal Muscle. Physiological Reviews, 2001, 81, 209-237.	28.8	897
3	Purification and reconstitution of the calcium release channel from skeletal muscle. Nature, 1988, 331, 315-319.	27.8	840
4	Isolation of sarcoplasmic reticulum by zonal centrifugation and purification of Ca2+-pump and Ca2+-binding proteins. Biochimica Et Biophysica Acta - Biomembranes, 1973, 298, 246-269.	2.6	468
5	Kinetics of rapid calcium release by sarcoplasmic reticulum. Effects of calcium, magnesium, and adenine nucleotides. Biochemistry, 1986, 25, 236-244.	2.5	457
6	Isolation and characterization of two types of sarcoplasmic reticulum vesicles. Biochimica Et Biophysica Acta - Biomembranes, 1975, 389, 51-68.	2.6	418
7	The Skeletal Muscle Calcium Release Channel. Cell, 2000, 102, 499-509.	28.9	407
8	Sarcoplasmic reticulum contains adenine nucleotide-activated calcium channels. Nature, 1985, 316, 446-449.	27.8	389
9	Activation of the Ca2+ release channel of skeletal muscle sarcoplasmic reticulum by caffeine and related compounds. Archives of Biochemistry and Biophysics, 1988, 267, 75-86.	3.0	326
10	Calmodulin Binding and Inhibition of Cardiac Muscle Calcium Release Channel (Ryanodine Receptor). Journal of Biological Chemistry, 2001, 276, 20144-20153.	3.4	183
11	The structural basis of ryanodine receptor ion channel function. Journal of General Physiology, 2017, 149, 1065-1089.	1.9	181
12	Regulation of Cardiac Ca ²⁺ Release Channel (Ryanodine Receptor) by Ca ²⁺ , H ⁺ , Mg ²⁺ , and Adenine Nucleotides Under Normal and Simulated Ischemic Conditions. Circulation Research, 1996, 79, 1100-1109.	4.5	166
13	Molecular regulation of cardiac ryanodine receptor ion channel. Cell Calcium, 2004, 35, 621-628.	2.4	161
14	Regulation of mammalian ryanodine receptors. Frontiers in Bioscience - Landmark, 2002, 7, d2072-2080.	3.0	153
15	Regulation of Skeletal Muscle Ca2+ Release Channel (Ryanodine Receptor) by Ca2+ and Monovalent Cations and Anions. Journal of Biological Chemistry, 1997, 272, 1628-1638.	3.4	146
16	Classes of Thiols That Influence the Activity of the Skeletal Muscle Calcium Release Channel. Journal of Biological Chemistry, 2001, 276, 15625-15630.	3.4	143
17	Evidence for a Role of the Lumenal M3-M4 Loop in Skeletal Muscle Ca2+ Release Channel (Ryanodine) Tj ETQq1 1 0.784314 rgBT /Ov	0.5	141
18	Characterization of Recombinant Skeletal Muscle (Ser-2843) and Cardiac Muscle (Ser-2809) Ryanodine Receptor Phosphorylation Mutants. Journal of Biological Chemistry, 2003, 278, 51693-51702.	3.4	141

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19	Regulation of Cardiac Muscle Ca2+ Release Channel by Sarcoplasmic Reticulum Lumenal Ca2+. Biophysical Journal, 1998, 75, 2302-2312.	0.5	140
20	Molecular Basis of Calmodulin Binding to Cardiac Muscle Ca2+ Release Channel (Ryanodine Receptor). Journal of Biological Chemistry, 2003, 278, 23480-23486.	3.4	135
21	Functional characterization of the Ca2+-gated Ca2+ release channel of vascular smooth muscle sarcoplasmic reticulum. Pflugers Archiv European Journal of Physiology, 1991, 418, 353-359.	2.8	134
22	Permeability of sarcoplasmic reticulum membrane. The effect of changed ionic environments on Ca2+ release. Journal of Membrane Biology, 1976, 30, 79-98.	2.1	124
23	(De)constructing the Ryanodine Receptor:Â Modeling Ion Permeation and Selectivity of the Calcium Release Channel. Journal of Physical Chemistry B, 2005, 109, 15598-15610.	2.6	121
24	Evidence for a Ca2+ channel within the ryanodine receptor complex from cardiac sarcoplasmic reticulum. Biochemical and Biophysical Research Communications, 1988, 151, 441-449.	2.1	109
25	Early cardiac hypertrophy in mice with impaired calmodulin regulation of cardiac muscle Ca2+ release channel. Journal of Clinical Investigation, 2007, 117, 1344-1353.	8.2	105
26	Potential for Pharmacology of Ryanadine Receptor/Calcium Release Channelsa. Annals of the New York Academy of Sciences, 1998, 853, 130-148.	3.8	103
27	Characterization of recessive RYR1 mutations in core myopathies. Human Molecular Genetics, 2006, 15, 2791-2803.	2.9	103
28	Monovalent ion and calcium ion fluxes in sarcoplasmic reticulum. Molecular and Cellular Biochemistry, 1983, 55, 65-82.	3.1	97
29	Evidence for a junctional feet-ryanodine receptor complex from sarcoplasmic reticulum. Biochemical and Biophysical Research Communications, 1987, 143, 704-709.	2.1	96
30	Ruthenium Red Modifies the Cardiac and Skeletal Muscle Ca2+ Release Channels (Ryanodine Receptors) by Multiple Mechanisms. Journal of Biological Chemistry, 1999, 274, 32680-32691.	3.4	96
31	Regulation of ryanodine receptors by reactive nitrogen species. Biochemical Pharmacology, 1999, 57, 1079-1084.	4.4	93
32	Modulation of Ca²⁺-gated cardiac muscle Ca²⁺-release channel (ryanodine) Tj ETQq0 0 0 rgBT /Overlock 10 T C120-C128.	4.6	88
33	Imperatoxin A Induces Subconductance States in Ca2+ Release Channels (Ryanodine Receptors) of Cardiac and Skeletal Muscle. Journal of General Physiology, 1998, 111, 679-690.	1.9	87
34	Identification of Apocalmodulin and Ca2+-Calmodulin Regulatory Domain in Skeletal Muscle Ca2+ Release Channel, Ryanodine Receptor. Journal of Biological Chemistry, 2001, 276, 22579-22585.	3.4	87
35	Regulation of the Cardiac Muscle Ryanodine Receptor by O₂ Tension and S-Nitrosoglutathione. Biochemistry, 2008, 47, 13985-13990.	2.5	84
36	Multi-minicore disease and atypical periodic paralysis associated with novel mutations in the skeletal muscle ryanodine receptor (RYR1) gene. Neuromuscular Disorders, 2010, 20, 166-173.	0.6	78

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37	Muscle weakness in Ryr1I4895T/WT knock-in mice as a result of reduced ryanodine receptor Ca2+ ion permeation and release from the sarcoplasmic reticulum. Journal of General Physiology, 2011, 137, 43-57.	1.9	76
38	Mechanism of Calmodulin Inhibition of Cardiac Sarcoplasmic Reticulum Ca2+ Release Channel (Ryanodine Receptor). Biophysical Journal, 2004, 86, 797-804.	0.5	70
39	Cardiac Myocyte Z-Line Calmodulin Is Mainly RyR2-Bound, and Reduction Is Arrhythmogenic and Occurs in Heart Failure. Circulation Research, 2014, 114, 295-306.	4.5	69
40	Regulation of mammalian ryanodine receptors. Frontiers in Bioscience - Landmark, 2002, 7, d2072.	3.0	67
41	Probing the Role of Negatively Charged Amino Acid Residues in Ion Permeation of Skeletal Muscle Ryanodine Receptor. Biophysical Journal, 2005, 89, 256-265.	0.5	66
42	Identification of a Two EF-Hand Ca2+ Binding Domain in Lobster Skeletal Muscle Ryanodine Receptor/Ca2+ Release Channel,. Biochemistry, 1998, 37, 4804-4814.	2.5	65
43	Two Rings of Negative Charges in the Cytosolic Vestibule of Type-1 Ryanodine Receptor Modulate Ion Fluxes. Biophysical Journal, 2006, 90, 443-453.	0.5	65
44	Evidence for a role of C-terminal amino acid residues in skeletal muscle Ca2+release channel (ryanodine receptor) function. FEBS Letters, 1997, 412, 223-226.	2.8	61
45	Selectivity and Permeation in Calcium Release Channel of Cardiac Muscle: Alkali Metal Ions. Biophysical Journal, 1999, 76, 1346-1366.	0.5	59
46	Structural Determinants of Skeletal Muscle Ryanodine Receptor Gating*. Journal of Biological Chemistry, 2013, 288, 6154-6165.	3.4	48
47	Sodium and potassium ion permeability of sarcoplasmic reticulum vesicles. FEBS Letters, 1977, 82, 47-50.	2.8	43
48	Excitation-Contraction Coupling in Airway Smooth Muscle. Journal of Biological Chemistry, 2006, 281, 30143-30151.	3.4	43
49	Knocking Down Type 2 but Not Type 1 Calsequestrin Reduces Calcium Sequestration and Release in C2C12 Skeletal Muscle Myotubes. Journal of Biological Chemistry, 2006, 281, 15572-15581.	3.4	39
50	Single Channel Properties of Heterotetrameric Mutant RyR1 Ion Channels Linked to Core Myopathies. Journal of Biological Chemistry, 2008, 283, 6321-6329.	3.4	36
51	Regulation of Ryanodine Receptor Ion Channels Through Posttranslational Modifications. Current Topics in Membranes, 2010, 66, 91-113.	0.9	35
52	Calmodulin Regulation and Identification of Calmodulin Binding Region of Type-3 Ryanodine Receptor Calcium Release Channel. Biochemistry, 2005, 44, 15074-15081.	2.5	34
53	Altered stored calcium release in skeletal myotubes deficient of triadin and junctin. Cell Calcium, 2009, 45, 29-37.	2.4	34
54	Location of Ryanodine and Dihydropyridine Receptors in Frog Myocardium. Biophysical Journal, 2003, 84, 1079-1092.	0.5	33

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55	Modulation of sarcoplasmic reticulum Ca²⁺release in skeletal muscle expressing ryanodine receptor impaired in regulation by calmodulin and S100A1. American Journal of Physiology - Cell Physiology, 2011, 300, C998-C1012.	4.6	33
56	Stabilization of the Skeletal Muscle Ryanodine Receptor Ion Channel-FKBP12 Complex by the 1,4-Benzothiazepine Derivative S107. PLoS ONE, 2013, 8, e54208.	2.5	33
57	Isolation and partial cloning of ryanodine-sensitive Ca2+release channel protein isoforms from human myometrial smooth muscle. FEBS Letters, 1995, 372, 6-12.	2.8	31
58	Evidence for a role of C-terminus in Ca2+inactivation of skeletal muscle Ca2+release channel (ryanodine receptor). FEBS Letters, 1999, 459, 154-158.	2.8	31
59	Cardiac hypertrophy associated with impaired regulation of cardiac ryanodine receptor by calmodulin and S100A1. American Journal of Physiology - Heart and Circulatory Physiology, 2013, 305, H86-H94.	3.2	30
60	Combining Fluorescence Detection and Mass Spectrometric Analysis for Comprehensive and Quantitative Analysis of Redox-Sensitive Cysteines in Native Membrane Proteins. Analytical Chemistry, 2006, 78, 7959-7966.	6.5	29
61	Selecting Ions by Size in a Calcium Channel: The Ryanodine Receptor Case Study. Biophysical Journal, 2014, 107, 2263-2273.	0.5	27
62	Ca2+-mediated activation of the skeletal-muscle ryanodine receptor ion channel. Journal of Biological Chemistry, 2018, 293, 19501-19509.	3.4	27
63	Two central core disease (CCD) deletions in the C-terminal region of RYR1 alter muscle excitation-contraction (EC) coupling by distinct mechanisms. Human Mutation, 2007, 28, 61-68.	2.5	26
64	A Structural Model of the Pore-Forming Region of the Skeletal Muscle Ryanodine Receptor (RyR1). PLoS Computational Biology, 2009, 5, e1000367.	3.2	25
65	Cardiac calcium signalling pathologies associated with defective calmodulin regulation of type 2 ryanodine receptor. Journal of Physiology, 2013, 591, 4287-4299.	2.9	24
66	Calcium Ion Permeation through the Calcium Release Channel (Ryanodine Receptor) of Cardiac Muscle. Journal of Physical Chemistry B, 2003, 107, 9139-9145.	2.6	22
67	Dyad content is reduced in cardiac myocytes of mice with impaired calmodulin regulation of RyR2. Journal of Muscle Research and Cell Motility, 2015, 36, 205-214.	2.0	22
68	A central core disease mutation in the Ca²⁺-binding site of skeletal muscle ryanodine receptor impairs single-channel regulation. American Journal of Physiology - Cell Physiology, 2019, 317, C358-C365.	4.6	22
69	Pore Dynamics and Conductance of RyR1 Transmembrane Domain. Biophysical Journal, 2014, 106, 2375-2384.	0.5	20
70	Dysfunctional ryanodine receptor and cardiac hypertrophy: role of signaling molecules. American Journal of Physiology - Heart and Circulatory Physiology, 2011, 300, H2187-H2195.	3.2	17
71	Channel Gating Dependence on Pore Lining Helix Glycine Residues in Skeletal Muscle Ryanodine Receptor. Journal of Biological Chemistry, 2015, 290, 17535-17545.	3.4	17
72	Different Regions in Skeletal and Cardiac Muscle Ryanodine Receptors Are Involved in Transducing the Functional Effects of Calmodulin. Journal of Biological Chemistry, 2004, 279, 36433-36439.	3.4	15

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73	Thermodynamics of calmodulin binding to cardiac and skeletal muscle ryanodine receptor ion channels. Proteins: Structure, Function and Bioinformatics, 2009, 74, 207-211.	2.6	15
74	Mass spectrometric analysis and mutagenesis predict involvement of multiple cysteines in redox regulation of the skeletal muscle ryanodine receptor ion channel complex. Research and Reports in Biology, 2011, 2011, 13.	0.2	14
75	Structural and functional interactions between the Ca2+-,ÂATP-, and caffeine-binding sites of skeletal muscle ryanodine receptor (RyR1). Journal of Biological Chemistry, 2021, 297, 101040.	3.4	13
76	Reconstitution of the solubilized cardiac sarcoplasmic reticulum potassium channel Identification of a putativeMrâˆ¼80 kDa polypeptide constituent. FEBS Letters, 1991, 291, 13-16.	2.8	12
77	Occurrence of atypical Ca2+ transients in triadin-binding deficient-RYR1 mutants. Biochemical and Biophysical Research Communications, 2006, 351, 909-914.	2.1	12
78	Does Ca 2+ /Calmodulin-Dependent Protein Kinase Î´ c Activate or Inhibit the Cardiac Ryanodine Receptor Ion Channel?. Circulation Research, 2007, 100, 293-295.	4.5	12
79	Ion-pulling simulations provide insights into the mechanisms of channel opening of the skeletal muscle ryanodine receptor. Journal of Biological Chemistry, 2017, 292, 12947-12958.	3.4	11
80	NADH, a New Player in the Cardiac Ryanodine Receptor?. Circulation Research, 2004, 94, 418-419.	4.5	10
81	G4941K substitution in the pore-lining S6 helix of the skeletal muscle ryanodine receptor increases RyR1 sensitivity to cytosolic and luminal Ca2+. Journal of Biological Chemistry, 2018, 293, 2015-2028.	3.4	10
82	Silencing genes of sarcoplasmic reticulum proteins clarifies their roles in excitationâ€“contraction coupling. Journal of Physiology, 2009, 587, 3089-3090.	2.9	9
83	Two EF-hand motifs in ryanodine receptor calcium release channels contribute to isoform-specific regulation by calmodulin. Cell Calcium, 2017, 66, 62-70.	2.4	7
84	Aldolase potentiates DIDS activation of the ryanodine receptor in rabbit skeletal sarcoplasmic reticulum. Biochemical Journal, 2006, 399, 325-333.	3.7	6
85	Regulation of ryanodine receptors by sphingosylphosphorylcholine: Involvement of both calmodulin-dependent and -independent mechanisms. Biochemical and Biophysical Research Communications, 2010, 401, 281-286.	2.1	6
86	Excitationâ€”Contraction Coupling in Skeletal Muscle. , 2012, , 783-800.		6
87	Single-channel properties of skeletal muscle ryanodine receptor pore Î”4923FF4924 in two brothers with a lethal form of fetal akinesia. Cell Calcium, 2020, 87, 102182.	2.4	6
88	Inhibition of CaMKII Does Not Attenuate Cardiac Hypertrophy in Mice with Dysfunctional Ryanodine Receptor. PLoS ONE, 2014, 9, e104338.	2.5	6
89	IL-6/STAT3 signaling in mice with dysfunctional type-2 ryanodine receptor. Jak-stat, 2015, 4, e1158379.	2.2	3
90	mTOR signaling in mice with dysfunctional cardiac ryanodine receptor ion channel. Journal of Receptor, Ligand and Channel Research, 2015, 8, 43.	0.7	3

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91	Mapping coâ€regulatory interactions among ligandâ€binding sites in ryanodine receptor 1. Proteins: Structure, Function and Bioinformatics, 2022, 90, 385-394.	2.6	2
92	Comparison of CHAPS-Induced Current Fluctuations with Sarcoplasmic Reticulum Ca²⁺Release Channel Activity. Membrane Biochemistry, 1990, 9, 171-178.	0.6	1
93	Ca2+ Release from Sarcoplasmic Reticulum in Muscle. , 2001, , 927-940.		1
94	STAT3 activation in cardiac hypertrophy induced by ryanodine receptor 2 mutation. FASEB Journal, 2013, 27, 386.5.	0.5	1
95	Membrane Transport | Ryanodine Receptor Calcium Ion Channels. , 2021, , 942-948.		0
96	Calcium Release from Cardiac Sarcoplasmic Reticulum. , 2001, , 461-470.		0
97	Sarcoplasmic Reticulum Ion Channels. , 2004, , 51-58.		0
98	Ca²⁺ Release Channel/Ryanodine Receptor - L-Type Ca²⁺ Channel/Dihydropyridine Receptor Interactions in Skeletal Muscle. , 1998, , 161-180.		0
99	Ca2+ Release from Sarcoplasmic Reticulum in Muscle. , 2001, , 927-940.		0