Ralph KnÃ¶ll

List of Publications by Year
in descending order

89 papers	3,884 citations	159585 30 h-index	128289 60 g-index
94 all docs	94 docs citations	94 times ranked	5225 citing authors

#	Article	IF	Citations
1	The Cardiac Mechanical Stretch Sensor Machinery Involves a Z Disc Complex that Is Defective in a Subset of Human Dilated Cardiomyopathy. Cell, 2002, 111, 943-955.	28.9	712
2	Tcap gene mutations in hypertrophic cardiomyopathy and dilated cardiomyopathy. Journal of the American College of Cardiology, 2004, 44, 2192-2201.	2.8	271
3	Ventricular Assist Device Implantation Corrects Myocardial Lipotoxicity, Reverses Insulin Resistance, and Normalizes Cardiac Metabolism in Patients With Advanced Heart Failure. Circulation, 2012, 125, 2844-2853.	1.6	232
4	Laminin-Î±4 and Integrin-Linked Kinase Mutations Cause Human Cardiomyopathy Via Simultaneous Defects in Cardiomyocytes and Endothelial Cells. Circulation, 2007, 116, 515-525.	1.6	206
5	Anisotropic stretch-induced hypertrophy in neonatal ventricular myocytes micropatterned on deformable elastomers. Biotechnology and Bioengineering, 2003, 81, 578-587.	3.3	183
6	Asymmetric septal hypertrophy in heterozygous cMyBP-C null mice. Cardiovascular Research, 2004, 63, 293-304.	3.8	129
7	The Sarcomeric Z-Disc and Z-Discopathies. Journal of Biomedicine and Biotechnology, 2011, 2011, 1-12.	3.0	100
8	Zebrafish integrin-linked kinase is required in skeletal muscles for strengthening the integrinâ€“ECM adhesion complex. Developmental Biology, 2008, 318, 92-101.	2.0	95
9	A Common MLP (Muscle LIM Protein) Variant Is Associated With Cardiomyopathy. Circulation Research, 2010, 106, 695-704.	4.5	90
10	Targeting myocardial remodelling to develop novel therapies for heart failure. European Journal of Heart Failure, 2014, 16, 494-508.	7.1	90
11	Cardiac mechanotransduction and implications for heart disease. Journal of Molecular Medicine, 2003, 81, 750-756.	3.9	86
12	Adipose Tissue Inflammation and Adiponectin Resistance in Patients With Advanced Heart Failure. Circulation: Heart Failure, 2012, 5, 340-348.	3.9	86
13	Telethonin Deficiency Is Associated With Maladaptation to Biomechanical Stress in the Mammalian Heart. Circulation Research, 2011, 109, 758-769.	4.5	78
14	OBSCN Mutations Associated with Dilated Cardiomyopathy and Haploinsufficiency. PLoS ONE, 2015, 10, e0138568.	2.5	70
15	Expression of heat shock proteins in the normal and stunned porcine myocardium. Cardiovascular Research, 1993, 27, 1421-1429.	3.8	63
16	MLP (muscle LIM protein) as a stress sensor in the heart. Pflugers Archiv European Journal of Physiology, 2011, 462, 135-142.	2.8	59
17	In vivo genome and base editing of a human PCSK9 knock-in hypercholesterolemic mouse model. BMC Biology, 2019, 17, 4.	3.8	59
18	Truncated titin proteins and titin haploinsufficiency are targets for functional recovery in human cardiomyopathy due to TTN mutations. Science Translational Medicine, 2021, 13, eabd3079.	12.4	59

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19	Relevance of Brain Natriuretic Peptide in Preload-Dependent Regulation of Cardiac Sarcoplasmic Reticulum Ca 2+ ATPase Expression. Circulation, 2006, 113, 2724-2732.	1.6	57
20	Genetic epidemiology of titin-truncating variants in the etiology of dilated cardiomyopathy. Biophysical Reviews, 2017, 9, 207-223.	3.2	55
21	Towards a reâ€definition of â€˜cardiac hypertrophyâ€™ through a rational characterization of left ventricular phenotypes: a position paper of the Working Group â€˜Myocardial Functionâ€™ of the ESC. European Journal of Heart Failure, 2011, 13, 811-819.	7.1	53
22	A critical role for Telethonin in regulating t-tubule structure and function in the mammalian heart. Human Molecular Genetics, 2013, 22, 372-383.	2.9	50
23	Enhanced gene expression of calcium regulatory proteins in stunned porcine myocardium. Cardiovascular Research, 1993, 27, 2037-2043.	3.8	48
24	Melusin protects from cardiac rupture and improves functional remodelling after myocardial infarction. Cardiovascular Research, 2014, 101, 97-107.	3.8	46
25	Human Mutation in the Anti-apoptotic Heat Shock Protein 20 Abrogates Its Cardioprotective Effects. Journal of Biological Chemistry, 2008, 283, 33465-33471.	3.4	45
26	Changes in gene expression following short coronary occlusions studied in porcine hearts with run-on assays. Cardiovascular Research, 1994, 28, 1062-1069.	3.8	42
27	Abnormal contractility in human heart myofibrils from patients with dilated cardiomyopathy due to mutations in TTN and contractile protein genes. Scientific Reports, 2017, 7, 14829.	3.3	40
28	The Sydney Heart Bank: improving translational research while eliminating or reducing the use of animal models of human heart disease. Biophysical Reviews, 2017, 9, 431-441.	3.2	39
29	Reversal of Calcium Cycling Defects in Advanced Heart Failure. Journal of the American College of Cardiology, 2006, 48, A15-A23.	2.8	33
30	Myosin binding protein C: implications for signal-transduction. Journal of Muscle Research and Cell Motility, 2012, 33, 31-42.	2.0	32
31	Mechano-signaling in heart failure. Pflugers Archiv European Journal of Physiology, 2014, 466, 1093-1099.	2.8	31
32	Association of Cardiomyopathy With MYBPC3 D389V and MYBPC3^{Î”25bp}Intronic Deletion in South Asian Descendants. JAMA Cardiology, 2018, 3, 481.	6.1	31
33	Assessment of multiple displacement amplification for polymorphism discovery and haplotype determination at a highly polymorphic locus,MC1R. Human Mutation, 2005, 26, 145-152.	2.5	29
34	Inhibiting cardiac myeloperoxidase alleviates the relaxation defect in hypertrophic cardiomyocytes. Cardiovascular Research, 2022, 118, 517-530.	3.8	27
35	Myopalladin promotes muscle growth through modulation of the serum response factor pathway. Journal of Cachexia, Sarcopenia and Muscle, 2020, 11, 169-194.	7.3	26
36	Elevated Afterload, Neuroendocrine Stimulation, and Human Heart Failure Increase BNP Levels and Inhibit Preload-Dependent SERCA Upregulation. Circulation: Heart Failure, 2008, 1, 265-271.	3.9	24

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37	Phospholamban antisense oligonucleotides improve cardiac function in murine cardiomyopathy. Nature Communications, 2021, 12, 5180.	12.8	24
38	Molecular disturbance underlies to arrhythmogenic cardiomyopathy induced by transgene content, age and exercise in a truncated PKP2 mouse model. Human Molecular Genetics, 2016, 25, 3676-3688.	2.9	23
39	Role of Adenosine in the Hypoxic Induction of Vascular Endothelial Growth Factor in Porcine Brain Derived Microvascular Endothelial Cells. Endothelium: Journal of Endothelial Cell Research, 1997, 5, 155-165.	1.7	22
40	Association of intronic DNA methylation and hydroxymethylation alterations in the epigenetic etiology of dilated cardiomyopathy. American Journal of Physiology - Heart and Circulatory Physiology, 2019, 317, H168-H180.	3.2	22
41	Titin kinase ubiquitination aligns autophagy receptors with mechanical signals in the sarcomere. EMBO Reports, 2021, 22, e48018.	4.5	22
42	Targeted therapies in genetic dilated and hypertrophic cardiomyopathies: from molecular mechanisms to therapeutic targets. A position paper from the Heart Failure Association (HFA) and the Working Group on Myocardial Function of the European Society of Cardiology (ESC). European Journal of Heart Failure, 2022, 24, 406-420.	7.1	22
43	Genetics of Mechanosensation in the Heart. Journal of Cardiovascular Translational Research, 2011, 4, 238-244.	2.4	21
44	Cell shape: effects on gene expression and signaling. Biophysical Reviews, 2020, 12, 895-901.	3.2	21
45	Titin splicing regulates cardiotoxicity associated with calpain 3 gene therapy for limb-girdle muscular dystrophy type 2A. Science Translational Medicine, 2019, 11, .	12.4	19
46	Desmin, desminopathy and the complexity of genetics. Journal of Molecular and Cellular Cardiology, 2016, 92, 93-95.	1.9	18
47	Expression and Immunohistochemical Localization of Heat-Shock Protein-70 in Preconditioned Porcine Myocardium. Annals of the New York Academy of Sciences, 1994, 723, 491-494.	3.8	16
48	Muscle Research and Gene Ontology: New standards for improved data integration. BMC Medical Genomics, 2009, 2, 6.	1.5	16
49	MLP: A stress sensor goes nuclear. Journal of Molecular and Cellular Cardiology, 2009, 47, 423-425.	1.9	16
50	Z-disc Transcriptional Coupling, Sarcomeroptosis and Mechanopoptosis. Cell Biochemistry and Biophysics, 2013, 66, 65-71.	1.8	15
51	The Combined Human Genotype of Truncating TTN and RBM20 Mutations Is Associated with Severe and Early Onset of Dilated Cardiomyopathy. Genes, 2021, 12, 883.	2.4	15
52	Cell shape determines gene expression: cardiomyocyte morphotypic transcriptomes. Basic Research in Cardiology, 2020, 115, 7.	5.9	14
53	A role for membrane shape and information processing in cardiac physiology. Pflugers Archiv European Journal of Physiology, 2015, 467, 167-173.	2.8	13
54	Recent Advances in the Molecular Genetics of Familial Hypertrophic Cardiomyopathy in South Asian Descendants. Frontiers in Physiology, 2016, 7, 499.	2.8	13

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55	Melusin gene (ITGB1BP2) nucleotide variations study in hypertensive and cardiopathic patients. BMC Medical Genetics, 2009, 10, 140.	2.1	12
56	ZBTB17 (MIZ1) Is Important for the Cardiac Stress Response and a Novel Candidate Gene for Cardiomyopathy and Heart Failure. Circulation: Cardiovascular Genetics, 2015, 8, 643-652.	5.1	12
57	The MLP Family of Cytoskeletal Z Disc Proteins and Dilated Cardiomyopathy: A Stress Pathway Model for Heart Failure Progression. Cold Spring Harbor Symposia on Quantitative Biology, 2002, 67, 399-408.	1.1	12
58	Ageâ€dependent changes in contractile function and passive elastic properties of myocardium from mice lacking muscle LIM protein (MLP). European Journal of Heart Failure, 2012, 14, 430-437.	7.1	11
59	<scp>ESC</scp> Working Group on Myocardial Function Position Paper: how to study the right ventricle in experimental models. European Journal of Heart Failure, 2014, 16, 509-518.	7.1	11
60	Patterns of Myocardial Gene Expression after Cycles of Brief Coronary Occlusion and Reperfusion. Annals of the New York Academy of Sciences, 1994, 723, 284-291.	3.8	10
61	Characterization of Differentially Expressed Genes following Brief Cardiac Ischemia. Biochemical and Biophysical Research Communications, 1996, 221, 402-407.	2.1	10
62	Z-line proteins: implications for additional functions. European Heart Journal Supplements, 2002, 4, I13-I17.	0.1	10
63	Disease-Modifying Mutations in Familial Hypertrophic Cardiomyopathy. Circulation, 2008, 117, 1775-1777.	1.6	10
64	Epigenetics and Heart Failure. International Journal of Molecular Sciences, 2020, 21, 9010.	4.1	10
65	Control of p21Cip by BRCA1-associated protein is critical for cardiomyocyte cell cycle progression and survival. Cardiovascular Research, 2020, 116, 592-604.	3.8	9
66	Distinct Myocardial Transcriptomic Profiles of Cardiomyopathies Stratified by the Mutant Genes. Genes, 2020, 11, 1430.	2.4	9
67	Personalized nutrition: an integrative process to success. Genes and Nutrition, 2007, 2, 23-25.	2.5	8
68	On Mechanosensation, Acto/Myosin Interaction, and Hypertrophy. Trends in Cardiovascular Medicine, 2012, 22, 17-22.	4.9	8
69	Nitro-Oleic Acid (NO2-OA) Improves Systolic Function in Dilated Cardiomyopathy by Attenuating Myocardial Fibrosis. International Journal of Molecular Sciences, 2021, 22, 9052.	4.1	6
70	Muscle LIM protein in heart failure. Experimental and Clinical Cardiology, 2002, 7, 104-5.	1.3	6
71	Myosin binding protein-C and hypertrophic cardiomyopathy: role of altered C10 domain. Cardiovascular Research, 2019, 115, 1943-1945.	3.8	5
72	Antisense Therapy Attenuates Phospholamban p.(Arg14del) Cardiomyopathy in Mice and Reverses Protein Aggregation. International Journal of Molecular Sciences, 2022, 23, 2427.	4.1	5

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73	An Approach to Study Shape-Dependent Transcriptomics at a Single Cell Level. Journal of Visualized Experiments, 2020, , .	0.3	3
74	Response to Gehmlich et al. Letter to the Editor of the Journal of Molecular and Cellular Cardiology Regarding â€œMLP: A Stress Sensor Goes Nuclearâ€• Journal of Molecular and Cellular Cardiology, 2010, 48, 426-427.	1.9	2
75	An inverse problem approach to identify the internal force of a mechanosensation process in a cardiac myocyte. Informatics in Medicine Unlocked, 2017, 6, 36-42.	3.4	2
76	The Degree of Cardiac Remodelling before Overload Relief Triggers Different Transcriptome and miRome Signatures during Reverse Remodelling (RR)â€"Molecular Signature Differ with the Extent of RR. International Journal of Molecular Sciences, 2020, 21, 9687.	4.1	1
77	Titin M-line insertion sequence 7 is required for proper cardiac function in mice. Journal of Cell Science, 2021, 134, .	2.0	1
78	Abstract 772: The Highly Prevalent 25bp Intronic Deletion in MYBPC3 is Benign Under Baseline Conditions. Circulation Research, 2019, 125, .	4.5	1
79	Targeted inactivation of the murine cardiac myosin-binding protein C gene leads to hypertrophic cardiomyopathy. Journal of Molecular and Cellular Cardiology, 2002, 34, A15.	1.9	0
80	Mechanisms of dilated cardiomyopathies. Drug Discovery Today Disease Mechanisms, 2004, 1, 31-36.	0.8	0
81	Corrigendum to â€œMLP: A stress sensor goes nuclearâ€•[J. Mol. Cell. Cardiol. 47 (2009) 423â€“425]. Journal of Molecular and Cellular Cardiology, 2010, 48, 807.	1.9	0
82	Response to Letter Regarding Article â€œAdipose Tissue Inflammation and Adiponectin Resistance in Patients With Advanced Heart Failure: Correction After Ventricular Assist Device Implantationâ€• Circulation: Heart Failure, 2012, 5, .	3.9	0
83	Cardiomyopathy - Associated W4R Variant of Muscle LIM Protein affects Skeletal Muscle Passive Mechanics. Biophysical Journal, 2012, 102, 361a.	0.5	0
84	Renal Denervation and Treatment of Hypertension. High Blood Pressure and Cardiovascular Prevention, 2012, 19, 5-9.	2.2	0
85	Obscurin Mutations Cause Haploinsufficiency and are Common in Patients with Familial Dilated Cardiomyopathy (FDCM). Biophysical Journal, 2015, 108, 292a.	0.5	0
86	P500Cell shape determines gene expression: cardiomyocyte morphotypic transcriptomes. Cardiovascular Research, 2018, 114, S121-S121.	3.8	0
87	Altered Gene Transcription Following Brief Episodes of Coronary Occlusions. Advances in Experimental Medicine and Biology, 1995, 382, 175-183.	1.6	0
88	Abstract 373: The Molecular Consequence of a Polymorphic 25bp Deletion in Intron 32 of MYBPC3, Specific to South Asians. Circulation Research, 2018, 123, .	4.5	0
89	Mouse Models to Study Inherited Cardiomyopathy. Cardiac and Vascular Biology, 2019, , 289-312.	0.2	0