Jeroen Bakkers

List of Publications by Year
in descending order

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111 papers	7,621 citations	50276 46 h-index	58581 82 g-index
131 all docs	131 docs citations	131 times ranked	11358 citing authors

#	Article	IF	Citations
1	Zebrafish as a model to study cardiac development and human cardiac disease. Cardiovascular Research, 2011, 91, 279-288.	3.8	518
2	Galectin-1 is essential in tumor angiogenesis and is a target for antiangiogenesis therapy. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15975-15980.	7.1	424
3	Essential role of BCL9-2 in the switch between Â-catenin's adhesive and transcriptional functions. Genes and Development, 2004, 18, 2225-2230.	5.9	294
4	Genome-wide RNA Tomography in the Zebrafish Embryo. Cell, 2014, 159, 662-675.	28.9	248
5	MUSCLEMOTION. Circulation Research, 2018, 122, e5-e16.	4.5	235
6	Distinct phases of cardiomyocyte differentiation regulate growth of the zebrafish heart. Development (Cambridge), 2009, 136, 1633-1641.	2.5	234
7	Zebrafish Î”Np63 Is a Direct Target of Bmp Signaling and Encodes a Transcriptional Repressor Blocking Neural Specification in the Ventral Ectoderm. Developmental Cell, 2002, 2, 617-627.	7.0	217
8	Metastatic behaviour of primary human tumours in a zebrafish xenotransplantation model. BMC Cancer, 2009, 9, 128.	2.6	209
9	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
10	The ankyrin repeat protein Diversin recruits Casein kinase Iepsilon to the beta -catenin degradation complex and acts in both canonical Wnt and Wnt/JNK signaling. Genes and Development, 2002, 16, 2073-2084.	5.9	181
11	Ubiad1 Is an Antioxidant Enzyme that Regulates eNOS Activity by CoQ10 Synthesis. Cell, 2013, 152, 504-518.	28.9	176
12	Spatially Resolved Genome-wide Transcriptional Profiling Identifies BMP Signaling as Essential Regulator of Zebrafish Cardiomyocyte Regeneration. Developmental Cell, 2016, 36, 36-49.	7.0	176
13	Genetic variation in T-box binding element functionally affects SCN5A/SCN10A enhancer. Journal of Clinical Investigation, 2012, 122, 2519-2530.	8.2	167
14	Single-cell analysis uncovers that metabolic reprogramming by ErbB2 signaling is essential for cardiomyocyte proliferation in the regenerating heart. ELife, 2019, 8, .	6.0	162
15	Identification and Functional Characterization of Cardiac Pacemaker Cells in Zebrafish. PLoS ONE, 2012, 7, e47644.	2.5	154
16	Zebrafish Bmp4 regulates leftâ€“right asymmetry at two distinct developmental time points. Developmental Biology, 2007, 305, 577-588.	2.0	147
17	Early Endocardial Morphogenesis Requires Scl/Tal1. PLoS Genetics, 2007, 3, e140.	3.5	144
18	The Bmp Gradient of the Zebrafish GastrulaÂGuidesÂMigrating Lateral CellsÂbyÂRegulating Cell-Cell Adhesion. Current Biology, 2007, 17, 475-487.	3.9	131

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19	Has2 is required upstream of Rac1 to govern dorsal migration of lateral cells during zebrafish gastrulation. Development (Cambridge), 2004, 131, 525-537.	2.5	127
20	Macrophage development from HSCs requires PU.1-coordinated microRNA expression. Blood, 2011, 118, 2275-2284.	1.4	113
21	Macrophages provide a transient muscle stem cell niche via NAMPT secretion. Nature, 2021, 591, 281-287.	27.8	111
22	Rotation and Asymmetric Development of the Zebrafish Heart Requires Directed Migration of Cardiac Progenitor Cells. Developmental Cell, 2008, 14, 287-297.	7.0	109
23	MicroRNA-23 Restricts Cardiac Valve Formation by Inhibiting Has2 and Extracellular Hyaluronic Acid Production. Circulation Research, 2011, 109, 649-657.	4.5	108
24	Morpholino phenocopies ofthe swirl,snailhouse,somitabun,minifin,silberblick, andpipetail mutations. Genesis, 2001, 30, 190-194.	1.6	102
25	A Nodal-independent and tissue-intrinsic mechanism controls heart-looping chirality. Nature Communications, 2013, 4, 2754.	12.8	102
26	Mutations in SGOL1 cause a novel cohesinopathy affecting heart and gut rhythm. Nature Genetics, 2014, 46, 1245-1249.	21.4	98
27	Dominant-Negative ALK2 Allele Associates With Congenital Heart Defects. Circulation, 2009, 119, 3062-3069.	1.6	97
28	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
29	Bmp Signaling Exerts Opposite Effects on Cardiac Differentiation. Circulation Research, 2012, 110, 578-587.	4.5	83
30	An important developmental role for oligosaccharides during early embryogenesis of cyprinid fish. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 7982-7986.	7.1	77
31	Conserved NPPB + Border Zone Switches From MEF2- to AP-1â€“Driven Gene Program. Circulation, 2019, 140, 864-879.	1.6	70
32	Destabilization of ΔNp63α by Nedd4-Mediated Ubiquitination Ubc9-Mediated Sumoylation, and Its Implications on Dorsoventral Patterning of the Zebrafish Embryo. Cell Cycle, 2005, 4, 790-800.	2.6	69
33	Effective CRISPR/Cas9-based nucleotide editing in zebrafish to model human genetic cardiovascular disorders. DMM Disease Models and Mechanisms, 2018, 11, .	2.4	69
34	Tmem2 Regulates Embryonic Vegf Signaling by Controlling Hyaluronic Acid Turnover. Developmental Cell, 2017, 40, 123-136.	7.0	63
35	Identification of human D lactate dehydrogenase deficiency. Nature Communications, 2019, 10, 1477.	12.8	62
36	Distinct functions for ERK1 and ERK2 in cell migration processes during zebrafish gastrulation. Developmental Biology, 2008, 319, 370-383.	2.0	61

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37	Identification and Regulation of a Molecular Module for Bleb-Based Cell Motility. Developmental Cell, 2012, 23, 210-218.	7.0	61
38	Recurrent Mutations in the Basic Domain of TWIST2 Cause Ablepharon Macrostomia and Barber-Say Syndromes. American Journal of Human Genetics, 2015, 97, 99-110.	6.2	61
39	Chitin Oligosaccharide Synthesis by Rhizobia and Zebrafish Embryos Starts by Glycosyl Transfer to O4 of the Reducing-Terminal Residueâ€. Biochemistry, 1999, 38, 4045-4052.	2.5	60
40	Wnt signaling regulates atrioventricular canal formation upstream of BMP and Tbx2. Birth Defects Research Part A: Clinical and Molecular Teratology, 2011, 91, 435-440.	1.6	59
41	GNB5 Mutations Cause an Autosomal-Recessive Multisystem Syndrome with Sinus Bradycardia and Cognitive Disability. American Journal of Human Genetics, 2016, 99, 704-710.	6.2	58
42	Shaping the zebrafish heart: From leftâ€“right axis specification to epithelial tissue morphogenesis. Developmental Biology, 2009, 330, 213-220.	2.0	55
43	Two novel type II receptors mediate BMP signalling and are required to establish leftâ€“right asymmetry in zebrafish. Developmental Biology, 2008, 315, 55-71.	2.0	54
44	CHAP is a newly identified Z-disc protein essential for heart and skeletal muscle function. Journal of Cell Science, 2010, 123, 1141-1150.	2.0	53
45	Fgf signaling induces posterior neuroectoderm independently of Bmp signaling inhibition. Developmental Dynamics, 2004, 231, 750-757.	1.8	49
46	Zebrafish cypher is important for somite formation and heart development. Developmental Biology, 2006, 299, 356-372.	2.0	48
47	Transmembrane protein 2 (Tmem2) is required to regionally restrict atrioventricular canal boundary and endocardial cushion development. Development (Cambridge), 2011, 138, 4193-4198.	2.5	48
48	Noonan and LEOPARD syndrome Shp2 variants induce heart displacement defects in zebrafish. Development (Cambridge), 2014, 141, 1961-1970.	2.5	47
49	Tomo-seq. Methods in Cell Biology, 2016, 135, 299-307.	1.1	46
50	Genes in congenital heart disease: atrioventricular valve formation. Basic Research in Cardiology, 2008, 103, 216-227.	5.9	45
51	Bmp and Nodal Independently Regulate lefty1 Expression to Maintain Unilateral Nodal Activity during Left-Right Axis Specification in Zebrafish. PLoS Genetics, 2011, 7, e1002289.	3.5	45
52	Animal and in silico models for the study of sarcomeric cardiomyopathies. Cardiovascular Research, 2015, 105, 439-448.	3.8	45
53	Glypican4 promotes cardiac specification and differentiation by attenuating canonical Wnt and Bmp signaling. Development (Cambridge), 2015, 142, 1767-1776.	2.5	42
54	Developmental Alterations in Heart Biomechanics and Skeletal Muscle Function in Desmin Mutants Suggest an Early Pathological Root for Desminopathies. Cell Reports, 2015, 11, 1564-1576.	6.4	42

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55	Spatially resolved RNA-sequencing of the embryonic heart identifies a role for Wnt/Î²-catenin signaling in autonomic control of heart rate. ELife, 2018, 7, .	6.0	41
56	Optogenetic sensors in the zebrafish heart: a novel in vivo electrophysiological tool to study cardiac arrhythmogenesis. Theranostics, 2018, 8, 4750-4764.	10.0	38
57	HeterozygousKIDINS220/ARMSnonsense variants cause spastic paraplegia, intellectual disability, nystagmus, and obesity. Human Molecular Genetics, 2016, 25, 2158-2167.	2.9	37
58	Normal formation of a vertebrate body plan and loss of tissue maintenance in the absence of ezh2. Scientific Reports, 2016, 6, 24658.	3.3	36
59	Germline mutations affecting the histone H4 core cause a developmental syndrome by altering DNA damage response and cell cycle control. Nature Genetics, 2017, 49, 1642-1646.	21.4	35
60	Variants in members of the cadherinâ€“catenin complex, CDH1 and CTNND1, cause blepharocheilodontic syndrome. European Journal of Human Genetics, 2018, 26, 210-219.	2.8	34
61	ALK2 mutation in a patient with Down's syndrome and a congenital heart defect. European Journal of Human Genetics, 2011, 19, 389-393.	2.8	33
62	On the Evolution of the Cardiac Pacemaker. Journal of Cardiovascular Development and Disease, 2017, 4, 4.	1.6	33
63	GLUT12 deficiency during early development results in heart failure and a diabetic phenotype in zebrafish. Journal of Endocrinology, 2015, 224, 1-15.	2.6	32
64	ABCC9-related Intellectual disability Myopathy Syndrome is a KATP channelopathy with loss-of-function mutations in ABCC9. Nature Communications, 2019, 10, 4457.	12.8	31
65	Hyaluronan: A critical regulator of endothelial-to-mesenchymal transition during cardiac valve formation. Trends in Cardiovascular Medicine, 2013, 23, 135-142.	4.9	30
66	Animal models and animal-free innovations for cardiovascular research: current status and routes to be explored. Consensus document of the ESC Working Group on Myocardial Function and the ESC Working Group on Cellular Biology of the Heart. Cardiovascular Research, 2022, 118, 3016-3051.	3.8	30
67	Î±E-catenin-dependent mechanotransduction is essential for proper convergent extension in zebrafish. Biology Open, 2016, 5, 1461-1472.	1.2	28
68	Single-cell profiling of transcriptome and histone modifications with EpiDamID. Molecular Cell, 2022, 82, 1956-1970.e14.	9.7	28
69	A Zebrafish Loss-of-Function Model for Human CFAP53 Mutations Reveals Its Specific Role in Laterality Organ Function. Human Mutation, 2016, 37, 194-200.	2.5	25
70	Prrx1b restricts fibrosis and promotes Nrg1-dependent cardiomyocyte proliferation during zebrafish heart regeneration. Development (Cambridge), 2021, 148, .	2.5	25
71	GLS hyperactivity causes glutamate excess, infantile cataract and profound developmental delay. Human Molecular Genetics, 2019, 28, 96-104.	2.9	23
72	Asymmetric Hapln1a drives regionalized cardiac ECM expansion and promotes heart morphogenesis in zebrafish development. Cardiovascular Research, 2022, 118, 226-240.	3.8	23

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73	Sox4 mediates Tbx3 transcriptional regulation of the gap junction protein Cx43. Cellular and Molecular Life Sciences, 2011, 68, 3949-3961.	5.4	22
74	Revealing details: whole mount microRNA in situ hybridization protocol for zebrafish embryos and adult tissues. Biology Open, 2012, 1, 566-569.	1.2	22
75	Genome-Wide Analysis Identifies an Essential Human TBX3 Pacemaker Enhancer. Circulation Research, 2020, 127, 1522-1535.	4.5	22
76	Genetic variation in GNB5 causes bradycardia by increasing IK,ACh augmenting cholinergic response. DMM Disease Models and Mechanisms, 2019, 12, .	2.4	19
77	T-box transcription factor 3 governs a transcriptional program for the function of the mouse atrioventricular conduction system. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18617-18626.	7.1	19
78	Cardiac regenerative capacity: an evolutionary afterthought?. Cellular and Molecular Life Sciences, 2021, 78, 5107-5122.	5.4	19
79	UDP-glucose Dehydrogenase Polymorphisms from Patients with Congenital Heart Valve Defects Disrupt Enzyme Stability and Quaternary Assembly. Journal of Biological Chemistry, 2012, 287, 32708-32716.	3.4	18
80	Loss of the Polycomb group protein Rnf2 results in derepression of tbx-transcription factors and defects in embryonic and cardiac development. Scientific Reports, 2019, 9, 4327.	3.3	18
81	Istaroxime treatment ameliorates calcium dysregulation in a zebrafish model of phospholamban R14del cardiomyopathy. Nature Communications, 2021, 12, 7151.	12.8	18
82	Nodal Signaling Range Is Regulated by Proprotein Convertase-Mediated Maturation. Developmental Cell, 2015, 32, 631-639.	7.0	17
83	Pyridox(am)ine 5â€²-phosphate oxidase (PNPO) deficiency in zebrafish results in fatal seizures and metabolic aberrations. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2020, 1866, 165607.	3.8	17
84	Intracranial Aneurysmâ€“Associated Single-Nucleotide Polymorphisms Alter Regulatory DNA in the Human Circle of Willis. Stroke, 2018, 49, 447-453.	2.0	16
85	Rare novel variants in the ZIC3 gene cause X-linked heterotaxy. European Journal of Human Genetics, 2016, 24, 1783-1791.	2.8	15
86	Identification and Characterization of a Transcribed Distal Enhancer Involved in Cardiac Kcnh2 Regulation. Cell Reports, 2019, 28, 2704-2714.e5.	6.4	15
87	Zebrafish prrx1a mutants have normal hearts. Nature, 2020, 585, E14-E16.	27.8	15
88	Function of chitin oligosaccharides in plant and animal development. , 1999, 87, 71-83.		15
89	Common Genetic Variants Contribute to Risk of Transposition of the Great Arteries. Circulation Research, 2022, 130, 166-180.	4.5	15
90	Genetics of Congenital Heart Defects: A Candidate Gene Approach. Trends in Cardiovascular Medicine, 2010, 20, 124-128.	4.9	13

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91	Chromatin Conformation Links Putative Enhancers in Intracranial Aneurysmâ€“Associated Regions to Potential Candidate Genes. Journal of the American Heart Association, 2019, 8, e011201.	3.7	13
92	Recurrent de novo missense variants across multiple histone H4 genes underlie a neurodevelopmental syndrome. American Journal of Human Genetics, 2022, 109, 750-758.	6.2	13
93	Tmem2 Regulates Embryonic Vegf Signaling by Controlling Hyaluronic Acid Turnover. Developmental Cell, 2017, 40, 421.	7.0	12
94	The zebrafishgrimemutant uncovers an evolutionarily conserved role for Tmem161b in the control of cardiac rhythm. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	12
95	Molecular Signature of CAID Syndrome: Noncanonical Roles of SGO1 in Regulation of TGF-Î² Signaling and Epigenomics. Cellular and Molecular Gastroenterology and Hepatology, 2019, 7, 411-431.	4.5	11
96	A de novo variant in the human HIST1H4J gene causes a syndrome analogous to the HIST1H4C-associated neurodevelopmental disorder. European Journal of Human Genetics, 2020, 28, 674-678.	2.8	11
97	Is zebrafish heart regeneration â€œcompleteâ€? Lineage-restricted cardiomyocytes proliferate to pre-injury numbers but some fail to differentiate in fibrotic hearts. Developmental Biology, 2021, 471, 106-118.	2.0	11
98	Twisting of the zebrafish heart tube during cardiac looping is a tbx5-dependent and tissue-intrinsic process. ELife, 2021, 10, .	6.0	10
99	Loss of sdhb in zebrafish larvae recapitulates human paraganglioma characteristics. Endocrine-Related Cancer, 2021, 28, 65-77.	3.1	9
100	Inflammatory response in hematopoietic stem and progenitor cells triggered by activating SHP2 mutations evokes blood defects. ELife, 2022, 11, .	6.0	9
101	Notch and Bmp signaling pathways act coordinately during the formation of the proepicardium. Developmental Dynamics, 2020, 249, 1455-1469.	1.8	8
102	A Heterozygous Mutation in Cardiac Troponin T Promotes Ca2+ Dysregulation and Adult Cardiomyopathy in Zebrafish. Journal of Cardiovascular Development and Disease, 2021, 8, 46.	1.6	8
103	Expression of Rhizobium Chitin Oligosaccharide Fucosyltransferase in Zebrafish Embryos Disrupts Normal Developmenta,. Annals of the New York Academy of Sciences, 1998, 842, 49-54.	3.8	6
104	Assessment of the Most Optimal Control Tissue for Intracranial Aneurysm Gene Expression Studies. Stroke, 2019, 50, 2933-2936.	2.0	6
105	On the robustness of germ cell migration and microRNA-mediated regulation of chemokine signaling. Nature Genetics, 2013, 45, 1264-1265.	21.4	5
106	Live imaging of adult zebrafish cardiomyocyte proliferation ex vivo. Development (Cambridge), 2021, 148, .	2.5	5
107	Shaping up with morphogen gradients. Nature Cell Biology, 2018, 20, 998-999.	10.3	3
108	Epigenetic State Changes Underlie Metabolic Switch in Mouse Post-Infarction Border Zone Cardiomyocytes. Journal of Cardiovascular Development and Disease, 2021, 8, 134.	1.6	3

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109	The zebrafish cohesin protein Sgo1 is required for cardiac function and eye development. Developmental Dynamics, 2022, , .	1.8	3
110	Inherited Ventricular Arrhythmia in Zebrafish: Genetic Models and Phenotyping Tools. Reviews of Physiology, Biochemistry and Pharmacology, 2021, , 1.	1.6	1
111	Twists and turns. ELife, 2017, 6, .	6.0	0