Calum A Macrae

List of Publications by Year
in descending order

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132 papers	7,429 citations	81900 39 h-index	58581 82 g-index
142 all docs	142 docs citations	142 times ranked	11327 citing authors

#	Article	IF	Citations
1	Zebrafish as tools for drug discovery. Nature Reviews Drug Discovery, 2015, 14, 721-731.	46.4	888
2	Mutations in the cardiac myosin binding proteinâ€“C gene on chromosome 11 cause familial hypertrophic cardiomyopathy. Nature Genetics, 1995, 11, 434-437.	21.4	540
3	Drugs That Induce Repolarization Abnormalities Cause Bradycardia in Zebrafish. Circulation, 2003, 107, 1355-1358.	1.6	418
4	Chemical suppression of a genetic mutation in a zebrafish model of aortic coarctation. Nature Biotechnology, 2004, 22, 595-599.	17.5	368
5	High-throughput assay for small molecules that modulate zebrafish embryonic heart rate. Nature Chemical Biology, 2005, 1, 263-264.	8.0	320
6	In vivo recording of adult zebrafish electrocardiogram and assessment of drug-induced QT prolongation. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 291, H269-H273.	3.2	222
7	Identification of a New Modulator of the Intercalated Disc in a Zebrafish Model of Arrhythmogenic Cardiomyopathy. Science Translational Medicine, 2014, 6, 240ra74.	12.4	222
8	A gene defect that causes conduction system disease and dilated cardiomyopathy maps to chromosome 1p1â€“1q1. Nature Genetics, 1994, 7, 546-551.	21.4	187
9	Fine Mapping of the 1p36 Deletion Syndrome Identifies Mutation of PRDM16 as a Cause of Cardiomyopathy. American Journal of Human Genetics, 2013, 93, 67-77.	6.2	164
10	Caenorhabditis elegans is a useful model for anthelmintic discovery. Nature Communications, 2015, 6, 7485.	12.8	163
11	Zebrafish-Based Small Molecule Discovery. Chemistry and Biology, 2003, 10, 901-908.	6.0	152
12	Systematic Approaches to Toxicology in the Zebrafish. Annual Review of Pharmacology and Toxicology, 2012, 52, 433-453.	9.4	150
13	The Impact of Whole-Genome Sequencing on the Primary Care and Outcomes of Healthy Adult Patients. Annals of Internal Medicine, 2017, 167, 159.	3.9	145
14	Notch1b and neuregulin are required for specification of central cardiac conduction tissue. Development (Cambridge), 2006, 133, 1125-1132.	2.5	136
15	Wnt11 patterns a myocardial electrical gradient through regulation of the L-type Ca2+ channel. Nature, 2010, 466, 874-878.	27.8	127
16	Central role for GSK3Î² in the pathogenesis of arrhythmogenic cardiomyopathy. JCI Insight, 2016, 1, .	5.0	127
17	A gene for non-syndromic autosomal dominant progressive postlingual sensorineural hearing loss maps to chromosome 14q12-13. Human Molecular Genetics, 1996, 5, 1047-1050.	2.9	114
18	Drug-Sensitized Zebrafish Screen Identifies Multiple Genes, Including GINS3 , as Regulators of Myocardial Repolarization. Circulation, 2009, 120, 553-559.	1.6	106

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19	Lysosomal dysfunction and impaired autophagy underlie the pathogenesis of amyloidogenic light chainâ€mediated cardiotoxicity. EMBO Molecular Medicine, 2014, 6, 1493-1507.	6.9	106
20	Large-scale genome-wide analysis identifies genetic variants associated with cardiac structure and function. Journal of Clinical Investigation, 2017, 127, 1798-1812.	8.2	106
21	Chamber identity programs drive early functional partitioning of the heart. Nature Communications, 2015, 6, 8146.	12.8	103
22	Bedside Back to Bench: Building Bridges between Basic and Clinical Genomic Research. Cell, 2017, 169, 6-12.	28.9	103
23	Selecting causal genes from genome-wide association studies via functionally coherent subnetworks. Nature Methods, 2015, 12, 154-159.	19.0	96
24	Dilated Cardiomyopathy and Sensorineural Hearing Loss. Circulation, 2000, 101, 1812-1818.	1.6	95
25	High-resolution cardiovascular function confirms functional orthology of myocardial contractility pathways in zebrafish. Physiological Genomics, 2010, 42, 300-309.	2.3	77
26	Artificial intelligence-enabled fully automated detection of cardiac amyloidosis using electrocardiograms and echocardiograms. Nature Communications, 2021, 12, 2726.	12.8	73
27	Glucocorticoids enhance muscle endurance and ameliorate Duchenne muscular dystrophy through a defined metabolic program. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6780-9.	7.1	71
28	Identification of pathogenic gene mutations in LMNA and MYBPC3 that alter RNA splicing. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7689-7694.	7.1	70
29	Missense Mutation in the Pore Region of HERG Causes Familial Long QT Syndrome. Circulation, 1996, 93, 1791-1795.	1.6	70
30	Elucidation of MRAS-mediated Noonan syndrome with cardiac hypertrophy. JCI Insight, 2017, 2, e91225.	5.0	66
31	Phenotypic Manifestations of Arrhythmogenic Cardiomyopathy in Children and Adolescents. Journal of the American College of Cardiology, 2019, 74, 346-358.	2.8	63
32	A Comparison of Whole Genome Sequencing to Multigene Panel Testing in Hypertrophic Cardiomyopathy Patients. Circulation: Cardiovascular Genetics, 2017, 10, .	5.1	62
33	Remote Optimization of Guideline-Directed Medical Therapy in Patients With Heart Failure With Reduced Ejection Fraction. JAMA Cardiology, 2020, 5, 1430.	6.1	62
34	Animal models for arrhythmias. Cardiovascular Research, 2005, 67, 426-437.	3.8	57
35	Valsartan in early-stage hypertrophic cardiomyopathy: a randomized phase 2 trial. Nature Medicine, 2021, 27, 1818-1824.	30.7	51
36	Opportunities for the Cardiovascular Community in the Precision Medicine Initiative. Circulation, 2016, 133, 226-231.	1.6	50

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37	In vivo natriuretic peptide reporter assay identifies chemical modifiers of hypertrophic cardiomyopathy signalling. Cardiovascular Research, 2012, 93, 463-470.	3.8	49
38	Electrophysiologic Characteristics of Accessory Atrioventricular Connections in an Inherited Form of Wolff-Parkinson-White Syndrome. Journal of Cardiovascular Electrophysiology, 1999, 10, 629-635.	1.7	45
39	Arrhythmogenic right ventricular cardiomyopathy mutations alter shear response without changes in cellâ€“cell adhesion. Cardiovascular Research, 2014, 104, 280-289.	3.8	45
40	Wars2 is a determinant of angiogenesis. Nature Communications, 2016, 7, 12061.	12.8	45
41	Development of an entirely remote, nonâ€physician led hypertension management program. Clinical Cardiology, 2019, 42, 285-291.	1.8	43
42	An NPPB Promoter Polymorphism Associated With Elevated Nâ€Terminal proâ€“Bâ€Type Natriuretic Peptide and Lower Blood Pressure, Hypertension, and Mortality. Journal of the American Heart Association, 2017, 6, .	3.7	42
43	Purification of hearts from zebrafish embryos. BioTechniques, 2006, 40, 278-282.	1.8	41
44	The Design of the Valsartan for Attenuating Disease Evolution in Early Sarcomeric Hypertrophic Cardiomyopathy (VANISH) Trial. American Heart Journal, 2017, 187, 145-155.	2.7	41
45	Zebrafish genetic models for arrhythmia. Progress in Biophysics and Molecular Biology, 2008, 98, 301-308.	2.9	40
46	Accelerating Innovation in Health IT. New England Journal of Medicine, 2016, 375, 815-817.	27.0	40
47	Digital Care Transformation. Circulation, 2021, 143, 507-509.	1.6	40
48	THSD1 (Thrombospondin Type 1 Domain Containing Protein 1) Mutation in the Pathogenesis of Intracranial Aneurysm and Subarachnoid Hemorrhage. Stroke, 2016, 47, 3005-3013.	2.0	39
49	Next-Generation Genome-Wide Association Studies. Circulation: Cardiovascular Genetics, 2011, 4, 334-336.	5.1	38
50	Chemical and metabolomic screens identify novel biomarkers and antidotes for cyanide exposure. FASEB Journal, 2013, 27, 1928-1938.	0.5	38
51	RING Finger Protein RNF207, a Novel Regulator of Cardiac Excitation. Journal of Biological Chemistry, 2014, 289, 33730-33740.	3.4	38
52	MIC-Drop: A platform for large-scale in vivo CRISPR screens. Science, 2021, 373, 1146-1151.	12.6	36
53	The Future of Genetics and Genomics. Circulation, 2016, 133, 2634-2639.	1.6	35
54	Summarizing polygenic risks for complex diseases in a clinical whole-genome report. Genetics in Medicine, 2015, 17, 536-544.	2.4	34

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55	Using Zebrafish for High-Throughput Screening of Novel Cardiovascular Drugs. JACC Basic To Translational Science, 2017, 2, 1-12.	4.1	34
56	Cardiac arrhythmia:in vivoscreening in the zebrafish to overcome complexity in drug discovery. Expert Opinion on Drug Discovery, 2010, 5, 619-632.	5.0	30
57	The Deep Genome Project. Genome Biology, 2020, 21, 18.	8.8	30
58	A call to action for new global approaches to cardiovascular disease drug solutions. European Heart Journal, 2021, 42, 1464-1475.	2.2	29
59	Metastable Atrial State Underlies the Primary Genetic Substrate for MYL4 Mutation-Associated Atrial Fibrillation. Circulation, 2020, 141, 301-312.	1.6	28
60	PIEZO1 mediates a mechanothrombotic pathway in diabetes. Science Translational Medicine, 2022, 14, eabk1707.	12.4	28
61	Human Kidney Disease-causing INF2 Mutations Perturb Rho/Dia Signaling in the Glomerulus. EBioMedicine, 2014, 1, 107-115.	6.1	25
62	An integrated clinical program and crowdsourcing strategy for genomic sequencing and Mendelian disease gene discovery. Npj Genomic Medicine, 2018, 3, 21.	3.8	24
63	nkxgenes establish SHF cardiomyocyte progenitors at the arterial pole and pattern the venous pole through Isl1 repression. Development (Cambridge), 2018, 145, .	2.5	23
64	Targeting the Microtubule EB1-CLASP2 Complex Modulates Na _V 1.5 at Intercalated Discs. Circulation Research, 2021, 129, 349-365.	4.5	23
65	The Future of Cardiovascular Therapeutics. Circulation, 2016, 133, 2610-2617.	1.6	22
66	Heart on a Plate: Histological and Functional Assessment of Isolated Adult Zebrafish Hearts Maintained in Culture. PLoS ONE, 2014, 9, e96771.	2.5	21
67	Evaluation of a transitional care pharmacist intervention in a high-risk cardiovascular patient population. American Journal of Health-System Pharmacy, 2018, 75, S63-S71.	1.0	21
68	Extraction of Ejection Fraction from Echocardiography Notes for Constructing a Cohort of Patients having Heart Failure with reduced Ejection Fraction (HFrEF). Journal of Medical Systems, 2018, 42, 209.	3.6	18
69	A Call to Action for New Global Approaches to Cardiovascular Disease Drug Solutions. Circulation, 2021, 144, 159-169.	1.6	18
70	Cisplatin Analogs Confer Protection against Cyanide Poisoning. Cell Chemical Biology, 2017, 24, 565-575.e4.	5.2	17
71	Intramuscular administration of hexachloroplatinate reverses cyanide-induced metabolic derangements and counteracts severe cyanide poisoning. FASEB BioAdvances, 2019, 1, 81-92.	2.4	17
72	Zebrafish model of amyloid light chain cardiotoxicity: regeneration versus degeneration. American Journal of Physiology - Heart and Circulatory Physiology, 2019, 316, H1158-H1166.	3.2	17

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73	Rationale and design of a navigatorâ€driven remote optimization of guidelineâ€directed medical therapy in patients with heart failure with reduced ejection fraction. Clinical Cardiology, 2020, 43, 4-13.	1.8	17
74	A Clinical Approach to Inherited Premature Coronary Artery Disease. Circulation: Cardiovascular Genetics, 2014, 7, 558-564.	5.1	16
75	A cystineâ€knot miniprotein from tomato fruit inhibits endothelial cell migration and angiogenesis by affecting vascular endothelial growth factor receptor (VEGFR) activation and nitric oxide production. Molecular Nutrition and Food Research, 2015, 59, 2255-2266.	3.3	15
76	Lysolipids in Vascular Development, Biology, and Disease. Arteriosclerosis, Thrombosis, and Vascular Biology, 2021, 41, 564-584.	2.4	15
77	Myocardial blood flow and oxygen consumption in patients with Friedreich's ataxia prior to the onset of cardiomyopathy. Coronary Artery Disease, 2007, 18, 15-22.	0.7	14
78	Optical Mapping in the Developing Zebrafish Heart. Pediatric Cardiology, 2012, 33, 916-922.	1.3	13
79	The uptake of family screening in hypertrophic cardiomyopathy and an online video intervention to facilitate family communication. Molecular Genetics & Genomic Medicine, 2019, 7, e940.	1.2	13
80	Screening drugs for myocardial disease in vivo with zebrafish: an expert update. Expert Opinion on Drug Discovery, 2019, 14, 343-353.	5.0	13
81	Identification of specific metabolic pathways as druggable targets regulating the sensitivity to cyanide poisoning. PLoS ONE, 2018, 13, e0193889.	2.5	12
82	Trafficking of the human ether-a-go-go-related gene (hERG) potassium channel is regulated by the ubiquitin ligase rififylin (RFFL). Journal of Biological Chemistry, 2019, 294, 351-360.	3.4	11
83	Moving Genomics to Routine Care. Circulation Genomic and Precision Medicine, 2020, 13, 406-416.	3.6	11
84	Impact of functional studies on exome sequence variant interpretation in early-onset cardiac conduction system diseases. Cardiovascular Research, 2020, 116, 2116-2130.	3.8	11
85	Family history of atrial fibrillation as a predictor of atrial substrate and arrhythmia recurrence in patients undergoing atrial fibrillation catheter ablation. Europace, 2018, 20, 921-928.	1.7	10
86	Baseline Characteristics of the VANISH Cohort. Circulation: Heart Failure, 2019, 12, e006231.	3.9	10
87	Recent advances in in vivo screening for antiarrhythmic drugs. Expert Opinion on Drug Discovery, 2013, 8, 131-141.	5.0	9
88	A New Approach to an Old Problem. Circulation Research, 2018, 122, 1172-1175.	4.5	9
89	Zebrafish assay development for cardiovascular disease mechanism and drug discovery. Progress in Biophysics and Molecular Biology, 2018, 138, 126-131.	2.9	9
90	LITAF (Lipopolysaccharide-Induced Tumor Necrosis Factor) Regulates Cardiac L-Type Calcium Channels by Modulating NEDD (Neural Precursor Cell Expressed Developmentally Downregulated Protein) 4-1 Ubiquitin Ligase. Circulation Genomic and Precision Medicine, 2019, 12, 407-420.	3.6	9

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91	Reimagining What We Measure in Atherosclerosisâ€"a â€œPhenotype Stackâ€• Circulation Research, 2020, 126, 1146-1158.	4.5	8
92	Population health management of low-density lipoprotein cholesterol via a remote, algorithmic, navigator-executed program. American Heart Journal, 2022, 243, 15-27.	2.7	8
93	The endosomal trafficking regulator LITAF controls the cardiac Nav1.5 channel via the ubiquitin ligase NEDD4-2. Journal of Biological Chemistry, 2020, 295, 18148-18159.	3.4	8
94	Effect Size Does Matter. Circulation, 2015, 132, 1943-1945.	1.6	6
95	Fusiform Aneurysms Are Associated with Aortic Root Dilatation in Patients with Subarachnoid Hemorrhage. World Neurosurgery, 2015, 84, 1681-1685.	1.3	6
96	Evaluation of the Usage and Dosing of Guideline-Directed Medical Therapy for Heart Failure With Reduced Ejection Fraction Patients in Clinical Practice. Journal of Pharmacy Practice, 2021, , 089719002110048.	1.0	6
97	Closing the Genotype-Phenotype Loop for Precision Medicine. Circulation, 2017, 136, 1492-1494.	1.6	5
98	Closing the â€˜phenotype gapâ€™ in precision medicine: improving what we measure to understand complex disease mechanisms. Mammalian Genome, 2019, 30, 201-211.	2.2	5
99	Deep Phenotyping in Cardiovascular Disease. Current Treatment Options in Cardiovascular Medicine, 2021, 23, 1.	0.9	5
100	Phenotyping to Facilitate Accrual for a Cardiovascular Intervention. Journal of Clinical Medicine Research, 2019, 11, 458-463.	1.2	5
101	Noninvasive Scale Measurement of Stroke Volume and Cardiac Output Compared With the Direct Fick Method: A Feasibility Study. Journal of the American Heart Association, 2021, 10, e021893.	3.7	5
102	Cardiovascular Risk Assessment Using Artificial Intelligence-Enabled Event Adjudication and Hematologic Predictors. Circulation: Cardiovascular Quality and Outcomes, 2022, 15, 101161CIRCOUTCOMES121008007.	2.2	5
103	Mendelian Forms of Structural Cardiovascular Disease. Current Cardiology Reports, 2013, 15, 399.	2.9	4
104	A novel cardiovascular decision support framework for effective clinical risk assessment. , 2014, , .		4
105	Reponse to de Leeuw and Houge. American Journal of Human Genetics, 2014, 94, 154-155.	6.2	4
106	Glyoxylate protects against cyanide toxicity through metabolic modulation. Scientific Reports, 2022, 12, 4982.	3.3	4
107	A countermeasure development pipeline. Annals of the New York Academy of Sciences, 2016, 1378, 58-67.	3.8	3
108	The Future of Cardiovascular Biomedicine. Circulation, 2016, 133, 2601-2602.	1.6	3

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109	Phenotypic Characterization of Individuals With Variants in Cardiovascular Genes in the Absence of a Primary Cardiovascular Indication for Testing. Circulation Genomic and Precision Medicine, 2019, 12, e002463.	3.6	3
110	Ecosystem Barriers to Innovation Adoption in Clinical Practice. Trends in Molecular Medicine, 2021, 27, 5-7.	6.7	3
111	Extending i2b2 into a framework for semantic abstraction of EHR to facilitate rapid development and portability of Health IT applications. AMIA Summits on Translational Science Proceedings, 2019, 2019, 370-378.	0.4	3
112	Efficient clinical decision making by learning from missing clinical data. , 2013, , .		2
113	A New Phenotypic Lexicon for Accelerated Translation. Circulation, 2015, 131, 234-236.	1.6	2
114	A Critical Need for Clinical Context in the Genomic Era. Circulation, 2015, 132, 992-993.	1.6	2
115	Non-invasive Thoracic Impedance Changes in COVID-19 Pulmonary Infection. Journal of Cardiovascular Translational Research, 2021, 14, 387-389.	2.4	2
116	The Future of Cardiovascular Education and Training. Circulation, 2016, 133, 2734-2742.	1.6	1
117	Acute Coronary Syndrome in a 52-Year-Old Woman With Scleroderma. Circulation, 2016, 133, 2576-2582.	1.6	1
118	In vitro and in vivo reprogramming for the conduction system. Trends in Cardiovascular Medicine, 2016, 26, 21-22.	4.9	1
119	Evolution of academicâ€“industry partnerships in cardiovascular research and development. Nature Reviews Cardiology, 2019, 16, 449-451.	13.7	1
120	Single Cell Biology: Exploring Somatic Cell Behaviors, Competition and Selection in Chronic Disease. Frontiers in Pharmacology, 2022, 13, .	3.5	1
121	Cardiovascular Genetics and Genomics for the Cardiologist. Circulation, 2008, 118, .	1.6	0
122	Response to Letter Regarding Article, â€œCloser Look at Genetic Testing in Long-QT Syndrome: Will DNA Diagnostics Ever Be Enough?â€. Circulation, 2010, 121, e440.	1.6	0
123	Preface. Heart Failure Clinics, 2010, 6, xv-xvi.	2.1	0
124	Searching for a Rosetta Stone: Genetic data and clinical patient management. Heart Rhythm, 2014, 11, 1714-1715.	0.7	0
125	Rare Diseases Inform Myocardial Phenotypes for Precision Medicine. Journal of Cardiac Failure, 2018, 24, 680-681.	1.7	0
126	The Undiagnosed Diseases Network as a Tool for Graduate Medical Education. American Journal of Medicine, 2020, 133, e18-e22.	1.5	0

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127	Skin and Vascular Diseaseâ€"Inside-Out/Outside-In. JAMA Cardiology, 2017, 2, 944.	6.1	0
128	Cardiac Nav1.5 Channel is Regulated by LITAF. FASEB Journal, 2018, 32, 533.81.	0.5	0
129	LITAF regulates action potential duration by modulating NEDD4â€1â€mediated degradation of Lâ€type calcium channels. FASEB Journal, 2019, 33, 824.19.	0.5	0
130	Genetic Testing in Sudden Cardiac Arrest: the History and Physical Exam Remain Central in the Genomics Era. Circulation Genomic and Precision Medicine, 2022, , CIRCGEN121003520.	3.6	0
131	Abstract 11814: Definitive Diagnostic Yield in a Referral Population is Similar to That of Cascade Genetic Screening. Circulation, 2021, 144, .	1.6	0
132	Wnt Signaling Interactor WTIP (Wilms Tumor Interacting Protein) Underlies Novel Mechanism for Cardiac Hypertrophy. Circulation Genomic and Precision Medicine, 0, , .	3.6	0