Sander Verheule

List of Publications by Year
in descending order

98 papers	6,321 citations	81889 39 h-index	69246 77 g-index
103 all docs	103 docs citations	103 times ranked	5759 citing authors

#	Article	IF	Citations
1	Pathophysiological Mechanisms of Atrial Fibrillation: A Translational Appraisal. Physiological Reviews, 2011, 91, 265-325.	28.8	1,048
2	Increased Vulnerability to Atrial Fibrillation in Transgenic Mice With Selective Atrial Fibrosis Caused by Overexpression of TGF-Î²1. Circulation Research, 2004, 94, 1458-1465.	4.5	507
3	Arrhythmogenic Substrate of the Pulmonary Veins Assessed by High-Resolution Optical Mapping. Circulation, 2003, 107, 1816-1821.	1.6	332
4	Alterations in Atrial Electrophysiology and Tissue Structure in a Canine Model of Chronic Atrial Dilatation Due to Mitral Regurgitation. Circulation, 2003, 107, 2615-2622.	1.6	302
5	PITX2c Is Expressed in the Adult Left Atrium, and Reducing Pitx2c Expression Promotes Atrial Fibrillation Inducibility and Complex Changes in Gene Expression. Circulation: Cardiovascular Genetics, 2011, 4, 123-133.	5.1	267
6	Atrial Sources of Reactive Oxygen Species Vary With the Duration and Substrate of Atrial Fibrillation. Circulation, 2011, 124, 1107-1117.	1.6	197
7	Cardiac electrophysiology in mice: a matter of size. Frontiers in Physiology, 2012, 3, 345.	2.8	148
8	Transmural Conduction Is the Predominant Mechanism of Breakthrough During Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2013, 6, 334-341.	4.8	146
9	Reconstruction of Instantaneous Phase of Unipolar Atrial Contact Electrogram Using a Concept of Sinusoidal Recomposition and Hilbert Transform. IEEE Transactions on Biomedical Engineering, 2015, 62, 296-302.	4.2	144
10	Cardiac Conduction Abnormalities in Mice Lacking the Gap Junction Protein Connexin40. Journal of Cardiovascular Electrophysiology, 1999, 10, 1380-1389.	1.7	142
11	Time course and mechanisms of endo-epicardial electrical dissociation during atrial fibrillation in the goat. Cardiovascular Research, 2011, 89, 816-824.	3.8	141
12	Mutual Regulation of Epicardial Adipose Tissue and Myocardial Redox State by PPAR-Î³/Adiponectin Signalling. Circulation Research, 2016, 118, 842-855.	4.5	132
13	Hypercoagulability causes atrial fibrosis and promotes atrial fibrillation. European Heart Journal, 2017, 38, 38-50.	2.2	131
14	Tissue structure and connexin expression of canine pulmonary veins. Cardiovascular Research, 2002, 55, 727-738.	3.8	126
15	Mechanisms of perpetuation of atrial fibrillation in chronically dilated atria. Progress in Biophysics and Molecular Biology, 2008, 97, 435-451.	2.9	119
16	Characterization of Gap Junction Channels in Adult Rabbit Atrial and Ventricular Myocardium. Circulation Research, 1997, 80, 673-681.	4.5	117
17	Tachycardia-induced silencing of subcellular Ca2+ signaling in atrial myocytes. Journal of Clinical Investigation, 2014, 124, 4759-4772.	8.2	114
18	Structural atrial remodeling alters the substrate and spatiotemporal organization of atrial fibrillation: a comparison in canine models of structural and electrical atrial remodeling. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 291, H2911-H2923.	3.2	106

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19	Loss of Continuity in the Thin Epicardial Layer Because of Endomysial Fibrosis Increases the Complexity of Atrial Fibrillatory Conduction. Circulation: Arrhythmia and Electrophysiology, 2013, 6, 202-211.	4.8	104
20	Fibrillatory Conduction in the Atrial Free Walls of Goats in Persistent and Permanent Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2010, 3, 590-599.	4.8	100
21	Development of a Substrate of Atrial Fibrillation During Chronic Atrioventricular Block in the Goat. Circulation, 2005, 111, 30-37.	1.6	97
22	Distinct contractile and molecular differences between two goat models of atrial dysfunction: AV block-induced atrial dilatation and atrial fibrillation. Journal of Molecular and Cellular Cardiology, 2009, 46, 385-394.	1.9	96
23	Direction-dependent conduction abnormalities in a canine model of atrial fibrillation due to chronic atrial dilatation. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 287, H634-H644.	3.2	75
24	Role of endo-epicardial dissociation of electrical activity and transmural conduction in the development of persistent atrial fibrillation. Progress in Biophysics and Molecular Biology, 2014, 115, 173-185.	2.9	75
25	Mechanoelectric feedback leads to conduction slowing and block in acutely dilated atria: a modeling study of cardiac electromechanics. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H2832-H2853.	3.2	69
26	Up-regulation of miR-31 in human atrial fibrillation begets the arrhythmia by depleting dystrophin and neuronal nitric oxide synthase. Science Translational Medicine, 2016, 8, 340ra74.	12.4	68
27	AVE0118, Blocker of the Transient Outward Current (I to) and Ultrarapid Delayed Rectifier Current (I) Tj ETQq1 1 0.784314 rgBT /Over Circulation, 2006, 114, 1234-1242.	1.6	67
28	Rearrangement of Atrial Bundle Architecture and Consequent Changes in Anisotropy of Conduction Constitute the 3-Dimensional Substrate for Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2013, 6, 967-975.	4.8	67
29	Connexin diversity in the heart: insights from transgenic mouse models. Frontiers in Pharmacology, 2013, 4, 81.	3.5	61
30	Catheter-Based Renal Denervation Reduces Atrial Nerve Sprouting and Complexity of Atrial Fibrillation in Goats. Circulation: Arrhythmia and Electrophysiology, 2015, 8, 466-474.	4.8	61
31	Atrial metabolism and tissue perfusion as determinants of electrical and structural remodelling in atrial fibrillation. Cardiovascular Research, 2016, 109, 527-541.	3.8	59
32	Overexpression of cAMP-response element modulator causes abnormal growth and development of the atrial myocardium resulting in a substrate for sustained atrial fibrillation in mice. International Journal of Cardiology, 2013, 166, 366-374.	1.7	57
33	Gap junctions in the rabbit sinoatrial node. American Journal of Physiology - Heart and Circulatory Physiology, 2001, 280, H2103-H2115.	3.2	56
34	Blockade of atrial-specific K+-currents increases atrial but not ventricular contractility by enhancing reverse mode Na+/Ca2+-exchange. Cardiovascular Research, 2007, 73, 37-47.	3.8	56
35	Indices of bipolar complex fractionated atrial electrograms correlate poorly with each other and atrial fibrillation substrate complexity. Heart Rhythm, 2015, 12, 1415-1423.	0.7	52
36	Rotors Detected by Phase Analysis of Filtered, Epicardial Atrial Fibrillation Electrograms Colocalize With Regions of Conduction Block. Circulation: Arrhythmia and Electrophysiology, 2018, 11, e005858.	4.8	51

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37	Knock-in gain-of-function sodium channel mutation prolongs atrial action potentials and alters atrial vulnerability. Heart Rhythm, 2010, 7, 1862-1869.	0.7	50
38	Epicardial Fibrosis Explains Increased Endoâ€"Epicardial Dissociation and Epicardial Breakthroughs in Human Atrial Fibrillation. Frontiers in Physiology, 2020, 11, 68.	2.8	48
39	Mechanoelectrical coupling enhances initiation and affects perpetuation of atrial fibrillation during acute atrial dilation. Heart Rhythm, 2011, 8, 429-436.	0.7	43
40	Stability of Complex Fractionated Atrial Electrograms: A Systematic Review. Journal of Cardiovascular Electrophysiology, 2012, 23, 980-987.	1.7	41
41	Left atrial dilatation resulting from chronic mitral regurgitation decreases spatiotemporal organization of atrial fibrillation in left atrium. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 286, H2452-H2460.	3.2	35
42	The ECG in cardiovascular-relevant animal models of electrophysiology. Herzschrittmachertherapie Und Elektrophysiologie, 2013, 24, 84-91.	0.8	34
43	Atrial supplyâ€"demand balance in healthy adult pigs: coronary blood flow, oxygen extraction, and lactate production during acute atrial fibrillation. Cardiovascular Research, 2014, 101, 9-19.	3.8	33
44	A computer model of endo-epicardial electrical dissociation and transmural conduction during atrial fibrillation. Europace, 2012, 14, v10-v16.	1.7	32
45	Transgenic and knockout mouse models of atrial arrhythmias. Cardiovascular Research, 2002, 54, 280-286.	3.8	31
46	A prospective randomized controlled trial on the incidence and predictors of late-phase postoperative atrial fibrillation up to 30 days and the preventive value of biatrial pacing. Heart Rhythm, 2014, 11, 1156-1162.	0.7	31
47	Cathepsin A mediates susceptibility to atrial tachyarrhythmia and impairment of atrial emptying function in Zucker diabetic fatty rats. Cardiovascular Research, 2016, 110, 371-380.	3.8	29
48	Electrophysiological Consequences of Cardiac Fibrosis. Cells, 2021, 10, 3220.	4.1	28
49	Intrapericardial Delivery of Amiodarone and Sotalol: Atrial Transmural Drug Distribution and Electrophysiological Effects. Journal of Cardiovascular Pharmacology, 2009, 54, 355-363.	1.9	23
50	How disruption of endo-epicardial electrical connections enhances endo-epicardial conduction during atrial fibrillation. Europace, 2017, 19, euv445.	1.7	21
51	The inward rectifier current inhibitor PAâ€6 terminates atrial fibrillation and does not cause ventricular arrhythmias in goat and dog models. British Journal of Pharmacology, 2017, 174, 2576-2590.	5.4	20
52	Gene Therapy for Repair of Cardiac Fibrosis. Circulation, 2005, 111, 391-393.	1.6	19
53	Arterial hypertension drives arrhythmia progression via specific structural remodeling in a porcine model of atrial fibrillation. Heart Rhythm, 2018, 15, 1328-1336.	0.7	19
54	Stationary Atrial Fibrillation Properties in the Goat Do Not Entail Stable or Recurrent Conduction Patterns. Frontiers in Physiology, 2018, 9, 947.	2.8	19

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55	Inducibility, but not stability, of atrial fibrillation is increased by NOX2 overexpression in mice. Cardiovascular Research, 2021, 117, 2354-2364.	3.8	18
56	Antiarrhythmic effect of vernakalant in electrically remodeled goat atria is caused by slowing of conduction and prolongation of postrepolarization refractoriness. Heart Rhythm, 2016, 13, 964-972.	0.7	15
57	Endomysial fibrosis, rather than overall connective tissue content, is the main determinant of conduction disturbances in human atrial fibrillation. Europace, 2022, 24, 1015-1024.	1.7	14
58	Mechanoelectric Feedback as a Trigger Mechanism for Cardiac Electrical Remodeling: A Model Study. Annals of Biomedical Engineering, 2008, 36, 1816-1835.	2.5	13
59	Quantification of epicardial adipose tissue in patients undergoing hybrid ablation for atrial fibrillation. European Journal of Cardio-thoracic Surgery, 2019, 56, 79-86.	1.4	13
60	Sensitization of the Histamine H1 Receptor by Increased Ligand Affinity. Journal of Biological Chemistry, 1998, 273, 2249-2255.	3.4	12
61	Evaluation of the role of miR-31-dependent reduction in dystrophin and nNOS on atrial-fibrillation-induced electrical remodelling in man. Lancet, The, 2015, 385, S82.	13.7	12
62	A Novel Tool for the Identification and Characterization of Repetitive Patterns in High-Density Contact Mapping of Atrial Fibrillation. Frontiers in Physiology, 2020, 11, 570118.	2.8	12
63	Clinical and electrophysiological predictors of device-detected new-onset atrial fibrillation during 3 years after cardiac surgery. Europace, 2021, 23, 1922-1930.	1.7	12
64	A Variant Noncoding Region Regulates <i>Prrx1</i> and Predisposes to Atrial Arrhythmias. Circulation Research, 2021, 129, 420-434.	4.5	11
65	Degree of Fibrosis in Human Atrial Tissue Is Not the Hallmark Driving AF. Cells, 2022, 11, 427.	4.1	11
66	The Acetylcholine-Activated Potassium Current Inhibitor XAF-1407 Terminates Persistent Atrial Fibrillation in Goats. Frontiers in Pharmacology, 2020, 11, 608410.	3.5	10
67	Dynamic regulation of atrial coronary blood flow in healthy adult pigs. Heart Rhythm, 2015, 12, 991-1000.	0.7	9
68	Inhibition of Small-Conductance Calcium-Activated Potassium Current (IK,Ca) Leads to Differential Atrial Electrophysiological Effects in a Horse Model of Persistent Atrial Fibrillation. Frontiers in Physiology, 2021, 12, 614483.	2.8	9
69	Effective termination of atrial fibrillation by SK channel inhibition is associated with a sudden organization of fibrillatory conduction. Europace, 2021, 23, 1847-1859.	1.7	9
70	The European Network for Translational Research in Atrial Fibrillation (EUTRAF): objectives and initial results. Europace, 2015, 17, 1457-1466.	1.7	8
71	Catheter Ablation Targeting Complex Fractionated Atrial Electrogram in Atrial Fibrillation. Journal of Atrial Fibrillation, 2013, 6, 907.	0.5	8
72	Cardioversion of persistent atrial fibrillation is associated with a 24â€hour relapse gap: Observations from prolonged postcardioversion rhythm monitoring. Clinical Cardiology, 2018, 41, 366-371.	1.8	7

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73	Loss of Side-to-Side Connections Affects the Relative Contributions of the Sodium and Calcium Current to Transverse Propagation Between Strands of Atrial Myocytes. Frontiers in Physiology, 2018, 9, 1212.	2.8	6
74	Left Atrial Appendage Electrical Isolation Reduces Atrial Fibrillation Recurrences. Circulation: Arrhythmia and Electrophysiology, 2021, 14, e009230.	4.8	6
75	Effects of renal denervation on atrial arrhythmogenesis. Future Cardiology, 2014, 10, 813-822.	1.2	5
76	Synergistic antiarrhythmic effect of inward rectifier current inhibition and pulmonary vein isolation in a 3D computer model for atrial fibrillation. Europace, 2021, 23, i161-i168.	1.7	5
77	Increased fibroblast accumulation in the equine heart following persistent atrial fibrillation. IJC Heart and Vasculature, 2021, 35, 100842.	1.1	5
78	Coagulation Factor Xa Induces Proinflammatory Responses in Cardiac Fibroblasts via Activation of Protease-Activated Receptor-1. Cells, 2021, 10, 2958.	4.1	5
79	Incidence, prevalence, and trajectories of repetitive conduction patterns in human atrial fibrillation. Europace, 2021, 23, i123-i132.	1.7	4
80	Postoperative atrial fibrillation and atrial epicardial fat: Is there a link?. IJC Heart and Vasculature, 2022, 39, 100976.	1.1	4
81	Leaky ryanodine receptors in the failing heart: the root of all evil?. Cardiovascular Research, 2011, 90, 399-401.	3.8	3
82	Vernakalant does not alter early repolarization or contractility in normal and electrically remodelled atria. Europace, 2018, 20, 140-148.	1.7	3
83	Effect of Na+-channel blockade on the three-dimensional substrate of atrial fibrillation in a model of endo-epicardial dissociation and transmural conduction. Europace, 2018, 20, iii69-iii76.	1.7	3
84	Bi-atrial high-density mapping reveals inhibition of wavefront turning and reduction of complex propagation patterns as main antiarrhythmic mechanisms of vernakalant. Europace, 2021, 23, 1114-1123.	1.7	2
85	The relation between the atrial blood supply and the complexity of acute atrial fibrillation. IJC Heart and Vasculature, 2021, 34, 100794.	1.1	2
86	Electrophysiological effects of ranolazine in a goat model of lone atrial fibrillation. Heart Rhythm, 2021, 18, 615-622.	0.7	1
87	Atrial Anatomy Influences Onset and Termination of Atrial Fibrillation: A Computer Model Study. Lecture Notes in Computer Science, 2009, , 285-294.	1.3	1
88	Considerations for the Assessment of Substrates, Genetics and Risk Factors in Patients with Atrial Fibrillation. Arrhythmia and Electrophysiology Review, 2021, 10, 132-139.	2.4	1
89	Thrombin generation by calibrated automated thrombography in goat plasma: Optimization of an assay. Research and Practice in Thrombosis and Haemostasis, 2021, 5, e12620.	2.3	1
90	Extended ECG Improves Classification of Paroxysmal and Persistent Atrial Fibrillation Based on P- and f-Waves. Frontiers in Physiology, 2022, 13, 779826.	2.8	1

#	Article	IF	Citations
91	P4-17. Heart Rhythm, 2006, 3, S224.	0.7	0
92	B-PO01-019 COAGULATION POTENTIAL, ELECTROPHYSIOLOGICAL CHARACTERISTICS AND STRUCTURAL REMODELING DUE TO ATRIAL FIBRILLATION IN YOUNG AND AGED GOATS. Heart Rhythm, 2021, 18, S58.	0.7	0
93	Mechanisms and Significance of Fractionated Electrograms Recorded during Atrial Fibrillation. , 0, , 32-42.		0
94	Hypercoagulability Promotes Atrial Fibrosis and Fibrillation. Blood, 2014, 124, 4246-4246.	1.4	0
95	High Coverage and High-Resolution Mapping of Repetitive Patterns During Atrial Fibrillation. , 2021, , .		0
96	New-onset perioperative atrial fibrillation in cardiac surgery patients: transient trouble or persistent problem?â€"Authorsâ€™ reply. Europace, 2021, , .	1.7	0
97	PO-700-03 CORRELATION BETWEEN ATRIAL FUNCTION, BLOOD BIOMARKERS, AND HISTOLOGICAL PARAMETERS IN PATIENTS UNDERGOING CARDIAC SURGERY WITHOUT HISTORY OF ATRIAL ARRHYTHMIAS. Heart Rhythm, 2022, 19, S434.	0.7	0
98	PO-699-05 ATRIAL ENDOMYSIAL FIBROSIS IS ASSOCIATED WITH SEX, ATRIAL FIBRILLATION, HEART FAILURE AND AGE IN CARDIAC SURGERY PATIENTS: RESULTS FROM THE CATCH ME CONSORTIUM. Heart Rhythm, 2022, 19, S430-S431.	0.7	0