Lior Gepstein

List of Publications by Year
in descending order

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122	11,412	34016 52	28224 105
papers	citations	h-index	g-index

124	124	124	9060
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Modelling the long QT syndrome with induced pluripotent stem cells. Nature, 2011, 471, 225-229.	13.7	957
2	Electromechanical integration of cardiomyocytes derived from human embryonic stem cells. Nature Biotechnology, 2004, 22, 1282-1289.	9.4	835
3	A Novel Method for Nonfluoroscopic Catheter-Based Electroanatomical Mapping of the Heart. Circulation, 1997, 95, 1611-1622.	1.6	625
4	Transplantation of Human Embryonic Stem Cell-Derived Cardiomyocytes Improves Myocardial Performance in Infarcted Rat Hearts. Journal of the American College of Cardiology, 2007, 50, 1884-1893.	1.2	524
5	Tissue Engineering of Vascularized Cardiac Muscle From Human Embryonic Stem Cells. Circulation Research, 2007, 100, 263-272.	2.0	524
6	Defined Engineered Human Myocardium With Advanced Maturation for Applications in Heart Failure Modeling and Repair. Circulation, 2017, 135, 1832-1847.	1.6	462
7	Cardiomyocyte Differentiation of Human Induced Pluripotent Stem Cells. Circulation, 2009, 120, 1513-1523.	1.6	386
8	Nonfluoroscopic, in vivo navigation and mapping technology. Nature Medicine, 1996, 2, 1393-1395.	15.2	370
9	High-Resolution Electrophysiological Assessment of Human Embryonic Stem Cell-Derived Cardiomyocytes. Circulation Research, 2002, 91, 659-661.	2.0	281
10	Sinoatrial node cardiomyocytes derived from human pluripotent cells function as a biological pacemaker. Nature Biotechnology, 2017, 35, 56-68.	9.4	280
11	Mechanism of spontaneous excitability in human embryonic stem cell derived cardiomyocytes. Journal of Physiology, 2004, 559, 479-496.	1.3	260
12	Identification and selection of cardiomyocytes during human embryonic stem cell differentiation. FASEB Journal, 2007, 21, 2551-2563.	0.2	251
13	Derivation and Potential Applications of Human Embryonic Stem Cells. Circulation Research, 2002, 91, 866-876.	2.0	219
14	Transplantation of a Tissue-Engineered Human Vascularized Cardiac Muscle. Tissue Engineering - Part A, 2010, 16, 115-125.	1.6	217
15	In Vitro Electrophysiological Drug Testing Using Human Embryonic Stem Cell Derived Cardiomyocytes. Stem Cells and Development, 2009, 18, 161-172.	1.1	209
16	Modeling of Catecholaminergic Polymorphic Ventricular Tachycardia With Patient-Specific Human-Induced Pluripotent Stem Cells. Journal of the American College of Cardiology, 2012, 60, 990-1000.	1.2	203
17	Optogenetics for in vivo cardiac pacing and resynchronization therapies. Nature Biotechnology, 2015, 33, 750-754.	9.4	191
18	Low-Energy Laser Irradiation Reduces Formation of Scar Tissue After Myocardial Infarction in Rats and Dogs. Circulation, 2001, 103, 296-301.	1.6	170

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19	Preliminary Animal and Clinical Experiences Using an Electromechanical Endocardial Mapping Procedure to Distinguish Infarcted From Healthy Myocardium. Circulation, 1998, 98, 1116-1124.	1.6	166
20	Calcium Handling in Human Induced Pluripotent Stem Cell Derived Cardiomyocytes. PLoS ONE, 2011, 6, e18037.	1.1	165
21	Calcium Handling in Human Embryonic Stem Cell-Derived Cardiomyocytes. Stem Cells, 2008, 26, 1961-1972.	1.4	163
22	Modeling of Arrhythmogenic Right Ventricular Cardiomyopathy With Human Induced Pluripotent Stem Cells. Circulation: Cardiovascular Genetics, 2013, 6, 557-568.	5.1	153
23	Genome Editing of Isogenic Human Induced Pluripotent Stem Cells Recapitulates Long QT Phenotype for Drug Testing. Journal of the American College of Cardiology, 2014, 64, 451-459.	1.2	149
24	Generating ring-shaped engineered heart tissues from ventricular and atrial human pluripotent stem cell-derived cardiomyocytes. Nature Communications, 2020, 11, 75.	5.8	148
25	Monitoring Human-Induced Pluripotent Stem Cell-Derived Cardiomyocytes with Genetically Encoded Calcium and Voltage Fluorescent Reporters. Stem Cell Reports, 2015, 5, 582-596.	2.3	133
26	Guidance of Radiofrequency Endocardial Ablation With Real-time Three-dimensional Magnetic Navigation System. Circulation, 1997, 96, 2016-2021.	1.6	131
27	Engineered heart tissue models from hiPSC-derived cardiomyocytes and cardiac ECM for disease modeling and drug testing applications. Acta Biomaterialia, 2019, 92, 145-159.	4.1	129
28	Attenuation of infarct size in rats and dogs after myocardial infarction by low-energy laser irradiation. Lasers in Surgery and Medicine, 2001, 28, 204-211.	1.1	121
29	Electromechanical Characterization of Chronic Myocardial Infarction in the Canine Coronary Occlusion Model. Circulation, 1998, 98, 2055-2064.	1.6	112
30	Electrophysiological Modulation of Cardiomyocytic Tissue by Transfected Fibroblasts Expressing Potassium Channels. Circulation, 2002, 105, 522-529.	1.6	105
31	Use of Human Induced Pluripotent Stem Cellâ€“Derived Cardiomyocytes in Preclinical Cancer Drug Cardiotoxicity Testing: A Scientific Statement From the American Heart Association. Circulation Research, 2019, 125, e75-e92.	2.0	103
32	Extracellular Vesicles From Epicardial Fat Facilitate Atrial Fibrillation. Circulation, 2021, 143, 2475-2493.	1.6	99
33	Modulation of cardiac tissue electrophysiological properties with light-sensitive proteins. Cardiovascular Research, 2014, 102, 176-187.	1.8	93
34	Electroanatomic mapping of arrhythmogenic right ventricular dysplasia. Journal of the American College of Cardiology, 2001, 38, 2020-2027.	1.2	86
35	Electroanatomical Mapping of the Heart: Basic Concepts and Implications for the Treatment of Cardiac Arrhythmias. PACE - Pacing and Clinical Electrophysiology, 1998, 21, 1268-1278.	0.5	83
36	A combined cell therapy and in-situ tissue-engineering approach for myocardial repair. Biomaterials, 2011, 32, 7514-7523.	5.7	83

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37	Hollow Nanoneedle Array and Its Utilization for Repeated Administration of Biomolecules to the Same Cells. ACS Nano, 2012, 6, 4940-4946.	7.3	80
38	In Vivo Assessment of the Electrophysiological Integration and Arrhythmogenic Risk of Myocardial Cell Transplantation Strategies. Stem Cells, 2010, 28, 2151-2161.	1.4	78
39	Modeling Atrial Fibrillation using Human Embryonic Stem Cell-Derived Atrial Tissue. Scientific Reports, 2017, 7, 5268.	1.6	77
40	Human Induced Pluripotent Stem Cell-Derived Cardiac Cell Sheets Expressing Genetically Encoded Voltage Indicator for Pharmacological and Arrhythmia Studies. Stem Cell Reports, 2018, 10, 1879-1894.	2.3	71
41	Derivation and cardiomyocyte differentiation of induced pluripotent stem cells from heart failure patients. European Heart Journal, 2013, 34, 1575-1586.	1.0	70
42	A photopolymerizable hydrogel for 3-D culture of human embryonic stem cell-derived cardiomyocytes and rat neonatal cardiac cells. Journal of Molecular and Cellular Cardiology, 2009, 46, 213-224.	0.9	67
43	Reprogramming of telomeric regions during the generation of human induced pluripotent stem cells and subsequent differentiation into fibroblast-like derivatives. Epigenetics, 2011, 6, 63-75.	1.3	67
44	Hemodynamic Evaluation of the Heart With a Nonfluoroscopic Electromechanical Mapping Technique. Circulation, 1997, 96, 3672-3680.	1.6	65
45	Circadian pattern of life-threatening ventricular arrhythmia in patients with sleep-disordered breathing and implantable cardioverter-defibrillators. Heart Rhythm, 2011, 8, 657-662.	0.3	64
46	Modeling Reentry in the Short QTÂSyndrome With Human-Induced Pluripotent Stem Cellâ€“Derived CardiacÂCell Sheets. Journal of the American College of Cardiology, 2019, 73, 2310-2324.	1.2	64
47	Electrospun Extracellular Matrix: Paving the Way to Tailorâ€Made Natural Scaffolds for Cardiac Tissue Regeneration. Advanced Functional Materials, 2017, 27, 1700427.	7.8	62
48	Activation-Repolarization Coupling in the Normal Swine Endocardium. Circulation, 1997, 96, 4036-4043.	1.6	61
49	Atrial Linear Ablations in Pigs. Circulation, 1999, 100, 419-426.	1.6	60
50	Detailed endocardial mapping accurately predicts the transmural extent of myocardial infarction. Journal of the American College of Cardiology, 2001, 37, 1590-1597.	1.2	56
51	Human embryonic stem cells for myocardial regeneration. Heart Failure Reviews, 2003, 8, 229-236.	1.7	55
52	Differentiation Pathways in Human Embryonic Stem Cell-Derived Cardiomyocytes. Annals of the New York Academy of Sciences, 2005, 1047, 50-65.	1.8	55
53	Controlling the Cellular Organization of Tissue-Engineered Cardiac Constructs. Annals of the New York Academy of Sciences, 2004, 1015, 299-311.	1.8	54
54	Towards Precision Medicine With Human iPSCs for Cardiac Channelopathies. Circulation Research, 2019, 125, 653-658.	2.0	53

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55	Cell Therapy for Modification of the Myocardial Electrophysiological Substrate. Circulation, 2008, 117, 720-731.	1.6	51
56	Flecainide therapy suppresses exercise-induced ventricular arrhythmias in patients with CASQ2-associated catecholaminergic polymorphic ventricular tachycardia. Heart Rhythm, 2013, 10, 1671-1675.	0.3	50
57	Human embryonic stem cells for cardiomyogenesis. Journal of Molecular and Cellular Cardiology, 2008, 45, 462-474.	0.9	49
58	Usefulness of electroanatomical mapping to differentiate between right ventricular outflow tract tachycardia and arrhythmogenic right ventricular dysplasia. American Journal of Cardiology, 2005, 95, 935-940.	0.7	43
59	Patient-Specific Drug Screening Using a Human Induced Pluripotent Stem Cell Model of Catecholaminergic Polymorphic Ventricular Tachycardia Type 2. Circulation: Arrhythmia and Electrophysiology, 2017, 10, .	2.1	42
60	Calcium Handling in Embryonic Stem Cell-Derived Cardiac Myocytes: Of Mice and Men. Annals of the New York Academy of Sciences, 2006, 1080, 207-215.	1.8	41
61	Uncovering the Role of Hypermethylation by CTG Expansion in Myotonic Dystrophy Type 1ÂUsing Mutant Human Embryonic Stem Cells. Stem Cell Reports, 2015, 5, 221-231.	2.3	40
62	Induced pluripotent stem cells for cardiac repair. Cellular and Molecular Life Sciences, 2012, 69, 3285-3299.	2.4	37
63	Online Myocardial Viability Assessment in the Catheterization Laboratory via NOGA Electroanatomic Mapping. Circulation, 2001, 104, 1005-1011.	1.6	35
64	Potential Applications of Human Embryonic Stem Cell-Derived Cardiomyocytes. Annals of the New York Academy of Sciences, 2004, 1015, 285-298.	1.8	32
65	Cardiac safety pharmacology: from human ether-a-gogo related gene channel block towards induced pluripotent stem cell based disease models. Expert Opinion on Drug Safety, 2012, 11, 285-298.	1.0	31
66	Optogenetics for suppression of cardiac electrical activity in human and rat cardiomyocyte cultures. Neurophotonics, 2015, 2, 1.	1.7	28
67	Making better scar: Emerging approaches for modifying mechanical and electrical properties following infarction and ablation. Progress in Biophysics and Molecular Biology, 2016, 120, 134-148.	1.4	28
68	Polymorphic ventricular tachycardia, ischaemic ventricular fibrillation, and torsade de pointes: importance of the QT and the coupling interval in the differential diagnosis. European Heart Journal, 2021, 42, 3965-3975.	1.0	28
69	Myocardial regeneration strategies using human embryonic stem cell-derived cardiomyocytes. Journal of Controlled Release, 2006, 116, 211-218.	4.8	26
70	Pluripotent Stem Cellâ€Based Platforms in Cardiac Disease Modeling and Drug Testing. Clinical Pharmacology and Therapeutics, 2017, 102, 203-208.	2.3	26
71	Development of Cardiomyocytes from Human ES Cells. Methods in Enzymology, 2003, 365, 461-473.	0.4	25
72	Vascularization shaping the heart. Annals of the New York Academy of Sciences, 2010, 1188, 46-51.	1.8	25

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73	Importance of Ventricular Tachycardia Storms Not Terminated by Implantable Cardioverter Defibrillators Shocks in Patients With CASQ2 Associated Catecholaminergic Polymorphic Ventricular Tachycardia. American Journal of Cardiology, 2012, 110, 72-76.	0.7	25
74	Concise Review: Reprogramming Strategies for Cardiovascular Regenerative Medicine: From Induced Pluripotent Stem Cells to Direct Reprogramming. Stem Cells Translational Medicine, 2014, 3, 448-457.	1.6	23
75	Synthetic cells with self-activating optogenetic proteins communicate with natural cells. Nature Communications, 2022, 13, 2328.	5.8	23
76	High-Resolution Optical Mapping of Ventricular Tachycardia in Rats with Chronic Myocardial Infarction. PACE - Pacing and Clinical Electrophysiology, 2010, 33, 687-695.	0.5	22
77	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.	2.9	22
78	Three-dimensional endocardial impedance mapping: a new approach for myocardial infarction assessment. American Journal of Physiology - Heart and Circulatory Physiology, 2001, 280, H179-H188.	1.5	19
79	Electrocardiographic Comparison of Ventricular Premature Complexes during Exercise Test in Patients with CPVT and Healthy Subjects. PACE - Pacing and Clinical Electrophysiology, 2015, 38, 398-402.	0.5	18
80	Titin Circular RNAs Create a Back-Splice Motif Essential for SRSF10 Splicing. Circulation, 2021, 143, 1502-1512.	1.6	18
81	Stem cells as biological heart pacemakers. Expert Opinion on Biological Therapy, 2005, 5, 1531-1537.	1.4	17
82	Scalable Production of Cardiomyocytes Derived from c-Myc Free Induced Pluripotent Stem Cells. Tissue Engineering - Part A, 2011, 17, 1027-1037.	1.6	15
83	A combined gene and cell therapy approach for restoration of conduction. Heart Rhythm, 2011, 8, 121-130.	0.3	13
84	Chronic Akt1 Deficiency Attenuates Adverse Remodeling and Enhances Angiogenesis After Myocardial Infarction. Circulation: Cardiovascular Imaging, 2013, 6, 992-1000.	1.3	13
85	Single-Cell Mechanical Analysis of Human Pluripotent Stem Cell-Derived Cardiomyocytes for Drug Testing and Pathophysiological Studies. Stem Cell Reports, 2020, 15, 587-596.	2.3	13
86	Optogenetic modulation of cardiac action potential properties may prevent arrhythmogenesis in short and long QT syndromes. JCI Insight, 2021, 6, .	2.3	13
87	Technical delivery of myogenic cells through an endocardial injection catheter for myocardial cell implantation. International Journal of Cardiovascular Interventions, 2000, 3, 227-230.	0.5	12
88	Triiodothyronine and dexamethasone alter potassium channel expression and promote electrophysiological maturation of human-induced pluripotent stem cell-derived cardiomyocytes. Journal of Molecular and Cellular Cardiology, 2021, 161, 130-138.	0.9	12
89	Cell and gene therapy strategies for the treatment of postmyocardial infarction ventricular arrhythmias. Annals of the New York Academy of Sciences, 2010, 1188, 32-38.	1.8	11
90	Optogenetic Neuromodulation ofÂthe Heart. Journal of the American College of Cardiology, 2017, 70, 2791-2794.	1.2	11

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91	Hydrogels for cardiac tissue regeneration. Bio-Medical Materials and Engineering, 2008, 18, 309-14.	0.4	10
92	Electrophysiologic implications of myocardial stem cell therapies. Heart Rhythm, 2008, 5, S48-S52.	0.3	9
93	Robust Fabrication of Composite 3D Scaffolds with Tissue-Specific Bioactivity: A Proof-of-Concept Study. ACS Applied Bio Materials, 2020, 3, 4974-4986.	2.3	9
94	Experimental Molecular and Stem Cell Therapies in Cardiac Electrophysiology. Annals of the New York Academy of Sciences, 2008, 1123, 224-231.	1.8	8
95	Hydrogels for cardiac tissue regeneration. Bio-Medical Materials and Engineering, 2008, 18, 309-314.	0.4	8
96	Specific Therapy Based on the Genotype in a Malignant Form of Long QT3, Carrying the V411M Mutation. International Heart Journal, 2019, 60, 979-982.	0.5	8
97	Accurate Linear Radiofrequency Lesions Guided by a Nonfluoroscopic Electroanatomic Mapping Method During Atrial Fibrillation. PACE - Pacing and Clinical Electrophysiology, 2001, 24, 1672-1678.	0.5	7
98	Electroanatomical mapping and radiofrequency ablation of an accessory pathway associated with a large aneurysm of the coronary sinus. Europace, 2004, 6, 608-612.	0.7	7
99	Cardiovascular Therapeutic Aspects of Cell Therapy and Stem Cells. Annals of the New York Academy of Sciences, 2006, 1080, 415-425.	1.8	7
100	Cardiac optogenetics: the next frontier. Europace, 2018, 20, 1910-1918.	0.7	7
101	Characterization of the mechanism by which a nonsense variant in RYR2 leads to disordered calcium handling. Physiological Reports, 2022, 10, e15265.	0.7	7
102	From Gene Therapy and Stem Cells to Clinical Electrophysiology. PACE - Pacing and Clinical Electrophysiology, 2006, 29, 996-1005.	0.5	5
103	Electrophysiological Coupling of Transplanted Cardiomyocytes. Circulation Research, 2007, 101, 433-435.	2.0	5
104	The Third Intron of the Interferon Regulatory Factor-8 Is an Initiator of Repressed Chromatin Restricting Its Expression in Non-Immune Cells. PLoS ONE, 2016, 11, e0156812.	1.1	5
105	Gap junctions, stem cells, and cell therapy: Rhythmic/arrhythmic implications. Heart Rhythm, 2012, 9, 1512-1516.	0.3	4
106	Optogenetic Control of Human Induced Pluripotent Stem Cellâ€Derived Cardiac Tissue Models. Journal of the American Heart Association, 2022, , e021615.	1.6	4
107	Derivation and properties of human embryonic stem cell-derived cardiomyocytes. Gene Therapy and Regulation, 2001, 1, 387-398.	0.3	3
108	Modulation of excessive neuronal activity by fibroblasts: Potential use in treatment of Parkinson's disease. Restorative Neurology and Neuroscience, 2010, 28, 803-815.	0.4	3

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109	Insights from the Third Dimension: Cardiac Organoids Help Identify Regenerative Pathways. Cell Stem Cell, 2019, 24, 833-834.	5.2	2
110	Reply to â€˜Are atrial human pluripotent stem cell-derived cardiomyocytes ready to identify drugs that beat atrial fibrillation?â€™. Nature Communications, 2021, 12, 1729.	5.8	2
111	Type of Anemia, Chronic Non-cardiovascular Illnesses, and Outcomes of Patients with ST-segment Elevation Myocardial Infarction. Rambam Maimonides Medical Journal, 2020, 11, e0011.	0.4	2
112	Left Ventricular Systolic Dysfunction Due to Atrial Fibrillation: Clinical and Echocardiographic Predictors. Cardiac Failure Review, 2021, 7, e16.	1.2	2
113	Nonâ€ischemic sudden cardiac arrest: Role of 12 lead Holter, family screening and genetic testing. PACE - Pacing and Clinical Electrophysiology, 2021, 44, 1347-1354.	0.5	1
114	Restoration of heart functions using human embryonic stem cells derived heart muscle cells. Discovery Medicine, 2005, 5, 11-7.	0.5	1
115	Temporal Changes in the Endocardial ST Segment During the Evolution of Myocardial Infarction in Dogs. PACE - Pacing and Clinical Electrophysiology, 2002, 25, 1616-1623.	0.5	0
116	Biologic Pacemakers: Past, Present, and Future. Cardiac Electrophysiology Clinics, 2011, 3, 69-76.	0.7	0
117	Ablation of idiopathic ventricular fibrillation triggered by ventricular premature beat originating from myocardium of right ventricle: Case report. Journal of Cardiology Cases, 2014, 9, 109-112.	0.2	0
118	Using Decellularization/Recellularization Processes to Prepare Liver and Cardiac Engineered Tissues. Methods in Molecular Biology, 2021, 2273, 111-129.	0.4	0
119	Is image integration with preprocedural CT a necessity?. International Journal of Cardiovascular Imaging, 2021, , 1.	0.7	0
120	shRNAs Targeting a Common KCNQ1 Variant Could Alleviate Long-QT1 Disease Severity by Inhibiting a Mutant Allele. International Journal of Molecular Sciences, 2022, 23, 4053.	1.8	0
121	Factors Associated with Left Ventricular Function Recovery in Patients with Atrial Fibrillation Related Cardiomyopathy.. Israel Medical Association Journal, 2022, 24, 101-106.	0.1	0
122	PO-660-03 OPTICAL CONTROL OF ARRHYTHMIA MORPHOLOGY IN HUMAN INDUCED PLURIPOTENT STEM CELL DERIVED CARDIOMYOCYTE CELL SHEETS. Heart Rhythm, 2022, 19, S282.	0.3	0