Garry Duffy

List of Publications by Year
in descending order

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92 papers	3,506 citations	126907 33 h-index	149698 56 g-index
93 all docs	93 docs citations	93 times ranked	5394 citing authors

#	Article	IF	Citations
1	The healing of bony defects by cell-free collagen-based scaffolds compared to stem cell-seeded tissue engineered constructs. Biomaterials, 2010, 31, 9232-9243.	11.4	204
2	Innovative Collagen Nanoâ€Hydroxyapatite Scaffolds Offer a Highly Efficient Nonâ€Viral Gene Delivery Platform for Stem Cellâ€Mediated Bone Formation. Advanced Materials, 2012, 24, 749-754.	21.0	182
3	Drug and cell delivery for cardiac regeneration. Advanced Drug Delivery Reviews, 2015, 84, 85-106.	13.7	170
4	Combinatorial Gene Therapy Accelerates Bone Regeneration: Nonâ€Viral Dual Delivery of VEGF and BMP2 in a Collagenâ€Nanohydroxyapatite Scaffold. Advanced Healthcare Materials, 2015, 4, 223-227.	7.6	151
5	Comparison of biomaterial delivery vehicles for improving acute retention of stem cells in the infarcted heart. Biomaterials, 2014, 35, 6850-6858.	11.4	140
6	Bone Marrowâ€“Derived Mesenchymal Stem Cells Promote Angiogenic Processes in a Time- and Dose-Dependent MannerIn Vitro. Tissue Engineering - Part A, 2009, 15, 2459-2470.	3.1	127
7	The delayed addition of human mesenchymal stem cells to pre-formed endothelial cell networks results in functional vascularization of a collagenâ€“glycosaminoglycan scaffold in vivo. Acta Biomaterialia, 2013, 9, 9303-9316.	8.3	111
8	Supramolecular Hydrogels with Reverse Thermal Gelation Properties from (Oligo)tyrosine Containing Block Copolymers. Biomacromolecules, 2013, 14, 200-206.	5.4	103
9	Delivering Nucleicâ€Acid Based Nanomedicines on Biomaterial Scaffolds for Orthopedic Tissue Repair: Challenges, Progress and Future Perspectives. Advanced Materials, 2016, 28, 5447-5469.	21.0	95
10	The development of non-viral gene-activated matrices for bone regeneration using polyethyleneimine (PEI) and collagen-based scaffolds. Journal of Controlled Release, 2012, 158, 304-311.	9.9	93
11	Mechanical characterization of a customized decellularized scaffold for vascular tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 8, 58-70.	3.1	85
12	A novel collagen-nanohydroxyapatite microRNA-activated scaffold for tissue engineering applications capable of efficient delivery of both miR-mimics and antagomiRs to human mesenchymal stem cells. Journal of Controlled Release, 2015, 200, 42-51.	9.9	85
13	Nanomedicines for advanced cancer treatments: Transitioning towards responsive systems. International Journal of Pharmaceutics, 2016, 515, 132-164.	5.2	83
14	Non-invasive marker-independent high content analysis of a microphysiological human pancreas-on-a-chip model. Matrix Biology, 2020, 85-86, 205-220.	3.6	72
15	Sustained release of targeted cardiac therapy with a replenishable implanted epicardial reservoir. Nature Biomedical Engineering, 2018, 2, 416-428.	22.5	70
16	Towards in vitro vascularisation of collagen-GAG scaffolds. , 2011, 21, 15-30.		70
17	Effect of collagenâ€glycosaminoglycan scaffold pore size on matrix mineralization and cellular behavior in different cell types. Journal of Biomedical Materials Research - Part A, 2016, 104, 291-304.	4.0	68
18	Next generation bone tissue engineering: non-viral miR-133a inhibition using collagen-nanohydroxyapatite scaffolds rapidly enhances osteogenesis. Scientific Reports, 2016, 6, 27941.	3.3	68

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19	RANKL and OPG activity is regulated by injury size in networks of osteocyte-like cells. Bone, 2011, 48, 182-188.	2.9	66
20	Development of a thermoresponsive chitosan gel combined with human mesenchymal stem cells and desferrioxamine as a multimodal pro-angiogenic therapeutic for the treatment of critical limb ischaemia. Journal of Controlled Release, 2012, 161, 73-80.	9.9	64
21	Hyperthermiaâ€Induced Drug Delivery from Thermosensitive Liposomes Encapsulated in an Injectable Hydrogel for Local Chemotherapy. Advanced Healthcare Materials, 2014, 3, 854-859.	7.6	64
22	Biomaterialâ€Enhanced Cell and Drug Delivery: Lessons Learned in the Cardiac Field and Future Perspectives. Advanced Materials, 2016, 28, 5648-5661.	21.0	63
23	A stimuli responsive liposome loaded hydrogel provides flexible on-demand release of therapeutic agents. Acta Biomaterialia, 2017, 48, 110-119.	8.3	57
24	High levels of ephrinB2 over-expression increases the osteogenic differentiation of human mesenchymal stem cells and promotes enhanced cell mediated mineralisation in a polyethyleneimine-ephrinB2 gene-activated matrix. Journal of Controlled Release, 2013, 165, 173-182.	9.9	52
25	Temporal and Spatial Changes in Cartilage-Matrix-Specific Gene Expression in Mesenchymal Stem Cells in Response to Dynamic Compression. Tissue Engineering - Part A, 2011, 17, 3085-3093.	3.1	51
26	An actuatable soft reservoir modulates host foreign body response. Science Robotics, 2019, 4, .	17.6	49
27	Gene-Eluting Stents: Comparison of Adenoviral and Adeno- Associated Viral Gene Delivery to the Blood Vessel Wall In Vivo. Human Gene Therapy, 2006, 17, 741-750.	2.7	48
28	An injectable alginate/extra cellular matrix (ECM) hydrogel towards acellular treatment of heart failure. Drug Delivery and Translational Research, 2019, 9, 1-13.	5.8	47
29	Orchestrating osteogenic differentiation of mesenchymal stem cellsâ€"identification of placental growth factor as a mechanosensitive gene with a pro-osteogenic role. Stem Cells, 2013, 31, 2420-2431.	3.2	43
30	A collagen cardiac patch incorporating alginate microparticles permits the controlled release of hepatocyte growth factor and insulin-like growth factor-1 to enhance cardiac stem cell migration and proliferation. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e384-e394.	2.7	42
31	Non-viral gene-activated matrices. Organogenesis, 2013, 9, 22-28.	1.2	40
32	Controlled Heterotypic Pseudo-Islet Assembly of Human Î²-Cells and Human Umbilical Vein Endothelial Cells Using Magnetic Levitation. Tissue Engineering - Part A, 2020, 26, 387-399.	3.1	39
33	Harnessing an Inhibitory Role of miR-16 in Osteogenesis by Human Mesenchymal Stem Cells for Advanced Scaffold-Based Bone Tissue Engineering. Tissue Engineering - Part A, 2019, 25, 24-33.	3.1	37
34	Mesenchymal Stem Cells Overexpressing Ephrin-B2 Rapidly Adopt an Early Endothelial Phenotype with Simultaneous Reduction of Osteogenic Potential. Tissue Engineering - Part A, 2010, 16, 2755-2768.	3.1	36
35	Optimum Parameters for Freeze-Drying Decellularized Arterial Scaffolds. Tissue Engineering - Part C: Methods, 2013, 19, 981-990.	2.1	35
36	Medical devices, smart drug delivery, wearables and technology for the treatment of Diabetes Mellitus. Advanced Drug Delivery Reviews, 2022, 185, 114280.	13.7	32

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37	Towards Alternative Approaches for Coupling of a Soft Robotic Sleeve to the Heart. Annals of Biomedical Engineering, 2018, 46, 1534-1547.	2.5	31
38	Rapid bone repair with the recruitment of CD206+M2-like macrophages using non-viral scaffold-mediated miR-133a inhibition of host cells. Acta Biomaterialia, 2020, 109, 267-279.	8.3	30
39	Advances in polymeric islet cell encapsulation technologies to limit the foreign body response and provide immunoisolation. Current Opinion in Pharmacology, 2017, 36, 66-71.	3.5	27
40	Hydrogels in adipose tissue engineeringâ€"Potential application in postâ€mastectomy breast regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 2234-2247.	2.7	27
41	The pre-vascularisation of a collagen-chondroitin sulphate scaffold using human amniotic fluid-derived stem cells to enhance and stabilise endothelial cell-mediated vessel formation. Acta Biomaterialia, 2015, 26, 263-273.	8.3	26
42	A bioresorbable biomaterial carrier and passive stabilization device to improve heart function post-myocardial infarction. Materials Science and Engineering C, 2019, 103, 109751.	7.3	24
43	Design Considerations for Macroencapsulation Devices for Stem Cell Derived Islets for the Treatment of Type 1 Diabetes. Advanced Science, 2021, 8, e2100820.	11.2	24
44	Device-Based Solutions to Improve Cardiac Physiology and Hemodynamics in HeartÂFailure With Preserved EjectionÂFraction. JACC Basic To Translational Science, 2021, 6, 772-795.	4.1	24
45	Enhanced delivery of microRNA mimics to cardiomyocytes using ultrasound responsive microbubbles reverses hypertrophy in an in-vitro model. Technology and Health Care, 2014, 22, 37-51.	1.2	23
46	Resveratrol significantly improves cell survival in comparison to dexrazoxane and carvedilol in a h9c2 model of doxorubicin induced cardiotoxicity. Biomedicine and Pharmacotherapy, 2021, 140, 111702.	5.6	23
47	Pre-culture of mesenchymal stem cells within RGD-modified hyaluronic acid hydrogel improves their resilience to ischaemic conditions. Acta Biomaterialia, 2020, 107, 78-90.	8.3	22
48	Olfactory Derived Stem Cells Delivered in a Biphasic Conduit Promote Peripheral Nerve Repair In Vivo. Stem Cells Translational Medicine, 2017, 6, 1894-1904.	3.3	21
49	Direct UV-Triggered Thiolâ€"ene Cross-Linking of Electrospun Polyester Fibers from Unsaturated Poly(macrolactone)s and Their Drug Loading by Solvent Swelling. Biomacromolecules, 2017, 18, 4292-4298.	5.4	21
50	Sustained Release of Vascular Endothelial Growth Factor from Poly(Îµ-caprolactone-PEG-Îµ-caprolactone)-b-Poly(<scp>l</scp>-lactide) Multiblock Copolymer Microspheres. ACS Omega, 2019, 4, 11481-11492.	3.5	21
51	Development of a nanomedicine-loaded hydrogel for sustained delivery of an angiogenic growth factor to the ischaemic myocardium. Drug Delivery and Translational Research, 2020, 10, 440-454.	5.8	21
52	The application of a thermoresponsive chitosan/Î²â€GP gel to enhance cell repopulation of decellularized vascular scaffolds. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 1700-1710.	3.4	20
53	Fabrication of biodegradable textile scaffold based on hydrophobized hyaluronic acid. International Journal of Biological Macromolecules, 2017, 95, 903-909.	7.5	19
54	<u>A</u>dvanced <u>M</u>aterial <u>Cath</u>eter (AMCath), a minimally invasive endocardial catheter for the delivery of fast-gelling covalently cross-linked hyaluronic acid hydrogels. Journal of Biomaterials Applications, 2018, 33, 681-692.	2.4	19

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55	Hydrogels: 3D Drug Delivery Systems for Nanoparticles and Extracellular Vesicles. Biomedicines, 2021, 9, 1694.	3.2	19
56	Encapsulation of cardiac stem cells in superoxide dismutase-loaded alginate prevents doxorubicin-mediated toxicity. Journal of Tissue Engineering and Regenerative Medicine, 2013, 7, 302-311.	2.7	18
57	Vascular Endothelial Growth Factorâ€"Releasing Microspheres Based on Poly(Îµ-Caprolactone-PEG-Îµ-Caprolactone)-b-Poly(L-Lactide) Multiblock Copolymers Incorporated in a Three-Dimensional Printed Poly(Dimethylsiloxane) Cell Macroencapsulation Device. Journal of Pharmaceutical Sciences, 2020, 109, 863-870.	3.3	15
58	Collagen and Endothelial Cell Coculture Improves Î²-Cell Functionality and Rescues Pancreatic Extracellular Matrix. Tissue Engineering - Part A, 2021, 27, 977-991.	3.1	15
59	Nidogenâ€1 Mitigates Ischemia and Promotes Tissue Survival and Regeneration. Advanced Science, 2021, 8, 2002500.	11.2	15
60	Additive Manufacturing of Multiâ€Scale Porous Soft Tissue Implants That Encourage Vascularization and Tissue Ingrowth. Advanced Healthcare Materials, 2021, 10, e2100229.	7.6	14
61	Implantable Therapeutic Reservoir Systems for Diverse Clinical Applications in Large Animal Models. Advanced Healthcare Materials, 2020, 9, e2000305.	7.6	13
62	An Experimental Investigation of the Effect of Mechanical and Biochemical Stimuli on Cell Migration Within a Decellularized Vascular Construct. Annals of Biomedical Engineering, 2014, 42, 2029-2038.	2.5	12
63	Insulin-like growth factor-1 (IGF-1) poly (lactic-co-glycolic acid) (PLGA) microparticles â€" development, characterisation, and in vitro assessment of bioactivity for cardiac applications. Journal of Microencapsulation, 2019, 36, 267-277.	2.8	10
64	An in vitro investigation to assess procedure parameters for injecting therapeutic hydrogels into the myocardium. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 2618-2629.	3.4	9
65	Optimization of cell growth on palmitoylâ€hyaluronan knitted scaffolds developed for tissue engineering applications. Journal of Biomedical Materials Research - Part A, 2018, 106, 1488-1499.	4.0	9
66	Development of a Sustained Release Nano-In-Gel Delivery System for the Chemotactic and Angiogenic Growth Factor Stromal-Derived Factor 1Î±. Pharmaceutics, 2020, 12, 513.	4.5	9
67	Translational Studies on the Potential of a VEGF Nanoparticle-Loaded Hyaluronic Acid Hydrogel. Pharmaceutics, 2021, 13, 779.	4.5	9
68	Fluorescence lifetime metabolic mapping of hypoxiaâ€induced damage in pancreatic pseudoâ€islets. Journal of Biophotonics, 2020, 13, e202000375.	2.3	8
69	RGD-decorated cholesterol stabilized polyplexes for targeted siRNA delivery to glioblastoma cells. Drug Delivery and Translational Research, 2019, 9, 679-693.	5.8	7
70	The Foreign Body Response to an Implantable Therapeutic Reservoir in a Diabetic Rodent Model. Tissue Engineering - Part C: Methods, 2021, 27, 515-528.	2.1	7
71	Towards the use of localised delivery strategies to counteract cancer therapyâ€"induced cardiotoxicities. Drug Delivery and Translational Research, 2021, 11, 1924-1942.	5.8	7
72	Assessing the Effects of VEGF Releasing Microspheres on the Angiogenic and Foreign Body Response to a 3D Printed Silicone-Based Macroencapsulation Device. Pharmaceutics, 2021, 13, 2077.	4.5	7

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73	Investigating the effect of hypoxic culture on the endothelial differentiation of human amniotic fluidâ€derived stem cells. Journal of Anatomy, 2015, 227, 767-780.	1.5	6
74	Mesenchymal stem cells to augment therapeutic angiogenesis in hind-limb ischemia models: how important is their source?. Stem Cell Research and Therapy, 2013, 4, 131.	5.5	5
75	The Scissors Model of Microcrack Detection in Bone: Work in Progress. Materials Research Society Symposia Proceedings, 2010, 1274, 1.	0.1	3
76	Injection techniques for bulk cell seeding decellularised vascular scaffolds. International Journal of Nano and Biomaterials, 2012, 4, 96.	0.1	3
77	Enhancing medial layer recellularization of tissue-engineered blood vessels using radial microchannels. Regenerative Medicine, 2019, 14, 1013-1028.	1.7	3
78	A versatile technique for high-resolution three-dimensional imaging of human arterial segmentsÂusing microcomputed tomography. JVS Vascular Science, 2021, 2, 13-19.	1.1	3
79	Developing a morphomics framework to optimize implant site-specific design parameters for islet macroencapsulation devices. Journal of the Royal Society Interface, 2021, 18, 20210673.	3.4	3
80	Therapeutic Resevoirs: Implantable Therapeutic Reservoir Systems for Diverse Clinical Applications in Large Animal Models (Adv. Healthcare Mater. 11/2020). Advanced Healthcare Materials, 2020, 9, 2070035.	7.6	2
81	Cardiac responses to biomaterials. , 2020, , 573-599.		2
82	A Thermoresponsive Chitosan/Î²-Glycerophosphate Hydrogel for Minimally Invasive Treatment of Critical Limb Ischaemia. Polymers, 2021, 13, 3568.	4.5	2
83	Spatiotemporal delivery of small molecule therapeutics using a thermosensitive liposome loaded hydrogel. Journal of Controlled Release, 2015, 213, e28-e29.	9.9	1
84	Enhancing Delivery of Smallâ€Moleculeâ€•and Cellâ€Based Therapies for Ovarian Cancer Using Advanced Delivery Strategies. Advanced Therapeutics, 2020, 3, 2000144.	3.2	1
85	P.123: Establishing the Controlled Delivery of VEGF Using a Hydrogel Loaded Soft Robotic Drug Delivery System With the Aim to Prevascularise Implant Site for Islet Transplantation. Transplantation, 2021, 105, S47-S48.	1.0	1
86	A method of characterising the complex anatomy of vascular occlusions and <scp>3D</scp> printing biomimetic analogues. Journal of Anatomy, 2022, , .	1.5	1
87	Towards a Clinically Applicable Tissue Engineered Vascular Graft. , 2013, , .		0
88	ANGI-08. TARGETING THE RhoGEF BETA-PIX TO ENHANCE THE ACTIVITY OF BEVACIZUMAB IN GLIOBLASTOMA: A NANOPARTICLE MEDIATED GENE SILENCING APPROACH. Neuro-Oncology, 2018, 20, vi29-vi30.	1.2	0
89	In Vitro Vascularization: Tissue Engineering Constructs. , 0, , 4043-4062.		0
90	In vitroVascularization: Tissue Engineering Constructs. , 2017, , 723-742.		0

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91	P.122: Development of an Oxygen Durability Model to Overcome Hypoxia in Encapsulated Islets Within a Functionalized Oxygenated Biomaterial. Transplantation, 2021, 105, S46-S47.	1.0	0
92	P.120: Additive Manufactured Macroencapsulation Devices for Islet Cell Replacement Therapy. Transplantation, 2021, 105, S45-S45.	1.0	0