Mark Lewis

List of Publications by Year
in descending order

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129 papers	5,145 citations	81900 39 h-index	98798 67 g-index
133 all docs	133 docs citations	133 times ranked	5983 citing authors

#	Article	IF	Citations
1	Phosphate glasses for tissue engineering: Part 1. Processing and characterisation of a ternary-based P2O5â€“CaOâ€“Na2O glass system. Biomaterials, 2004, 25, 491-499.	11.4	334
2	Tumour-derived TGF-Î²1 modulates myofibroblast differentiation and promotes HGF/SF-dependent invasion of squamous carcinoma cells. British Journal of Cancer, 2004, 90, 822-832.	6.4	228
3	3D printing for chemical, pharmaceutical and biological applications. Nature Reviews Chemistry, 2018, 2, 422-436.	30.2	210
4	Processing, characterisation and biocompatibility of iron-phosphate glass fibres for tissue engineering. Biomaterials, 2004, 25, 3223-3232.	11.4	202
5	Phosphate glasses for tissue engineering: Part 2. Processing and characterisation of a ternary-based P2O5â€“CaOâ€“Na2O glass fibre system. Biomaterials, 2004, 25, 501-507.	11.4	149
6	Î±vÎ²6integrin promotes invasion of squamous carcinoma cells through up-regulation of matrix metalloproteinase-9. International Journal of Cancer, 2001, 92, 641-650.	5.1	140
7	Matrix metalloproteinases and oral cancer. Oral Oncology, 1999, 35, 227-233.	1.5	138
8	Craniofacial muscle engineering using a 3-dimensional phosphate glass fibre construct. Biomaterials, 2005, 26, 1497-1505.	11.4	128
9	Effect of iron on the surface, degradation and ion release properties of phosphate-based glass fibres. Acta Biomaterialia, 2005, 1, 553-563.	8.3	125
10	Soluble phosphate glasses: in vitro studies using human cells of hard and soft tissue origin. Biomaterials, 2004, 25, 2283-2292.	11.4	118
11	Expression of the Î±vÎ²6 Integrin Promotes Migration and Invasion in Squamous Carcinoma Cells. Journal of Investigative Dermatology, 2001, 117, 67-73.	0.7	114
12	Human adult craniofacial muscle-derived cells: neural-cell adhesion-molecule (NCAM;) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td (CD5 Biochemistry, 2004, 40, 25.	3.1	100
13	Gelatinase-B (matrix metalloproteinase-9; MMP-9) secretion is involved in the migratory phase of human and murine muscle cell cultures. Journal of Muscle Research and Cell Motility, 2000, 21, 223-233.	2.0	94
14	Betelâ€derived alkaloid upâ€regulates keratinocyte alphavbeta6 integrin expression and promotes oral submucous fibrosis. Journal of Pathology, 2011, 223, 366-377.	4.5	91
15	Î±vÎ²6 Integrin Upregulates Matrix Metalloproteinase 9 and Promotes Migration of Normal Oral Keratinocytes. Journal of Investigative Dermatology, 2001, 116, 898-904.	0.7	87
16	The IGFâ€I splice variant MGF increases progenitor cells in ALS, dystrophic, and normal muscle. FEBS Letters, 2007, 581, 2727-2732.	2.8	86
17	Cancer, pre-cancer and normal oral cells distinguished by dielectrophoresis. Analytical and Bioanalytical Chemistry, 2011, 401, 2455-2463.	3.7	78
18	Effect of diabetes and metabolic control on de novo bone formation following guided bone regeneration. Clinical Oral Implants Research, 2010, 21, 71-79.	4.5	76

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19	Partial characterization of an immortalized human trophoblast cell-line, TCL-1, which possesses a CSF-1 autocrine loop. Placenta, 1996, 17, 137-146.	1.5	75
20	Characterization and optimization of a simple, repeatable system for the long term in vitro culture of aligned myotubes in 3D. Journal of Cellular Biochemistry, 2012, 113, 1044-1053.	2.6	73
21	alphav integrins play an important role in myofibroblast differentiation. Wound Repair and Regeneration, 2004, 12, 461-470.	3.0	72
22	Factors affecting the structure and maturation of human tissue engineered skeletal muscle. Biomaterials, 2013, 34, 5759-5765.	11.4	69
23	Early detection of oral cancer â€“ Is dielectrophoresis the answer?. Oral Oncology, 2007, 43, 199-203.	1.5	67
24	Neuromuscular Junction Formation in Tissue-Engineered Skeletal Muscle Augments Contractile Function and Improves Cytoskeletal Organization. Tissue Engineering - Part A, 2015, 21, 2595-2604.	3.1	63
25	Modelling in vivo skeletal muscle ageing in vitro using threeâ€dimensional bioengineered constructs. Aging Cell, 2012, 11, 986-995.	6.7	62
26	The acute angiogenic signalling response to lowâ€load resistance exercise with blood flow restriction. European Journal of Sport Science, 2018, 18, 397-406.	2.7	57
27	Myogenic precursor cells in craniofacial muscles. Oral Diseases, 2007, 13, 134-140.	3.0	56
28	Synergy between myogenic and non-myogenic cells in a 3D tissue-engineered craniofacial skeletal muscle construct. Journal of Tissue Engineering and Regenerative Medicine, 2008, 2, 408-417.	2.7	56
29	The effect of cell density on the maturation and contractile ability of muscle derived cells in a 3D tissueâ€engineered skeletal muscle model and determination of the cellular and mechanical stimuli required for the synthesis of a postural phenotype. Journal of Cellular Physiology, 2010, 225, 646-653.	4.1	53
30	Annexin-enriched osteoblast-derived vesicles act as an extracellular site of mineral nucleation within developing stem cell cultures. Scientific Reports, 2017, 7, 12639.	3.3	53
31	Role of vitronectin and fibronectin receptors in oral mucosal and dermal myofibroblast differentiation. Biology of the Cell, 2007, 99, 601-614.	2.0	52
32	Quantification of Anion and Cation Release from a Range of Ternary Phosphate-based Glasses with Fixed 45 mol% P2O5. Journal of Biomaterials Applications, 2005, 20, 65-80.	2.4	51
33	Impact of mechanical stretch on the cell behaviors of bone and surrounding tissues. Journal of Tissue Engineering, 2016, 7, 204173141561834.	5.5	51
34	Scalable 3D Printed Molds for Human Tissue Engineered Skeletal Muscle. Frontiers in Bioengineering and Biotechnology, 2019, 7, 20.	4.1	48
35	Androgens Affect Myogenesis In Vitro and Increase Local IGF-1 Expression. Medicine and Science in Sports and Exercise, 2012, 44, 610-615.	0.4	47
36	Reduction of myoblast differentiation following multiple population doublings in mouse C2C12 cells: A model to investigate ageing?. Journal of Cellular Biochemistry, 2011, 112, 3773-3785.	2.6	46

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37	Biocompatible 3D printed polymers via fused deposition modelling direct C₂C₁₂ cellular phenotype in vitro. Lab on A Chip, 2017, 17, 2982-2993.	6.0	46
38	Mechanical loading stimulates hypertrophy in tissueâ€engineered skeletal muscle: Molecular and phenotypic responses. Journal of Cellular Physiology, 2019, 234, 23547-23558.	4.1	45
39	High Magnesium Corrosion Rate has an Effect on Osteoclast and Mesenchymal Stem Cell Role During Bone Remodelling. Scientific Reports, 2018, 8, 10003.	3.3	45
40	The role of insulin-like-growth factor binding protein 2 (IGFBP2) and phosphatase and tensin homologue (PTEN) in the regulation of myoblast differentiation and hypertrophy. Growth Hormone and IGF Research, 2013, 23, 53-61.	1.1	42
41	Pexicrine effects of basement membrane components on paracrine signaling by renal tubular cells. Kidney International, 1996, 49, 48-58.	5.2	41
42	Soluble phosphate glass fibres for repair of bone-ligament interface. Journal of Materials Science: Materials in Medicine, 2005, 16, 1131-1136.	3.6	41
43	The extracellular matrix of muscle - implications for manipulation of the craniofacial musculature. European Journal of Oral Sciences, 2001, 109, 209-221.	1.5	40
44	Testosterone enables growth and hypertrophy in fusion impaired myoblasts that display myotube atrophy: deciphering the role of androgen and IGF-I receptorsÂ. Biogerontology, 2016, 17, 619-639.	3.9	40
45	Photodynamic therapy down-regulates the invasion promoting factors in human oral cancer. Archives of Oral Biology, 2006, 51, 1104-1111.	1.8	37
46	Acute mechanical overload increases IGF-I and MMP-9 mRNA in 3D tissue-engineered skeletal muscle. Biotechnology Letters, 2014, 36, 1113-1124.	2.2	37
47	Creating Interactions between Tissue-Engineered Skeletal Muscle and the Peripheral Nervous System. Cells Tissues Organs, 2016, 202, 143-158.	2.3	37
48	A three-dimensional in vitro model system to study the adaptation of craniofacial skeletal muscle following mechanostimulation. European Journal of Oral Sciences, 2005, 113, 218-224.	1.5	36
49	Development of a novel smart scaffold for human skeletal muscle regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2016, 10, 162-171.	2.7	35
50	Î±vÎ²3 and Î±vÎ²5 integrins and their role in muscle precursor cell adhesion. Biology of the Cell, 2008, 100, 465-477.	2.0	33
51	Impaired hypertrophy in myoblasts is improved with testosterone administration. Journal of Steroid Biochemistry and Molecular Biology, 2013, 138, 152-161.	2.5	33
52	Identifying the Cellular Mechanisms Leading to Heterotopic Ossification. Calcified Tissue International, 2015, 97, 432-444.	3.1	33
53	Muscling in on stem cells. Biology of the Cell, 2006, 98, 203-214.	2.0	32
54	Feasibility and Biocompatibility of 3Dâ€Printed Photopolymerized and Laser Sintered Polymers for Neuronal, Myogenic, and Hepatic Cell Types. Macromolecular Bioscience, 2018, 18, e1800113.	4.1	32

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55	Identification of matrix metalloproteinases and their tissue inhibitors type 1 and 2 in human masseter muscle. Archives of Oral Biology, 2000, 45, 431-440.	1.8	31
56	Epithelial cancer cells exhibit different electrical properties when cultured in 2D and 3D environments. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 5136-5141.	2.4	30
57	Value of laparotomy in the diagnosis of obscure gastrointestinal haemorrhage.. Gut, 1995, 37, 187-190.	12.1	28
58	A dielectrophoretic method of discrimination between normal oral epithelium, and oral and oropharyngeal cancer in a clinical setting. Analyst, The, 2015, 140, 5198-5204.	3.5	28
59	Resolvin E1 (R_vE₁) attenuates LPS induced inflammation and subsequent atrophy in C2C12 myotubes. Journal of Cellular Biochemistry, 2018, 119, 6094-6103.	2.6	27
60	The effect of experimental diabetes and glycaemic control on guided bone regeneration: histology and gene expression analyses. Clinical Oral Implants Research, 2018, 29, 139-154.	4.5	27
61	Northcroft Memorial Lecture 2005. Journal of Orthodontics, 2006, 33, 187-197.	1.0	25
62	Hypoxia Impairs Muscle Function and Reduces Myotube Size in Tissue Engineered Skeletal Muscle. Journal of Cellular Biochemistry, 2017, 118, 2599-2605.	2.6	25
63	Controlled Arrangement of Neuronal Cells on Surfaces Functionalized with Micropatterned Polymer Brushes. ACS Omega, 2018, 3, 12383-12391.	3.5	24
64	Bioengineered human skeletal muscle capable of functional regeneration. BMC Biology, 2020, 18, 145.	3.8	24
65	Defining the Balance between Regeneration and Pathological Ossification in Skeletal Muscle Following Traumatic Injury. Frontiers in Physiology, 2017, 8, 194.	2.8	23
66	Polydimethylsiloxane and poly(ether) ether ketone functionally graded composites for biomedical applications. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 93, 130-142.	3.1	23
67	3D-printable zwitterionic nano-composite hydrogel system for biomedical applications. Journal of Tissue Engineering, 2020, 11, 204173142096729.	5.5	23
68	Differential Response of Activated versus Non-Activated Renal Fibroblasts to Tubular Epithelial Cells: A Model of Initiation and Progression of Fibrosis?. Nephron Experimental Nephrology, 1998, 6, 132-143.	2.2	21
69	Leucine elicits myotube hypertrophy and enhances maximal contractile force in tissue engineered skeletal muscle in vitro. Journal of Cellular Physiology, 2017, 232, 2788-2797.	4.1	21
70	Human airway smooth muscle maintain in situ cell orientation and phenotype when cultured on aligned electrospun scaffolds. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2014, 307, L38-L47.	2.9	20
71	Single leg squat ratings by clinicians are reliable and predict excessive hip internal rotation moment. Gait and Posture, 2018, 61, 453-458.	1.4	20
72	Evidence for deciduaâ€"trophoblast interactions in early human pregnancy. Human Reproduction, 1993, 8, 965-968.	0.9	19

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73	Ironâ€phosphate glass fiber scaffolds for the hardâ€“soft interface regeneration: The effect of fiber diameter and flow culture condition on cell survival and differentiation. Journal of Biomedical Materials Research - Part A, 2008, 87A, 1017-1026.	4.0	18
74	Human endometrial fibroblasts immortalized by simian virus 40 large T antigen differentiate in response to a decidualization stimulus. Endocrinology, 1996, 137, 2225-2231.	2.8	18
75	The effect of mechanical strain on protease production by keratinocytes. British Journal of Dermatology, 2007, 158, 396-398.	1.5	17
76	Downhill running and exercise in hot environments increase leukocyte Hsp72 (HSPA1A) and Hsp90Î± (HSPC1) gene transcripts. Journal of Applied Physiology, 2015, 118, 996-1005.	2.5	17
77	PDGF is a potent initiator of bone formation in a tissue engineered model of pathological ossification. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e355-e367.	2.7	17
78	Sequential identification of a degradable phosphate glass scaffold for skeletal muscle regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2014, 8, 801-810.	2.7	16
79	Regulation by interleukin-1Î² of growth and collagenase production by choriocarcinoma cells. Placenta, 1994, 15, 13-20.	1.5	15
80	Brachial artery characteristics and microâ€vascular filtration capacity in rock climbers. European Journal of Sport Science, 2015, 15, 296-304.	2.7	15
81	Adapting the Electrospinning Process to Provide Three Unique Environments for a Tri-layered In Vitro Model of the Airway Wall. Journal of Visualized Experiments, 2015, , e52986.	0.3	14
82	An Assessment of Myotube Morphology, Matrix Deformation, and Myogenic mRNA Expression in Custom-Built and Commercially Available Engineered Muscle Chamber Configurations. Frontiers in Physiology, 2018, 9, 483.	2.8	14
83	Delayed Presentation of Intestinal Atresia and Intussusception - A Case Report and Literature Review. European Journal of Pediatric Surgery, 1993, 3, 296-298.	1.3	13
84	Stretching skeletal muscle in vitro: does it replicate in vivo physiology?. Biotechnology Letters, 2011, 33, 1513-1521.	2.2	13
85	Human-derived feeder fibroblasts for the culture of epithelial cells for clinical use. Regenerative Medicine, 2016, 11, 529-543.	1.7	13
86	The effect of chronic high insulin exposure upon metabolic and myogenic markers in C2C12 skeletal muscle cells and myotubes. Journal of Cellular Biochemistry, 2018, 119, 5686-5695.	2.6	13
87	Characterising hyperinsulinemia-induced insulin resistance in human skeletal muscle cells. Journal of Molecular Endocrinology, 2020, 64, 125-132.	2.5	13
88	Electrospun gelatin-based scaffolds as a novel 3D platform to study the function of contractile smooth muscle cells in vitro. Biomedical Physics and Engineering Express, 2018, 4, 045039.	1.2	12
89	Functional regeneration of tissue engineered skeletal muscle in vitro is dependent on the inclusion of basement membrane proteins. Cytoskeleton, 2019, 76, 371-382.	2.0	12
90	Differentiation of Bioengineered Skeletal Muscle within a 3D Printed Perfusion Bioreactor Reduces Atrophic and Inflammatory Gene Expression. ACS Biomaterials Science and Engineering, 2019, 5, 5525-5538.	5.2	12

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91	Bioengineered model of the human motor unit with physiologically functional neuromuscular junctions. Scientific Reports, 2021, 11, 11695.	3.3	12
92	â€˜From Death, Lead Me to Immortalityâ€™ â€“ Mantra of Ageing Skeletal Muscle. Current Genomics, 2013, 14, 256-267.	1.6	12
93	Sport and exercise medicine consultants are reliable in assessing tendon neovascularity using ultrasound Doppler. BMJ Open Sport and Exercise Medicine, 2018, 4, e000298.	2.9	11
94	Development of tissueâ€engineered skeletal muscle manufacturing variables. Biotechnology and Bioengineering, 2019, 116, 2364-2376.	3.3	11
95	Mechanical loading of tissue engineered skeletal muscle prevents dexamethasone induced myotube atrophy. Journal of Muscle Research and Cell Motility, 2021, 42, 149-159.	2.0	11
96	Effect of capillary shear stress on recovery and osteogenic differentiation of muscle-derived precursor cell populations. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 629-635.	2.7	10
97	Kinematic and kinetic differences between military patients with patellar tendinopathy and asymptomatic controls during single leg squats. Clinical Biomechanics, 2019, 62, 127-135.	1.2	10
98	Myosin proteins identified from masseter muscle using quantitative reverse transcriptase-polymerase chain reaction--a pilot study of the relevance to orthodontics. European Journal of Orthodontics, 2009, 31, 196-201.	2.4	9
99	Molecular Diagnosis in Orthodontics, Facial Orthopedics, and Orthognathic Surgery: Implications for Treatment Progress and Relapse. Seminars in Orthodontics, 2010, 16, 118-127.	1.4	9
100	The Hsp72 and Hsp90Î± mRNA Responses to Hot Downhill Running Are Reduced Following a Prior Bout of Hot Downhill Running, and Occur Concurrently within Leukocytes and the Vastus Lateralis. Frontiers in Physiology, 2017, 8, 473.	2.8	9
101	Hyaluronan derived nanoparticle for simvastatin delivery: evaluation of simvastatin induced myotoxicity in tissue engineered skeletal muscle. Biomaterials Science, 2020, 8, 302-312.	5.4	9
102	Indices of extracellular matrix turnover in human masseter muscles as markers of craniofacial form--a preliminary study. European Journal of Orthodontics, 2008, 30, 217-225.	2.4	8
103	Force generation and protease gene expression in organotypic co-cultures of fibroblasts and keratinocytes. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 647-650.	2.7	7
104	Digitally Driven Aerosol Jet Printing to Enable Customisable Neuronal Guidance. Frontiers in Cell and Developmental Biology, 2021, 9, 722294.	3.7	7
105	Expression of an embryonic fibronectin splicing variant in human masseter muscle. Archives of Oral Biology, 1998, 43, 911-915.	1.8	5
106	The Role of Connective Tissue and Extracellular Matrix Signaling in Controlling Muscle Development, Function, and Response to Mechanical Forces. Seminars in Orthodontics, 2010, 16, 135-142.	1.4	5
107	Effect of acute normobaric hypoxia on the ventilatory threshold. European Journal of Applied Physiology, 2014, 114, 1555-1562.	2.5	5
108	Oral Mucosa Tissue Equivalents for the Treatment of Limbal Stem Cell Deficiency. Advanced Biology, 2020, 4, 1900265.	3.0	5

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109	Gradient biomimetic platforms for neurogenesis studies. Journal of Neural Engineering, 2022, 19, 011001.	3.5	5
110	Grouping patients for masseter muscle genotype-phenotype studies. Angle Orthodontist, 2012, 82, 261-266.	2.4	4
111	Skeletal Muscle Tissue Engineering. , 2015, , 567-592.		4
112	Neural and Aneural Regions Generated by the Use of Chemical Surface Coatings. ACS Biomaterials Science and Engineering, 2018, 4, 98-106.	5.2	4
113	Development of a 3D Tissueâ€Engineered Skeletal Muscle and Bone Coâ€culture System. Biotechnology Journal, 2020, 15, 1900106.	3.5	4
114	Physiological and pathophysiological concentrations of fatty acids induce lipid droplet accumulation and impair functional performance of tissue engineered skeletal muscle. Journal of Cellular Physiology, 2021, 236, 7033-7044.	4.1	4
115	High-Volume Image-Guided Injections in Achilles and Patellar Tendinopathy in a Young Active Military Population: A Double-Blind Randomized Controlled Trial. Orthopaedic Journal of Sports Medicine, 2022, 10, 232596712210883.	1.7	4
116	The Future? Craniofacial Skeletal Muscle Engineering as an Aid for the Management of Craniofacial Deformities. Seminars in Orthodontics, 2010, 16, 153-162.	1.4	3
117	Muscle-derived precursor cells isolated on the basis of differential adhesion properties respond differently to capillary flow. Biotechnology Letters, 2011, 33, 1481-1486.	2.2	3
118	Molecular changes in detrained & retrained adult jaw muscle. European Journal of Orthodontics, 2013, 35, 659-663.	2.4	3
119	Observation of Ageâ€Related Decline in the Performance of the Transverse Abdominis Muscle. PM and R, 2016, 8, 45-50.	1.6	3
120	Host muscle cell infiltration in cell-seeded plastic compressed collagen constructs. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 72-75.	2.7	2
121	The application of maximal heart rate predictive equations in hypoxic conditions. European Journal of Applied Physiology, 2015, 115, 277-284.	2.5	2
122	Muscle Tissue Engineering. , 2009, , 243-253.		2
123	Comment: Response to an article by Hamilton et al. on 'Effects of colony stimulating factor-1 on human extravillous trophoblast growth and invasion'. Journal of Endocrinology, 1999, 160, 319-320.	2.6	1
124	Regeneration of Jaw Muscleâ€"Potential Cellular Mechanisms. Seminars in Orthodontics, 2010, 16, 147-152.	1.4	1
125	Masticatory Muscle Structure and Function. , 2012, , 91-109.		1
126	Tissue Engineered Animal Sparing Models for the Study of Joint and Muscle Diseases. , 2013, , .		1

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127	Impact of type-1 collagen hydrogel density on integrin-linked morphogenic response of SH-SY5Y neuronal cells. RSC Advances, 2021, 11, 33124-33135.	3.6	1
128	Human Oral Mucosal Fibroblasts from Limbal Stem Cell Deficient Patients as an Autologous Feeder Layer for Epithelial Cell Culture. Current Eye Research, 2022, , 1-10.	1.5	1
129	British Society for Matrix Biology Autumn Meeting â€¨Joint with the UK Tissue & Cell Engineering Society, University of Bristol, UK. International Journal of Experimental Pathology, 2005, 86, A1-A56.	1.3	0