Lonnie D Shea

List of Publications by Citations

237 papers	14,402 citations	65 h-index	110 g-index
244 ext. papers	16,389 ext. citations	9.2 avg, IF	6.79 L-index

#	Paper	IF	Citations
237	DNA delivery from polymer matrices for tissue engineering. *Nature Biotechnology*, **1999**, 17, 551-4	44.5	600
236	Stem/progenitor cell-mediated de novo regeneration of dental pulp with newly deposited continuous layer of dentin in an in vivo model. *Tissue Engineering - Part A*, **2010**, 16, 605-15	3.9	452
235	Cancer nanomedicine for combination cancer immunotherapy. *Nature Reviews Materials*, **2019**, 4, 398-414	73.3	372
234	Tissue-engineered follicles produce live, fertile offspring. *Tissue Engineering*, **2006**, 12, 2739-46		302
233	Microparticles bearing encephalitogenic peptides induce T-cell tolerance and ameliorate experimental autoimmune encephalomyelitis. *Nature Biotechnology*, **2012**, 30, 1217-24	44.5	287
232	Crosslinked hyaluronic acid hydrogels: a strategy to functionalize and pattern. *Biomaterials*, **2005**, 26, 359-71	15.6	283
231	Porous carriers for biomedical applications based on alginate hydrogels. *Biomaterials*, **2000**, 21, 1921-7	15.6	281
230	In vitro grown human ovarian follicles from cancer patients support oocyte growth. *Human Reproduction*, **2009**, 24, 2531-40	5.7	245
229	Physical properties of alginate hydrogels and their effects on in vitro follicle development. *Biomaterials*, **2007**, 28, 4439-48	15.6	232
228	Matrices and scaffolds for DNA delivery in tissue engineering. *Advanced Drug Delivery Reviews*, **2007**, 59, 292-307	18.5	225
227	Advances in islet encapsulation technologies. *Nature Reviews Drug Discovery*, **2017**, 16, 338-350	64.1	214
226	A biodegradable nanoparticle platform for the induction of antigen-specific immune tolerance for treatment of autoimmune disease. *ACS Nano*, **2014**, 8, 2148-60	16.7	209
225	Controlled release systems for DNA delivery. *Molecular Therapy*, **2004**, 10, 19-26	11.7	199
224	The in vitro regulation of ovarian follicle development using alginate-extracellular matrix gels. *Biomaterials*, **2006**, 27, 714-23	15.6	198
223	Identification of a stage-specific permissive in vitro culture environment for follicle growth and oocyte development. *Biology of Reproduction*, **2006**, 75, 916-23	3.9	198
222	Engineered bone development from a pre-osteoblast cell line on three-dimensional scaffolds. *Tissue Engineering*, **2000**, 6, 605-17		193
221	Design of modular non-viral gene therapy vectors. *Biomaterials*, **2006**, 27, 947-54	15.6	176

220	Tissue engineering tools for modulation of the immune response. *BioTechniques*, **2011**, 51, 239-40, 242, 244 passim	2.5	174
219	Interpenetrating fibrin-alginate matrices for in vitro ovarian follicle development. *Biomaterials*, **2009**, 30, 5476-85	15.6	172
218	Novel approach for the three-dimensional culture of granulosa cell-oocyte complexes. *Tissue Engineering*, **2003**, 9, 1013-21		169
217	Postnatal regulation of germ cells by activin: the establishment of the initial follicle pool. *Developmental Biology*, **2006**, 298, 132-48	3.1	162
216	Harnessing nanoparticles for immune modulation. *Trends in Immunology*, **2015**, 36, 419-27	14.4	148
215	Plasmid delivery in vivo from porous tissue-engineering scaffolds: transgene expression and cellular transfection. *Molecular Therapy*, **2005**, 12, 475-83	11.7	147
214	Generation of lung organoids from human pluripotent stem cells in vitro. *Nature Protocols*, **2019**, 14, 518-540	18.8	142
213	In vitro follicle growth supports human oocyte meiotic maturation. *Scientific Reports*, **2015**, 5, 17323	4.9	141
212	DNA delivery from hyaluronic acid-collagen hydrogels via a substrate-mediated approach. *Biomaterials*, **2005**, 26, 1575-84	15.6	141
211	Regulation of mouse follicle development by follicle-stimulating hormone in a three-dimensional in vitro culture system is dependent on follicle stage and dose. *Biology of Reproduction*, **2005**, 73, 942-50	3.9	138
210	Surface-tethered DNA complexes for enhanced gene delivery. *Bioconjugate Chemistry*, **2002**, 13, 621-9	6.3	133
209	Controllable delivery of non-viral DNA from porous scaffolds. *Journal of Controlled Release*, **2003**, 86, 157-68	11.7	132
208	Chromosome cohesion decreases in human eggs with advanced maternal age. *Aging Cell*, **2012**, 11, 1121-9	7.9	121
207	Gene delivery through cell culture substrate adsorbed DNA complexes. *Biotechnology and Bioengineering*, **2005**, 90, 290-302	4.9	120
206	A novel two-step strategy for in vitro culture of early-stage ovarian follicles in the mouse. *Fertility and Sterility*, **2010**, 93, 2633-9	4.8	116
205	Neurotrophin releasing single and multiple lumen nerve conduits. *Journal of Controlled Release*, **2005**, 104, 433-46	11.7	114
204	Non-viral vector delivery from PEG-hyaluronic acid hydrogels. *Journal of Controlled Release*, **2007**, 120, 233-41	11.7	113
203	Extracellular matrix protein-coated scaffolds promote the reversal of diabetes after extrahepatic islet transplantation. *Transplantation*, **2008**, 85, 1456-64	1.8	110

202	Hydrogel network design using multifunctional macromers to coordinate tissue maturation in ovarian follicle culture. *Biomaterials*, **2011**, 32, 2524-31	15.6	109
201	Polymer scaffolds as synthetic microenvironments for extrahepatic islet transplantation. *Transplantation*, **2006**, 82, 452-9	1.8	108
200	The role of the extracellular matrix in ovarian follicle development. *Reproductive Sciences*, **2007**, 14, 6-10	3	108
199	Bioengineering the ovarian follicle microenvironment. *Annual Review of Biomedical Engineering*, **2014**, 16, 29-52	12	106
198	Substrate-mediated DNA delivery: role of the cationic polymer structure and extent of modification. *Journal of Controlled Release*, **2003**, 93, 69-84	11.7	103
197	Distribution of extracellular matrix proteins type I collagen, type IV collagen, fibronectin, and laminin in mouse folliculogenesis. *Histochemistry and Cell Biology*, **2006**, 126, 583-92	2.4	102
196	In vivo capture and label-free detection of early metastatic cells. *Nature Communications*, **2015**, 6, 8094	17.4	100
195	A new hypothesis regarding ovarian follicle development: ovarian rigidity as a regulator of selection and health. *Journal of Assisted Reproduction and Genetics*, **2011**, 28, 3-6	3.4	100
194	Fate of the initial follicle pool: empirical and mathematical evidence supporting its sufficiency for adult fertility. *Developmental Biology*, **2006**, 298, 149-54	3.1	100
193	Engineering the follicle microenvironment. *Seminars in Reproductive Medicine*, **2007**, 25, 287-99	1.4	97
192	Engineering biomaterial systems to enhance viral vector gene delivery. *Molecular Therapy*, **2011**, 19, 1407-15	7.5	96
191	Secondary follicle growth and oocyte maturation by culture in alginate hydrogel following cryopreservation of the ovary or individual follicles. *Biotechnology and Bioengineering*, **2009**, 103, 378-86	4.9	96
190	Gene delivery from polymer scaffolds for tissue engineering. *Expert Review of Medical Devices*, **2004**, 1, 127-38	3.5	96
189	Vasculogenic hydrogel enhances islet survival, engraftment, and function in leading extrahepatic sites. *Science Advances*, **2017**, 3, e1700184	14.3	95
188	Evidence for chromosome 2p16.3 polycystic ovary syndrome susceptibility locus in affected women of European ancestry. *Journal of Clinical Endocrinology and Metabolism*, **2013**, 98, E185-90	5.6	95
187	Multifunctional, multichannel bridges that deliver neurotrophin encoding lentivirus for regeneration following spinal cord injury. *Biomaterials*, **2012**, 33, 1618-26	15.6	87
186	In vitro oocyte maturation and preantral follicle culture from the luteal-phase baboon ovary produce mature oocytes. *Biology of Reproduction*, **2011**, 84, 689-97	3.9	87
185	Fibrin encapsulation and vascular endothelial growth factor delivery promotes ovarian graft survival in mice. *Tissue Engineering - Part A*, **2011**, 17, 3095-104	3.9	87

184	The mouse follicle microenvironment regulates antrum formation and steroid production: alterations in gene expression profiles. *Biology of Reproduction*, **2009**, 80, 432-9	3.9	85
183	Extracellular matrix functions in follicle maturation. *Seminars in Reproductive Medicine*, **2006**, 24, 262-9	1.4	85
182	Alginate encapsulation supports the growth and differentiation of human primordial follicles within ovarian cortical tissue. *Journal of Assisted Reproduction and Genetics*, **2014**, 31, 1013-28	3.4	81
181	Local gene delivery from ECM-coated poly(lactide-co-glycolide) multiple channel bridges after spinal cord injury. *Biomaterials*, **2009**, 30, 2361-8	15.6	81
180	Transforming growth factor-beta 1 delivery from microporous scaffolds decreases inflammation post-implant and enhances function of transplanted islets. *Biomaterials*, **2016**, 80, 11-19	15.6	76
179	Engineering the pre-metastatic niche. *Nature Biomedical Engineering*, **2017**, 1,	19	73
178	Local immunomodulation Fas ligand-engineered biomaterials achieves allogeneic islet graft acceptance. *Nature Materials*, **2018**, 17, 732-739	27	72
177	In vivo reprogramming of immune cells: Technologies for induction of antigen-specific tolerance. *Advanced Drug Delivery Reviews*, **2017**, 114, 240-255	18.5	70
176	Nanoparticle delivery of donor antigens for transplant tolerance in allogeneic islet transplantation. *Biomaterials*, **2014**, 35, 8887-8894	15.6	69
175	Enhanced Survival with Implantable Scaffolds That Capture Metastatic Breast Cancer Cells In Vivo. *Cancer Research*, **2016**, 76, 5209-18	10.1	68
174	An antigen-encapsulating nanoparticle platform for T1/17 immune tolerance therapy. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2017**, 13, 191-200	6	66
173	Substrate-mediated delivery from self-assembled monolayers: effect of surface ionization, hydrophilicity, and patterning. *Acta Biomaterialia*, **2005**, 1, 511-22	10.8	65
172	Engineering the ovarian cycle using in vitro follicle culture. *Human Reproduction*, **2015**, 30, 1386-95	5.7	64
171	Fibrin hydrogels for non-viral vector delivery in vitro. *Journal of Controlled Release*, **2009**, 136, 148-54	11.7	63
170	Inductive tissue engineering with protein and DNA-releasing scaffolds. *Molecular BioSystems*, **2006**, 2, 36-48		62
169	Apoptosis-induced CXCL5 accelerates inflammation and growth of prostate tumor metastases in bone. *Journal of Clinical Investigation*, **2018**, 128, 248-266	15.9	62
168	Fibrin hydrogels for lentiviral gene delivery in vitro and in vivo. *Journal of Controlled Release*, **2012**, 157, 80-5	11.7	61
167	Channel density and porosity of degradable bridging scaffolds on axon growth after spinal injury. *Biomaterials*, **2013**, 34, 2213-20	15.6	61

166	Patterned PLG substrates for localized DNA delivery and directed neurite extension. *Biomaterials*, **2007**, 28, 2603-11	15.6	61
165	Biodegradable antigen-associated PLG nanoparticles tolerize Th2-mediated allergic airway inflammation pre- and postsensitization. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 5059-64	11.5	61
164	Plakophilin-2 loss promotes TGF-β1/p38 MAPK-dependent fibrotic gene expression in cardiomyocytes. *Journal of Cell Biology*, **2016**, 212, 425-38	7.3	60
163	Modulation of leukocyte infiltration and phenotype in microporous tissue engineering scaffolds via vector induced IL-10 expression. *Biomaterials*, **2014**, 35, 2024-31	15.6	60
162	Extrahepatic islet transplantation with microporous polymer scaffolds in syngeneic mouse and allogeneic porcine models. *Biomaterials*, **2011**, 32, 9677-84	15.6	60
161	Preserving female fertility following cancer treatment: current options and future possibilities. *Pediatric Blood and Cancer*, **2009**, 53, 289-95	3	59
160	Peptide-Conjugated Nanoparticles Reduce Positive Co-stimulatory Expression and T Cell Activity to Induce Tolerance. *Molecular Therapy*, **2017**, 25, 1676-1685	11.7	57
159	Tolerogenic Ag-PLG nanoparticles induce tregs to suppress activated diabetogenic CD4 and CD8 T cells. *Journal of Autoimmunity*, **2018**, 89, 112-124	15.5	56
158	Sonic hedgehog and neurotrophin-3 increase oligodendrocyte numbers and myelination after spinal cord injury. *Integrative Biology (United Kingdom)*, **2014**, 6, 694-705	3.7	55
157	Multiple channel bridges for spinal cord injury: cellular characterization of host response. *Tissue Engineering - Part A*, **2009**, 15, 3283-95	3.9	54
156	Plasmid releasing multiple channel bridges for transgene expression after spinal cord injury. *Molecular Therapy*, **2009**, 17, 318-26	11.7	54
155	Surface polyethylene glycol enhances substrate-mediated gene delivery by nonspecifically immobilized complexes. *Acta Biomaterialia*, **2008**, 4, 26-39	10.8	54
154	Sustained transgene expression via citric acid-based polyester elastomers. *Biomaterials*, **2009**, 30, 2632-41	15.6	53
153	Controlled Delivery of Single or Multiple Antigens in Tolerogenic Nanoparticles Using Peptide-Polymer Bioconjugates. *Molecular Therapy*, **2017**, 25, 1655-1664	11.7	53
152	Immune Tolerance for Autoimmune Disease and Cell Transplantation. *Annual Review of Biomedical Engineering*, **2016**, 18, 181-205	12	53
151	Nano-encapsulation of arsenic trioxide enhances efficacy against murine lymphoma model while minimizing its impact on ovarian reserve in vitro and in vivo. *PLoS ONE*, **2013**, 8, e58491	3.7	52
150	Future Directions in Oncofertility and Fertility Preservation: A Report from the 2011 Oncofertility Consortium Conference. *Journal of Adolescent and Young Adult Oncology*, **2013**, 2, 25-30	2.2	51
149	Murine granulosa cell morphology and function are regulated by a synthetic Arg-Gly-Asp matrix. *Molecular and Cellular Endocrinology*, **2003**, 205, 1-10	4.4	51

148	PLG scaffold delivered antigen-specific regulatory T cells induce systemic tolerance in autoimmune diabetes. *Tissue Engineering - Part A*, **2013**, 19, 1465-75	3.9	50
147	Biomaterial bridges enable regeneration and re-entry of corticospinal tract axons into the caudal spinal cord after SCI: Association with recovery of forelimb function. *Biomaterials*, **2015**, 65, 1-12	15.6	49
146	Poly(lactide-co-glycolide) microspheres for MRI-monitored transcatheter delivery of sorafenib to liver tumors. *Journal of Controlled Release*, **2014**, 184, 10-7	11.7	49
145	Aligned hydrogel tubes guide regeneration following spinal cord injury. *Acta Biomaterialia*, **2019**, 86, 312-322	10.8	49
144	Extracellular matrix mediators of metastatic cell colonization characterized using scaffold mimics of the pre-metastatic niche. *Acta Biomaterialia*, **2016**, 33, 13-24	10.8	48
143	It's All in the Delivery: Designing Hydrogels for Cell and Non-viral Gene Therapies. *Molecular Therapy*, **2018**, 26, 2087-2106	11.7	48
142	Collagen IV-modified scaffolds improve islet survival and function and reduce time to euglycemia. *Tissue Engineering - Part A*, **2013**, 19, 2361-72	3.9	48
141	Hydrogels for lentiviral gene delivery. *Expert Opinion on Drug Delivery*, **2013**, 10, 499-509	8	47
140	Permanent protection of PLG scaffold transplanted allogeneic islet grafts in diabetic mice treated with ECDI-fixed donor splenocyte infusions. *Biomaterials*, **2011**, 32, 4517-24	15.6	47
139	Microenvironmental regulation of chemokine (C-X-C-motif) receptor 4 in ovarian carcinoma. *Molecular Cancer Research*, **2010**, 8, 653-64	6.6	47
138	Lentivirus immobilization to nanoparticles for enhanced and localized delivery from hydrogels. *Molecular Therapy*, **2010**, 18, 700-6	11.7	47
137	Motility-related actinin alpha-4 is associated with advanced and metastatic ovarian carcinoma. *Laboratory Investigation*, **2008**, 88, 602-14	5.9	47
136	Overcoming challenges in treating autoimmuntity: Development of tolerogenic immune-modifying nanoparticles. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2019**, 18, 282-291	6	46
135	The contribution of plasmid design and release to in vivo gene expression following delivery from cationic polymer modified scaffolds. *Biomaterials*, **2010**, 31, 1140-7	15.6	44
134	Gliadin Nanoparticles Induce Immune Tolerance to Gliadin in Mouse Models of Celiac Disease. *Gastroenterology*, **2020**, 158, 1667-1681.e12	13.3	43
133	Spatially patterned gene delivery for localized neuron survival and neurite extension. *Molecular Therapy*, **2007**, 15, 705-12	11.7	43
132	Conjugation of Transforming Growth Factor Beta to Antigen-Loaded Poly(lactide- co-glycolide) Nanoparticles Enhances Efficiency of Antigen-Specific Tolerance. *Bioconjugate Chemistry*, **2018**, 29, 813-823	6.3	43
131	Intravascular innate immune cells reprogrammed via intravenous nanoparticles to promote functional recovery after spinal cord injury. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 14947-14954	11.5	42

130	The impact of adhesion peptides within hydrogels on the phenotype and signaling of normal and cancerous mammary epithelial cells. *Biomaterials*, **2012**, 33, 3548-59	15.6	42
129	Mechanistic model of G-protein signal transduction. Determinants of efficacy and effect of precoupled receptors. *Biochemical Pharmacology*, **1997**, 53, 519-30	6	42
128	Regulation and guidance of cell behavior for tissue regeneration via the siRNA mechanism. *Wound Repair and Regeneration*, **2007**, 15, 286-95	3.6	42
127	Designing drug-free biodegradable nanoparticles to modulate inflammatory monocytes and neutrophils for ameliorating inflammation. *Journal of Controlled Release*, **2019**, 300, 185-196	11.7	42
126	Size-specific follicle selection improves mouse oocyte reproductive outcomes. *Reproduction*, **2015**, 150, 183-92	3.8	41
125	Hydrogel macroporosity and the prolongation of transgene expression and the enhancement of angiogenesis. *Biomaterials*, **2012**, 33, 7412-21	15.6	41
124	Polysaccharide-modified scaffolds for controlled lentivirus delivery in vitro and after spinal cord injury. *Journal of Controlled Release*, **2013**, 170, 421-9	11.7	40
123	Embryonic fibroblasts enable the culture of primary ovarian follicles within alginate hydrogels. *Tissue Engineering - Part A*, **2012**, 18, 1229-38	3.9	39
122	Matrix rigidity activates Wnt signaling through down-regulation of Dickkopf-1 protein. *Journal of Biological Chemistry*, **2013**, 288, 141-51	5.4	38
121	Efficacy of immobilized polyplexes and lipoplexes for substrate-mediated gene delivery. *Biotechnology and Bioengineering*, **2009**, 102, 1679-91	4.9	38
120	Intramuscular delivery of DNA releasing microspheres: microsphere properties and transgene expression. *Journal of Controlled Release*, **2006**, 112, 120-8	11.7	38
119	Tolerance induction using nanoparticles bearing HY peptides in bone marrow transplantation. *Biomaterials*, **2016**, 76, 1-10	15.6	37
118	Three-dimensional systems for in vitro follicular culture: overview of alginate-based matrices. *Reproduction, Fertility and Development*, **2014**, 26, 915-30	1.8	37
117	Heparin-chitosan nanoparticle functionalization of porous poly(ethylene glycol) hydrogels for localized lentivirus delivery of angiogenic factors. *Biomaterials*, **2014**, 35, 8687-93	15.6	36
116	Noninvasive index of cryorecovery and growth potential for human follicles in vitro. *Biology of Reproduction*, **2010**, 82, 1180-9	3.9	36
115	Vascular endothelial growth factor and fibroblast growth factor 2 delivery from spinal cord bridges to enhance angiogenesis following injury. *Journal of Biomedical Materials Research - Part A*, **2011**, 98, 372-82	5.4	35
114	Layered PLG scaffolds for in vivo plasmid delivery. *Biomaterials*, **2009**, 30, 394-401	15.6	35
113	Design of biodegradable nanoparticles to modulate phenotypes of antigen-presenting cells for antigen-specific treatment of autoimmune disease. *Biomaterials*, **2019**, 222, 119432	15.6	34

112	Poly(lactide-co-glycolide) microspheres for MRI-monitored delivery of sorafenib in a rabbit VX2 model. *Biomaterials*, **2015**, 61, 299-306	15.6	34
111	Fibrin-mediated delivery of an ovarian follicle pool in a mouse model of infertility. *Tissue Engineering - Part A*, **2014**, 20, 3021-30	3.9	34
110	Downregulation of connective tissue growth factor by three-dimensional matrix enhances ovarian carcinoma cell invasion. *International Journal of Cancer*, **2009**, 125, 816-25	7.5	34
109	Self-assembling peptide-lipoplexes for substrate-mediated gene delivery. *Acta Biomaterialia*, **2009**, 5, 903-12	10.8	34
108	Balancing cell migration with matrix degradation enhances gene delivery to cells cultured three-dimensionally within hydrogels. *Journal of Controlled Release*, **2010**, 146, 128-35	11.7	34
107	Wilms tumor gene protein 1 is associated with ovarian cancer metastasis and modulates cell invasion. *Cancer*, **2008**, 112, 1632-41	6.4	34
106	Neutrophils preferentially phagocytose elongated particles-An opportunity for selective targeting in acute inflammatory diseases. *Science Advances*, **2020**, 6, eaba1474	14.3	33
105	Promoting extracellular matrix remodeling via ascorbic acid enhances the survival of primary ovarian follicles encapsulated in alginate hydrogels. *Biotechnology and Bioengineering*, **2014**, 111, 1417-29	4.9	33
104	Porous scaffolds support extrahepatic human islet transplantation, engraftment, and function in mice. *Cell Transplantation*, **2013**, 22, 811-9	4	33
103	Gene Delivery by Immobilization to Cell-Adhesive Substrates. *MRS Bulletin*, **2005**, 30, 659-662	3.2	33
102	Multi-modal magnetic resonance elastography for noninvasive assessment of ovarian tissue rigidity in vivo. *Acta Biomaterialia*, **2015**, 13, 295-300	10.8	32
101	Patterned transgene expression in multiple-channel bridges after spinal cord injury. *Acta Biomaterialia*, **2010**, 6, 2889-97	10.8	32
100	Reducing inflammation through delivery of lentivirus encoding for anti-inflammatory cytokines attenuates neuropathic pain after spinal cord injury. *Journal of Controlled Release*, **2018**, 290, 88-101	11.7	32
99	Local Immunomodulation with Anti-inflammatory Cytokine-Encoding Lentivirus Enhances Functional Recovery after Spinal Cord Injury. *Molecular Therapy*, **2018**, 26, 1756-1770	11.7	31
98	Phosphatidylserine immobilization of lentivirus for localized gene transfer. *Biomaterials*, **2010**, 31, 4353-9	15.6	31
97	Nerve growth factor expression by PLG-mediated lipofection. *Biomaterials*, **2006**, 27, 2477-86	15.6	31
96	Tissue Engineering Approaches to Modulate the Inflammatory Milieu following Spinal Cord Injury. *Cells Tissues Organs*, **2016**, 202, 52-66	2.1	29
95	Spatially patterned gene expression for guided neurite extension. *Journal of Neuroscience Research* , **2009**, 87, 844-56	4.4	27

94	Reducing neuroinflammation by delivery of IL-10 encoding lentivirus from multiple-channel bridges. *Bioengineering and Translational Medicine*, **2016**, 1, 136-148	14.8	27
93	Cargo-less nanoparticles program innate immune cell responses to toll-like receptor activation. *Biomaterials*, **2019**, 218, 119333	15.6	26
92	Inhibition of CDK-mediated phosphorylation of Smad3 results in decreased oncogenesis in triple negative breast cancer cells. *Cell Cycle*, **2014**, 13, 3191-201	4.7	26
91	Dynamic, large-scale profiling of transcription factor activity from live cells in 3D culture. *PLoS ONE*, **2010**, 5, e14026	3.7	26
90	Controlled release strategies for modulating immune responses to promote tissue regeneration. *Journal of Controlled Release*, **2015**, 219, 155-166	11.7	25
89	Retrievable hydrogels for ovarian follicle transplantation and oocyte collection. *Biotechnology and Bioengineering*, **2018**, 115, 2075-2086	4.9	25
88	Gene therapy vectors with enhanced transfection based on hydrogels modified with affinity peptides. *Biomaterials*, **2011**, 32, 5092-9	15.6	25
87	Bioluminescence imaging for assessment and normalization in transfected cell arrays. *Biotechnology and Bioengineering*, **2007**, 98, 486-97	4.9	25
86	Synergistic effect of eribulin and CDK inhibition for the treatment of triple negative breast cancer. *Oncotarget*, **2017**, 8, 83925-83939	3.3	25
85	Human lung organoids develop into adult airway-like structures directed by physico-chemical biomaterial properties. *Biomaterials*, **2020**, 234, 119757	15.6	24
84	Long-term characterization of axon regeneration and matrix changes using multiple channel bridges for spinal cord regeneration. *Tissue Engineering - Part A*, **2014**, 20, 1027-37	3.9	23
83	Cellular and molecular targeting for nanotherapeutics in transplantation tolerance. *Clinical Immunology*, **2015**, 160, 14-23	9	21
82	Hydrogel design for supporting neurite outgrowth and promoting gene delivery to maximize neurite extension. *Biotechnology and Bioengineering*, **2012**, 109, 830-9	4.9	21
81	Biomaterial Scaffolds as Pre-metastatic Niche Mimics Systemically Alter the Primary Tumor and Tumor Microenvironment. *Advanced Healthcare Materials*, **2018**, 7, e1700903	10.1	20
80	Microporous Polymer Scaffolds for the Transplantation of Embryonic Stem Cell Derived Pancreatic Progenitors to a Clinically Translatable Site for the Treatment of Type I Diabetes. *ACS Biomaterials Science and Engineering*, **2018**, 4, 1770-1778	5.5	20
79	Dynamic transcription factor networks in epithelial-mesenchymal transition in breast cancer models. *PLoS ONE*, **2013**, 8, e57180	3.7	20
78	Engineering surfaces for substrate-mediated gene delivery using recombinant proteins. *Biomacromolecules*, **2009**, 10, 2779-86	6.9	20
77	Biomaterial Scaffolds Recruit an Aggressive Population of Metastatic Tumor Cells. *Cancer Research*, **2019**, 79, 2042-2053	10.1	19

76	Sponge-mediated lentivirus delivery to acute and chronic spinal cord injuries. *Journal of Controlled Release*, **2015**, 204, 1-10	11.7	19
75	Secretome identification of immune cell factors mediating metastatic cell homing. *Scientific Reports*, **2015**, 5, 17566	4.9	19
74	Cellular arrays for large-scale analysis of transcription factor activity. *Biotechnology and Bioengineering*, **2011**, 108, 395-403	4.9	19
73	Hydrogels to modulate lentivirus delivery in vivo from microporous tissue engineering scaffolds. *Drug Delivery and Translational Research*, **2011**, 1, 91-101	6.2	18
72	Markers of growth and development in primate primordial follicles are preserved after slow cryopreservation. *Fertility and Sterility*, **2010**, 93, 2627-32	4.8	18
71	Dynamic transcription factor activity networks in response to independently altered mechanical and adhesive microenvironmental cues. *Integrative Biology (United Kingdom)*, **2016**, 8, 844-60	3.7	17
70	Evaluation of biomaterial scaffold delivery of IL-33 as a localized immunomodulatory agent to support cell transplantation in adipose tissue. *Journal of Immunology and Regenerative Medicine*, **2018**, 1, 1-12	2.8	17
69	Microporous scaffolds support assembly and differentiation of pancreatic progenitors into β cell clusters. *Acta Biomaterialia*, **2019**, 96, 111-122	10.8	17
68	Dynamic transcription factor activity profiling in 2D and 3D cell cultures. *Biotechnology and Bioengineering*, **2013**, 110, 563-72	4.9	17
67	Lentivirus delivery by adsorption to tissue engineering scaffolds. *Journal of Biomedical Materials Research - Part A*, **2010**, 93, 1252-9	5.4	17
66	Metastatic Conditioning of Myeloid Cells at a Subcutaneous Synthetic Niche Reflects Disease Progression and Predicts Therapeutic Outcomes. *Cancer Research*, **2020**, 80, 602-612	10.1	17
65	Modulating lung immune cells by pulmonary delivery of antigen-specific nanoparticles to treat autoimmune disease. *Science Advances*, **2020**, 6,	14.3	17
64	Mold-casted non-degradable, islet macro-encapsulating hydrogel devices for restoration of normoglycemia in diabetic mice. *Biotechnology and Bioengineering*, **2016**, 113, 2485-95	4.9	17
63	Peptide-mediated lipofection is governed by lipoplex physical properties and the density of surface-displayed amines. *Journal of Pharmaceutical Sciences*, **2008**, 97, 4794-806	3.9	15
62	Polycistronic Delivery of IL-10 and NT-3 Promotes Oligodendrocyte Myelination and Functional Recovery in a Mouse Spinal Cord Injury Model. *Tissue Engineering - Part A*, **2020**, 26, 672-682	3.9	14
61	Evaluation of encapsulating and microporous nondegradable hydrogel scaffold designs on islet engraftment in rodent models of diabetes. *Biotechnology and Bioengineering*, **2018**, 115, 2356-2364	4.9	14
60	Microarray analysis identifies COMP as the most differentially regulated transcript throughout in vitro follicle growth. *Molecular Reproduction and Development*, **2013**, 80, 132-44	2.6	14
59	Non-viral gene delivery transfection profiles influence neuronal architecture in an in vitro co-culture model. *Biotechnology and Bioengineering*, **2009**, 103, 1023-33	4.9	14

58	Supplemented MEM/F12-based medium enables the survival and growth of primary ovarian follicles encapsulated in alginate hydrogels. *Biotechnology and Bioengineering*, **2013**, 110, 3258-68	4.9	13
57	Quantification of particle-conjugated or particle-encapsulated peptides on interfering reagent backgrounds. *BioTechniques*, **2014**, 57, 39-44	2.5	13
56	Compartmentalization of Receptors and Enzymes Affects Activation for a Collision Coupling Mechanism. *Journal of Theoretical Biology*, **1998**, 191, 249-258	2.3	13
55	Localized immune tolerance from FasL-functionalized PLG scaffolds. *Biomaterials*, **2019**, 192, 271-281	15.6	13
54	Semi-automated counting of axon regeneration in poly(lactide co-glycolide) spinal cord bridges. *Journal of Neuroscience Methods*, **2016**, 263, 15-22	3	12
53	Optimizing PLG nanoparticle-peptide delivery platforms for transplantation tolerance using an allogeneic skin transplant model. *Biomaterials*, **2019**, 210, 70-82	15.6	11
52	Porous Silicon Nanoparticles Embedded in Poly(lactic--glycolic acid) Nanofiber Scaffolds Deliver Neurotrophic Payloads to Enhance Neuronal Growth. *Advanced Functional Materials*, **2020**, 30, 2002560	15.6	11
51	The structures that underlie normal reproductive function. *Molecular and Cellular Endocrinology*, **2007**, 267, 1-5	4.4	11
50	Spinal Progenitor-Laden Bridges Support Earlier Axon Regeneration Following Spinal Cord Injury. *Tissue Engineering - Part A*, **2018**, 24, 1588-1602	3.9	11
49	Systems analysis of dynamic transcription factor activity identifies targets for treatment in Olaparib resistant cancer cells. *Biotechnology and Bioengineering*, **2017**, 114, 2085-2095	4.9	10
48	Engineered Niches to Analyze Mechanisms of Metastasis and Guide Precision Medicine. *Cancer Research*, **2020**, 80, 3786-3794	10.1	10
47	Gene delivery to overcome astrocyte inhibition of axonal growth: an in vitro model of the glial scar. *Biotechnology and Bioengineering*, **2013**, 110, 947-57	4.9	10
46	Localized lentivirus delivery via peptide interactions. *Biotechnology and Bioengineering*, **2016**, 113, 2033-40	4.9	10
45	Dynamic genome-scale cell-specific metabolic models reveal novel inter-cellular and intra-cellular metabolic communications during ovarian follicle development. *BMC Bioinformatics*, **2019**, 20, 307	3.6	9
44	Dynamic microRNA activity identifies therapeutic targets in trastuzumab-resistant HER2 breast cancer. *Biotechnology and Bioengineering*, **2018**, 115, 2613-2623	4.9	9
43	Cryotemplation for the Rapid Fabrication of Porous, Patternable Photopolymerized Hydrogels. *Journal of Materials Chemistry B*, **2014**, 2, 4521-4530	7.3	9
42	Sustained, localized transgene expression mediated from lentivirus-loaded biodegradable polyester elastomers. *Journal of Biomedical Materials Research - Part A*, **2013**, 101, 1328-35	5.4	9
41	Acute Implantation of Aligned Hydrogel Tubes Supports Delayed Spinal Progenitor Implantation. *ACS Biomaterials Science and Engineering*, **2020**, 6, 5771-5784	5.5	9

40	Combinatorial lentiviral gene delivery of pro-oligodendrogenic factors for improving myelination of regenerating axons after spinal cord injury. *Biotechnology and Bioengineering*, **2019**, 116, 155-167	4.9	9
39	Cargo-free immunomodulatory nanoparticles combined with anti-PD-1 antibody for treating metastatic breast cancer. *Biomaterials*, **2021**, 269, 120666	15.6	8
38	Synergy of Paracrine Signaling During Early-Stage Mouse Ovarian Follicle Development. *Cellular and Molecular Bioengineering*, **2018**, 11, 435-450	3.9	8
37	Adrenergic Blockade Promotes Maintenance of Dormancy in Prostate Cancer Through Upregulation of GAS6. *Translational Oncology*, **2020**, 13, 100781	4.9	7
36	Ligands, Receptors, and Transcription Factors that Mediate Inter-Cellular and Intra-Cellular Communication during Ovarian Follicle Development. *Reproductive Sciences*, **2020**, 27, 690-703	3	7
35	Modular design of non-viral vectors with bioactive components. *Trends in Biotechnology*, **2004**, 22, 429-31	15.1	7
34	Pancreatic cancer is marked by complement-high blood monocytes and tumor-associated macrophages. *Life Science Alliance*, **2021**, 4,	5.8	7
33	Lentiviral Interleukin-10 Gene Therapy Preserves Fine Motor Circuitry and Function After a Cervical Spinal Cord Injury in Male and Female Mice. *Neurotherapeutics*, **2021**, 18, 503-514	6.4	7
32	Dynamic transcription factor activity profiles reveal key regulatory interactions during megakaryocytic and erythroid differentiation. *Biotechnology and Bioengineering*, **2014**, 111, 2082-94	4.9	6
31	Regulation of WilmsTtumor gene expression by nerve growth factor and follicle-stimulating hormone in the immature mouse ovary. *Fertility and Sterility*, **2009**, 91, 1451-4	4.8	6
30	Microporous scaffolds loaded with immunomodulatory lentivirus to study the contribution of immune cell populations to tumor cell recruitment in vivo. *Biotechnology and Bioengineering*, **2020**, 117, 210-222	4.9	6
29	Developing a Model for Integrating Professional Practice and Evidence-Based Teaching Practices into BME Curriculum. *Annals of Biomedical Engineering*, **2020**, 48, 881-892	4.7	6
28	Engineered immunological niches to monitor disease activity and treatment efficacy in relapsing multiple sclerosis. *Nature Communications*, **2020**, 11, 3871	17.4	6
27	Counteracting Flow Electrophoresis: A Technique for Separating Biochemicals or Charged Macromolecules. *Biotechnology Progress*, **1994**, 10, 246-252	2.8	5
26	An injectable PEG hydrogel controlling neurotrophin-3 release by affinity peptides. *Journal of Controlled Release*, **2021**, 330, 575-586	11.7	5
25	Phosphate regulates chondrogenesis in a biphasic and maturation-dependent manner. *Differentiation*, **2017**, 95, 54-62	3.5	4
24	Towards systems tissue engineering: Elucidating the dynamics, spatial coordination, and individual cells driving emergent behaviors. *Biomaterials*, **2020**, 255, 120189	15.6	4
23	Embryonic stem cell secreted factors decrease invasiveness of triple-negative breast cancer cells through regulome modulation. *Cancer Biology and Therapy*, **2018**, 19, 271-281	4.6	4

22	Take a deep breath and digest the material: organoids and biomaterials of the respiratory and digestive systems. *MRS Communications*, **2017**, 7, 502-514	2.7	4
21	Feasibility study on mouse live imaging after spinal cord injury and poly(lactide-co-glycolide) bridge implantation. *Journal of Biomedical Optics*, **2018**, 23, 1-6	3.5	4
20	IL-10 lentivirus-laden hydrogel tubes increase spinal progenitor survival and neuronal differentiation after spinal cord injury. *Biotechnology and Bioengineering*, **2021**, 118, 2609-2625	4.9	4
19	High Frequency Spectral Ultrasound Imaging to Detect Metastasis in Implanted Biomaterial Scaffolds. *Annals of Biomedical Engineering*, **2020**, 48, 477-489	4.7	4
18	Disease-induced immunomodulation at biomaterial scaffolds detects early pancreatic cancer in a spontaneous model. *Biomaterials*, **2021**, 269, 120632	15.6	4
17	Design of Large-Scale Reporter Construct Arrays for Dynamic, Live Cell Systems Biology. *ACS Synthetic Biology*, **2018**, 7, 2063-2073	5.7	3
16	Restoring normal islet mass and function in type 1 diabetes through regenerative medicine and tissue engineering. *Lancet Diabetes and Endocrinology,the*, **2021**, 9, 708-724	18.1	3
15	PLG Bridge Implantation in Chronic SCI Promotes Axonal Elongation and Myelination. *ACS Biomaterials Science and Engineering*, **2019**, 5, 6679-6690	5.5	2
14	Precision health for breast cancer metastasis: biomaterial scaffolds as an engineered metastatic niche to define, study, and monitor metastatic progression. *Oncoscience*, **2019**, 6, 380-382	0.8	2
13	Cyclin E overexpression confers resistance to trastuzumab through noncanonical phosphorylation of SMAD3 in HER2+ breast cancer. *Cancer Biology and Therapy*, **2020**, 21, 994-1004	4.6	2
12	Regulation of adipose tissue inflammation and systemic metabolism in murine obesity by polymer implants loaded with lentiviral vectors encoding human interleukin-4. *Biotechnology and Bioengineering*, **2020**, 117, 3891-3901	4.9	2
11	Integration of Islet/Beta-Cell Transplants with Host Tissue Using Biomaterial Platforms. *Endocrinology*, **2020**, 161,	4.8	2
10	Hydrogel and neural progenitor cell delivery supports organotypic fetal spinal cord development in an model of prenatal spina bifida repair. *Journal of Tissue Engineering*, **2020**, 11, 2041731420943833	7.5	2
9	Delivery of Interleukin-4-Encoding Lentivirus Using Multiple-Channel Bridges Enhances Nerve Regeneration. *Laryngoscope*, **2020**, 130, 2802-2810	3.6	1
8	Implications of TGF Signaling and CDK Inhibition for the Treatment of Breast Cancer. *Cancers*, **2021**, 13,	6.6	1
7	Human lung organoids develop into adult airway-like structures directed by physico-chemical biomaterial properties		1
6	Neutrophil and natural killer cell imbalances prevent muscle stem cell-mediated regeneration following murine volumetric muscle loss.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2111445119	11.5	1
5	Masked Delivery of Allergen in Nanoparticles Safely Attenuates Anaphylactic Response in Murine Models of Peanut Allergy.. *Frontiers in Allergy*, **2022**, 3, 829605	0	0

4	Mechanistic contributions of Kupffer cells and liver sinusoidal endothelial cells in nanoparticle-induced antigen-specific immune tolerance.. *Biomaterials*, **2022**, 283, 121457	15.6	0
3	Pre-Metastatic Niche: Biomaterial Scaffolds as Pre-metastatic Niche Mimics Systemically Alter the Primary Tumor and Tumor Microenvironment (Adv. Healthcare Mater. 10/2018). *Advanced Healthcare Materials*, **2018**, 7, 1870040	10.1	
2	Back to the science of stem cell research - CHIT's 2nd Annual Meeting. *IDrugs: the Investigational Drugs Journal*, **2006**, 9, 699-701		
1	Nanotechnology and biomaterials for immune modulation and monitoring **2021**, 41-65		