In situ programming of leukaemia-specific T cells
using synthetic DNA nanocarriers

#	Paper	IF	Citations
426	Cancer Immunotherapy: T cells tackle tumours. **2017**, 2,		0
425	Manufacture of CAR-T cells in the body. **2017**, 35, 520-521		12
424	Programming T cells in situ. **2017**, 17, 372-372		1
423	Immunoengineering: Valet parking for CAR genes. **2017**, 1,		1
422	Future cancer research priorities in the USA: a Lancet Oncology Commission. **2017**, 18, e653-e706		106
421	Preclinical and clinical advances in transposon-based gene therapy. **2017**, 37,		43
420	A New Model T on the Horizon?. **2017**, 171, 1-3		64
419	Bridging Bio-Nano Science and Cancer Nanomedicine. **2017**, 11, 9594-9613		222
418	Transposons: Moving Forward from Preclinical Studies to Clinical Trials. **2017**, 28, 1087-1104		38
417	Manufacturing Cell Therapies Using Engineered Biomaterials. **2017**, 35, 971-982		25
416	The era of bioengineering: how will this affect the next generation of cancer immunotherapy?. **2017**, 15, 142		10
415	INJECTING NANOPARTICLES INTO IMMUNOTHERAPY. **2017**, 63, 7-12		1
414	Attack of the killer clones. **2017**, 552, S64-S66		1
413	The Potential of Donor T-Cell Repertoires in Neoantigen-Targeted Cancer Immunotherapy. **2017**, 8, 1718		23
412	Cationic polymers for non-viral gene delivery to human T cells. **2018**, 282, 140-147		95
411	Hematopoietic stem cell transplantation in its 60s: A platform for cellular therapies. **2018**, 10,		73
410	Application of nanomaterials in cancer immunotherapy. **2018**, 7, 53-64		51

391   Polymeric Nucleic Acid Delivery for Immunoengineering. **2018**, 7, 42-50   14

390   New Combination/Application of Polymer-Based Nanoparticles for Biomedical Engineering. **2018**, 1078, 271-290   3

389   Dormant tumour cells, their niches and the influence of immunity. **2018**, 20, 1240-1249   83

388   Immunomodulating Nanomedicine for Cancer Therapy. **2018**, 18, 6655-6659   82

387   generation of human CD19-CAR T cells results in B-cell depletion and signs of cytokine release syndrome. **2018**, 10,   61

386   A novel integrase-mediated seamless vector transgenesis platform for therapeutic protein expression. **2018**, 46, e99   2

385   Increasing the precision of gene editing , and. **2018**, 7, 83-90   5

384   Designing natural and synthetic immune tissues. **2018**, 17, 484-498   62

383   A Universal GSH-Responsive Nanoplatform for the Delivery of DNA, mRNA, and Cas9/sgRNA Ribonucleoprotein. **2018**, 10, 18515-18523   42

382   A novel phosphoester-based cationic co-polymer nanocarrier delivers chimeric antigen receptor plasmid and exhibits anti-tumor effect.. **2018**, 8, 14975-14982   8

381   Photosensitizer Micelles Together with IDO Inhibitor Enhance Cancer Photothermal Therapy and Immunotherapy. **2018**, 5, 1700891   180

380   Immuno-Oncology: Emerging Targets and Combination Therapies. **2018**, 8, 315   164

379   The Multifaceted Uses and Therapeutic Advantages of Nanoparticles for Atherosclerosis Research. **2018**, 11,   19

378   Manipulating the tumor microenvironment by adoptive cell transfer of CAR T-cells. **2018**, 29, 739-756   22

377   Prospects for chimeric antigen receptor-modified T cell therapy for solid tumors. **2018**, 17, 7   46

376   Engineering Platforms for T Cell Modulation. **2018**, 341, 277-362   8

375   IL-10 Gene Transfection in Primary Endothelial Cells via Linear and Branched Poly(Bamino ester) Nanoparticles Attenuates Inflammation in Stimulated Macrophages.. **2018**, 1, 917-927   5

374   Enhanced mRNA delivery into lymphocytes enabled by lipid-varied libraries of charge-altering releasable transporters. **2018**, 115, E5859-E5866   101

355	Genetic programming of macrophages to perform anti-tumor functions using targeted mRNA nanocarriers. **2019**, 10, 3974	159
354	Engineering and Design of Chimeric Antigen Receptors. **2019**, 12, 145-156	149
353	Identifying key barriers in cationic polymer gene delivery to human T cells. **2019**, 7, 789-797	27
352	[CAR-T cells: Lymphocytes that express a chimeric antigen receptor]. **2019**, 40, 545-552	1
351	Advancing Cancer Immunotherapies with Nanotechnology. **2019**, 2, 1800128	36
350	CARs of the future. **2019**, 94, S55-S58	8
349	At the Intersection of Biomaterials and Gene Therapy: Progress in Non-viral Delivery of Nucleic Acids. **2019**, 7, 131	27
348	Messenger RNA delivery by hydrazone-activated polymers. **2019**, 10, 1138-1144	8
347	Recent advances in nanomaterial-based synergistic combination cancer immunotherapy. **2019**, 48, 3771-3810	179
346	T cell immunotherapy enhanced by designer biomaterials. **2019**, 217, 119265	24
345	Therapeutic potential of CRISPR/Cas9 gene editing in engineered T-cell therapy. **2019**, 8, 4254-4264	41
344	Combining Nanomedicine and Immunotherapy. **2019**, 52, 1543-1554	183
343	Chimeric antigen receptor-engineered regulatory T lymphocytes: promise for immunotherapy of autoimmune disease. **2019**, 21, 925-934	5
342	Nanoparticles for nucleic acid delivery: Applications in cancer immunotherapy. **2019**, 458, 102-112	44
341	Emerging blood-brain-barrier-crossing nanotechnology for brain cancer theranostics. **2019**, 48, 2967-3014	196
340	Engineering immunomodulatory biomaterials for type 1 diabetes. **2019**, 4, 429-450	52
339	Non-viral gene delivery for cancer immunotherapy. **2019**, 21, e3092	12
338	Engineered immune cells as highly sensitive cancer diagnostics. **2019**, 37, 531-539	59

319	Functional Nanomaterials Optimized to Circumvent Tumor Immunological Tolerance. **2019**, 29, 1806087	14
318	The Future of Chimeric Antigen Receptor T Cell Therapy for the Treatment of Multiple Myeloma. **2019**, 25, e73-e75	4
317	Therapeutic Opportunities in Neuroblastoma Using Nanotechnology. **2019**, 370, 625-635	9
316	Delivery technologies for cancer immunotherapy. **2019**, 18, 175-196	823
315	T-cells "la CAR-T(e)" - Genetically engineering T-cell response against cancer. **2019**, 141, 23-40	15
314	Surface-Engineered Lentiviral Vectors for Selective Gene Transfer into Subtypes of Lymphocytes. **2019**, 12, 19-31	27
313	Nanomedicine and macroscale materials in immuno-oncology. **2019**, 48, 351-381	91
312	Engineering lymphocytes with RNAi. **2019**, 141, 55-66	18
311	Murine RAW264.7 cells as cellular drug delivery carriers for tumor therapy: a good idea?. **2019**, 83, 361-374	3
310	Cancer Immunology. **2020**, 84-96.e5	
309	Big Data and Artificial Intelligence Modeling for Drug Discovery. **2020**, 60, 573-589	96
308	Heterogeneous surface-modified nanoplatforms for the targeted therapy of haematological malignancies. **2020**, 25, 160-167	4
307	Materials for Immunotherapy. **2020**, 32, e1901633	78
306	Tumor microenvironment targeted nanotherapeutics for cancer therapy and diagnosis: A review. **2020**, 101, 43-68	133
305	Challenges and Prospects of Chimeric Antigen Receptor T-cell Therapy for Metastatic Prostate Cancer. **2020**, 77, 299-308	18
304	Determinants of response and resistance to CAR T cell therapy. **2020**, 65, 80-90	28
303	Nano-immunoimaging. **2020**, 5, 628-653	16
302	A Multifunction Lipid-Based CRISPR-Cas13a Genetic Circuit Delivery System for Bladder Cancer Gene Therapy. **2020**, 9, 343-355	20

301 Current challenges and emerging opportunities of CAR-T cell therapies. **2020**, 319, 246-261   34

300 Biomolecules-derived biomaterials. **2020**, 230, 119633   52

299 Chimeric Antigen Receptor Therapies. **2020**, 349-359

298 Advances in chimeric antigen receptor T cells. **2020**, 27, 368-377   16

297 Dendrimers as Modulators of Brain Cells. **2020**, 25,   4

296 [Chimeric antigen receptors in oncology: clinical applications and new developments]. **2020**, 63, 1331-1340   3

295 When liposomes met antibodies: Drug delivery and beyond. **2020**, 154-155, 151-162   18

294 Development of a Gene Delivery System Composed of a Cell-Penetrating Peptide and a Nontoxic Polymer.. **2020**, 3, 7418-7427   3

293 Cancer Nanomedicines in an Evolving Oncology Landscape. **2020**, 41, 730-742   12

292 Imidazole-Based Synthetic Lipidoids for In Vivo mRNA Delivery into Primary T Lymphocytes. **2020**, 132, 20258-20264   4

291 Imidazole-Based Synthetic Lipidoids for In Vivo mRNA Delivery into Primary T Lymphocytes. **2020**, 59, 20083-20089   18

290 In vitro-transcribed antigen receptor mRNA nanocarriers for transient expression in circulating T cells in vivo. **2020**, 11, 6080   55

289 Nanomedicines modulating tumor immunosuppressive cells to enhance cancer immunotherapy. **2020**, 10, 2054-2074   29

288 Tuning Cancer Fate: Tumor Microenvironment? Role in Cancer Stem Cell Quiescence and Reawakening. **2020**, 11, 2166   19

287 Targeted Cellular Micropharmacies: Cells Engineered for Localized Drug Delivery. **2020**, 12,   3

286 Poly(beta-amino ester)s as gene delivery vehicles: challenges and opportunities. **2020**, 17, 1395-1410   21

285 Biomaterials in Chimeric Antigen Receptor T-Cell Process Development. **2020**, 53, 1724-1738   7

284 Serum-Independent Nonviral Gene Delivery to Innate and Adaptive Immune Cells Using Immunoplexes. **2020**, 3, 6263-6272   0

283	Poly (Bamino esters) based potential drug delivery and targeting polymer; an overview and perspectives (review). **2020**, 141, 110097	8
282	Charge-altering releasable transporters enable phenotypic manipulation of natural killer cells for cancer immunotherapy. **2020**, 4, 4244-4255	12
281	Nano-Enhanced Cancer Immunotherapy: Immunology Encounters Nanotechnology. **2020**, 9,	11
280	Tumor Immune Microenvironments (TIMEs): Responsive Nanoplatforms for Antitumor Immunotherapy. **2020**, 8, 804	4
279	Biomedical nanomaterials for immunological applications: ongoing research and clinical trials. **2020**, 2, 5046-5089	16
278	Overhauling CAR T Cells to Improve Efficacy, Safety and Cost. **2020**, 12,	6
277	Copresentation of Tumor Antigens and Costimulatory Molecules via Biomimetic Nanoparticles for Effective Cancer Immunotherapy. **2020**, 20, 4084-4094	16
276	Efficiency of Cytosolic Delivery with Poly(Bamino ester) Nanoparticles is Dependent on the Effective p of the Polymer. **2020**, 6, 3411-3421	12
275	Homologous cancerous cell membrane modulated multifunctional nanoshuttles: Targeting specificity and improved tumor theranostics. **2020**, 20, 100342	12
274	Rethinking Cancer Immunotherapy by Embracing and Engineering Complexity. **2020**, 38, 1054-1065	7
273	Innate and Adaptive Immunity. **2020**, 747-775	5
272	Cancer nanomedicine meets immunotherapy: opportunities and challenges. **2020**, 41, 954-958	14
271	Gene delivery for immunoengineering. **2020**, 66, 1-10	13
270	Immune cell engineering: opportunities in lung cancer therapeutics. **2020**, 10, 1203-1227	1
269	Nucleic Acid Immunotherapeutics for Cancer. **2020**, 3, 2838-2849	8
268	Building sophisticated sensors of extracellular cues that enable mammalian cells to work as "doctors" in the body. **2020**, 77, 3567-3581	17
267	Polymeric Nonviral Gene Delivery Systems for Cancer Immunotherapy. **2020**, 3, 1900213	15
266	Targeting Natural Killer Cells for Tumor Immunotherapy. **2020**, 11, 60	38

265   Bac-Based Non-Viral In Vivo Gene Delivery Useful for Production of Genetically Modified Animals and Organs. **2020**, 12,   5

264   3-Hydroxyhexanoate-based polycationic nanoparticle system for delivering reprogramming factors. **2020**, 37, 332-340   0

263   Nanotechnologies for enhancing cancer immunotherapy. **2020**, 13, 2595-2616   14

262   Nanomedicine and Onco-Immunotherapy: From the Bench to Bedside to Biomarkers. **2020**, 10,   13

261   Tumor Microenvironment. **2020**,   1

260   The Benefits of Going Small: Nanostructures for Mammalian Cell Transfection. **2020**, 14, 7714-7721   10

259   Improving cancer immunotherapy using nanomedicines: progress, opportunities and challenges. **2020**, 17, 251-266   196

258   Nanotechnology Promotes Genetic and Functional Modifications of Therapeutic T Cells Against Cancer. **2020**, 7, 1903164   12

257   Nanotherapeutics for Immuno-Oncology: A Crossroad for New Paradigms. **2020**, 6, 288-298   20

256   Tissue-resident memory T cells in breast cancer control and immunotherapy responses. **2020**, 17, 341-348   70

255   Regulation of cancer-immunity cycle and tumor microenvironment by nanobiomaterials to enhance tumor immunotherapy. **2020**, 12, e1612   10

254   Rapid evaluation of gold nanoparticle-lipid membrane interactions using a lipid/polydiacetylene vesicle sensor. **2020**, 145, 3049-3055   2

253   Enhancing cancer immunotherapy with nanomedicine. **2020**, 20, 321-334   245

252   Engineering Biomaterials with Micro/Nanotechnologies for Cell Reprogramming. **2020**, 14, 1296-1318   16

251   Self-Assembled Nanoparticles Prepared from Low-Molecular-Weight PEI and Low-Generation PAMAM for EGFRvIII-Chimeric Antigen Receptor Gene Loading and T-Cell Transient Modification. **2020**, 15, 483-495   14

250   Realizing Cancer Precision Medicine by Integrating Systems Biology and Nanomaterial Engineering. **2020**, 32, e1906783   11

249   Nanotechnology and immunoengineering: How nanotechnology can boost CAR-T therapy. **2020**, 109, 21-36   18

248   Biodegradable nanoparticles decorated with different carbohydrates for efficient macrophage-targeted gene therapy. **2020**, 323, 179-190   14

247	Improving Cancer Immunotherapy Outcomes Using Biomaterials. **2020**, 132, 17484-17495		4
246	Improving Cancer Immunotherapy Outcomes Using Biomaterials. **2020**, 59, 17332-17343		21
245	Nanoparticle mediated cancer immunotherapy. **2021**, 69, 307-324		19
244	Potent CAR-T cells engineered with Sleeping Beauty transposon vectors display a central memory phenotype. **2021**, 28, 3-5		1
243	Delivery of CRISPR/Cas systems for cancer gene therapy and immunotherapy. **2021**, 168, 158-180		41
242	Nanotechnology-Based CAR-T Strategies for Improving Efficacy and Safety of Tumor Immunotherapy. **2021**, 31, 2004713		5
241	Anti-CD19 CAR-T cells: Digging in the dark side of the golden therapy. **2021**, 157, 103096		3
240	VCAM-1-Targeted Gene Delivery Nanoparticles Localize to Inflamed Endothelial Cells and Atherosclerotic Plaques. **2021**, 4, 2000196		4
239	Engineering precision nanoparticles for drug delivery. **2021**, 20, 101-124		822
238	Nano-immunotherapy: Unique mechanisms of nanomaterials in synergizing cancer immunotherapy. **2021**, 36, 101023		16
237	Nanoenabled Tumor Oxygenation Strategies for Overcoming Hypoxia-Associated Immunosuppression.. **2021**, 4, 277-294		1
236	DNA scaffolds enable efficient and tunable functionalization of biomaterials for immune cell modulation. *Nature Nanotechnology*, **2021**, 16, 214-223	28.7	18
235	Optimization of electroporation and other non-viral gene delivery strategies for T cells. **2021**, 37, e3066		6
234	Nanoparticles in cancer immunotherapies: An innovative strategy. **2021**, 37, e3070		4
233	Stabilization of Poly (🗆Amino Ester) Nanoparticles for the Efficient Intracellular Delivery of PiggyBac Transposon. **2021**, 8,		4
232	Nanoparticle-Mediated Lipid Metabolic Reprogramming of T Cells in Tumor Microenvironments for Immunometabolic Therapy. **2021**, 13, 31		10
231	Nano-immunotherapy for each stage of cancer cellular immunity: which, why, and what?. **2021**, 11, 7471-7487		5
230	Nanomaterials for T-cell cancer immunotherapy. *Nature Nanotechnology*, **2021**, 16, 25-36	28.7	57

229   Gene Therapy. **2021**,

228   Biomaterials in Tissue Engineering and Regenerative Medicine: In Vitro Disease Models and Advances in Gene-Based Therapies. **2021**, 485-504

227   Nonviral gene delivery to T cells with Lipofectamine LTX. **2021**, 118, 1693-1706   2

226   From antibodies to living drugs: Quo vadis cancer immunotherapy?. **2021**, 72, 85-99   0

225   Super-Treg: Toward a New Era of Adoptive Treg Therapy Enabled by Genetic Modifications. **2020**, 11, 611638   3

224   AAV-Mediated In Vivo CAR Gene Therapy for Targeting Human T Cell Leukemia.   1

223   Engineering Nano-Therapeutics to Boost Adoptive Cell Therapy for Cancer Treatment.. **2021**, 5, e2001191   7

222   T Cell-Targeting Nanoparticle Drug Delivery Systems: Considerations for Rational Design. **2021**, 15, 3736-3753   17

221   Nano-Oncologicals: A Tortoise Trail Reaching New Avenues. 2009860   4

220   Delivery Techniques for Enhancing CAR T Cell Therapy against Solid Tumors. 2009489   13

219   Nano-bio surface interactions, cellular internalisation in cancer cells and e-data portals of nanomaterials: A review. **2021**, 15, 519-531   2

218   mRNA in cancer immunotherapy: beyond a source of antigen. **2021**, 20, 48   16

217   Nanoparticles for Enhanced Adoptive T Cell Therapies and Future Perspectives for CNS Tumors. **2021**, 12, 600659   3

216   Target Reprogramming Lysosomes of CD8+ T Cells by a Mineralized Metal-Organic Framework for Cancer Immunotherapy. **2021**, 33, e2100616   30

215   Immunotherapy perspectives in the new era of B-cell editing. **2021**, 5, 1770-1779   2

214   Genetic in vivo engineering of human T lymphocytes in mouse models. **2021**, 16, 3210-3240   4

213   Biological drug and drug delivery-mediated immunotherapy. **2021**, 11, 941-960   26

212   Materials for Improving Immune Cell Transfection. **2021**, 33, e2007421   5

211   The evolution of commercial drug delivery technologies. **2021**, 5, 951-967   117

210   Interfacing Biomaterials with Synthetic T Cell Immunity. **2021**, 10, e2100157   1

209   Effect of physicochemical properties on fate of nanoparticle-based cancer immunotherapies. **2021**, 11, 886-902   8

208   In vivo engineered B cells retain memory and secrete high titers of anti-HIV antibodies in mice.   1

207   Cellular networks controlling T cell persistence in adoptive cell therapy. **2021**, 21, 769-784   17

206   Artificial Engineering of Immune Cells for Improved Immunotherapy. **2021**, 1, 2000081   2

205   Integrating Biomaterials and Genome Editing Approaches to Advance Biomedical Science. **2021**, 23, 493-516   3

204   Overcoming delivery barriers in immunotherapy for glioblastoma. **2021**, 11, 2302-2316   6

203   Chemically modified guide RNAs enhance CRISPR-Cas13 knockdown in human cells.

202   Polymeric Delivery of Therapeutic Nucleic Acids. **2021**, 121, 11527-11652   30

201   Chimeric antigen receptor natural killer (CAR-NK) cell design and engineering for cancer therapy. **2021**, 14, 73   20

200   Delivery technologies for T cell gene editing: Applications in cancer immunotherapy. **2021**, 67, 103354   6

199   Targeting public neoantigens for cancer immunotherapy. **2021**, 2, 487-497   10

198   Contemporary Transposon Tools: A Review and Guide through Mechanisms and Applications of , and for Genome Engineering. **2021**, 22,   10

197   Current State of the Art of Allogeneic CAR Approaches - Pile ßEm High and Sell ßEm Cheap. **2021**, 110, 1909-1914   2

196   Nanotechnology synergized immunoengineering for cancer. **2021**, 163, 72-101   0

195   Taking a BiTE out of the CAR T space race. **2021**, 195, 689-697   1

194   Improving the Delivery of Drugs and Nucleic Acids to T Cells Using Nanotechnology. **2021**, 2, 2100026   2

175	Bispecific binder redirected lentiviral vector enables in vivo engineering of CAR-T cells. **2021**, 9,	2
174	Nanocomplex-Mediated In Vivo Programming to Chimeric Antigen Receptor-M1 Macrophages for Cancer Therapy. **2021**, 33, e2103258	12
173	Advances in engineering and synthetic biology toward improved therapeutic immune cells. **2021**, 20, 100342	1
172	Accelerating vein-to-vein cell therapy workflows with new bioanalytical strategies. **2021**, 71, 164-174	0
171	Biomaterial nanocarrier-driven mechanisms to modulate anti-tumor immunity. **2021**, 20,	0
170	Delivery strategies for ex vivo and in vivo T-cell reprogramming. **2022**, 31-62	
169	Nonviral gene editing in cancer immunotherapy. **2022**, 257-272	0
168	Engineering solutions to design CAR-T cells. **2022**, 1-31	
167	Self-assembling, self-adjuvanting and fully synthetic peptide nanovaccine for cancer immunotherapy. **2021**, 2, 237-249	4
166	Engineering nanomedicine for glutathione depletion-augmented cancer therapy. **2021**, 50, 6013-6041	83
165	A Simply Modified Lymphocyte for Systematic Cancer Therapy. **2018**, 30, e1801622	19
164	Nanotechnologyß application in Type 1 diabetes. **2020**, 12, e1645	4
163	Chimeric Antigen Receptors for the Tumour Microenvironment. **2020**, 1263, 117-143	7
162	Next Generation of Cancer Immunotherapy: Targeting the Cancer-Immunity Cycle with Nanotechnology. **2020**, 191-253	1
161	Multimodal stratified imaging of nanovaccines in lymph nodes for improving cancer immunotherapy. **2020**, 161-162, 145-160	6
160	Chemo-physical Strategies to Advance the Functionality of Targeted Nanomedicine: The Next Generation. **2021**, 143, 538-559	54
159	Application of Polymersomes Engineered to Target P32 Protein for Detection of Small Breast Tumors in Mice.	2
158	Charge-Altering Releasable Transporters Enable Specific Phenotypic Manipulation of Resting Primary Natural Killer Cells.	2

157	DNA-scaffolded biomaterials enable modular and tunable control of cell-based cancer immunotherapies.	4
156	Lipid-mediated insertion of Toll-like receptor (TLR) ligands for facile immune cell engineering.	1
155	Nanoparticles improve economic mileage for CARs. **2017**, 9,	2
154	CBFB-MYH11 fusion neoantigen enables T cell recognition and killing of acute myeloid leukemia. **2020**, 130, 5127-5141	20
153	Combining T-cell-specific activation and in vivo gene delivery through CD3-targeted lentiviral vectors. **2020**, 4, 5702-5715	10
152	Application of polymersomes engineered to target p32 protein for detection of small breast tumors in mice. **2018**, 9, 18682-18697	24
151	Current applications and future prospects of nanotechnology in cancer immunotherapy. **2019**, 16, 486-497	24
150	Injectable hydrogel mediated delivery of gene-engineered adipose-derived stem cells for enhanced osteoarthritis treatment. **2021**, 9, 7603-7616	2
149	Cancer Immunotherapy Strategies: Basic Principles. **2021**, 29-49	
148	In vivo mRNA delivery to virus-specific T cells by light-induced ligand exchange of MHC class I antigen-presenting nanoparticles.	
147	Safety Evaluation of Nanotechnology Products. **2021**, 13,	4
146	From Hematopoietic Stem Cell Transplantation to Chimeric Antigen Receptor Therapy: Advances, Limitations and Future Perspectives. **2021**, 10,	0
145	Nanomedicine for Immunotherapy Targeting Hematological Malignancies: Current Approaches and Perspective. **2021**, 11,	2
144	Modulating expression of inhibitory and stimulatory immune checkpoints using nanoparticulate-assisted nucleic acid delivery. **2021**, 73, 103624	0
143	Immunotherapy with mRNA vaccination and immunomodulation nanomedicine for cancer therapy. **2019**, 551-600	
142	Nanostructured Modulators of Neuroglia. **2019**, 25, 3905-3916	2
141	Selective B cell depletion upon intravenous infusion of replication-incompetent anti-CD19 CAR lentivirus.	0
140	Harnessing nanomedicine for enhanced immunotherapy for breast cancer brain metastases. **2021**, 11, 2344-2370	0

| 139 | Nanoparticle designs for delivery of nucleic acid therapeutics as brain cancer therapies. **2021**, 179, 113999 | 6 |

| 138 | Polymeric nanoparticles for RNA delivery. **2021**, | 0 |

| 137 | CAR-T. **2020**, 633-647 | |

| 136 | PiggyBac transposon system with polymeric gene carrier transfected into human T cells. **2019**, 11, 7126-7136 | 5 |

| 135 | Innovative strategies to advance CAR T cell therapy for solid tumors. **2020**, 10, 1979-1992 | 2 |

| 134 | Nanoparticle technologies: Recent state of the art and emerging opportunities. **2022**, 3-46 | 2 |

| 133 | Poly (amino esters) copolymers: Novel potential vectors for delivery of genes and related therapeutics. **2021**, 611, 121289 | 2 |

| 132 | Empowering patients from within: Emerging nanomedicines for in vivo immune cell reprogramming. **2021**, 101537 | 0 |

| 131 | Enhancing Cancer Immunotherapeutic Efficacy with Sonotheranostic Strategies. **2021**, | 3 |

| 130 | T Cell Engaging Immunotherapies, Highlighting Chimeric Antigen Receptor (CAR) T Cell Therapy. **2021**, 13, | 1 |

| 129 | External stimuli-responsive nanomedicine for cancer immunotherapy. **2021**, | |

| 128 | Design and Development of Branched Poly(Aminoester) Nanoparticles for Interleukin-10 Gene Delivery in a Mouse Model of Atherosclerosis. | |

| 127 | Nanocarriers for pancreatic cancer imaging, treatments, and immunotherapies.. **2022**, 12, 1030-1060 | 5 |

| 126 | Nanomaterials with changeable physicochemical property for boosting cancer immunotherapy.. **2022**, 342, 210-227 | 1 |

| 125 | Nanoparticles for generating antigen-specific T cells for immunotherapy.. **2021**, 101541 | 1 |

| 124 | Nanomedicine in Pancreatic Cancer: Current Status and Future Opportunities for Overcoming Therapy Resistance.. **2021**, 13, | 2 |

| 123 | Biomaterial-assisted biotherapy: A brief review of biomaterials used in drug delivery, vaccine development, gene therapy, and stem cell therapy.. **2022**, 17, 29-48 | 3 |

| 122 | Recent advances of engineered and artificial drug delivery system towards solid tumor based on immune cells.. **2022**, | 0 |

121	In situ T-cell transfection by anti-CD3-conjugated lipid nanoparticles leads to T-cell activation, migration, and phenotypic shift.. **2021**, 281, 121339	3
120	Induced CAR-T Cell for the Potential Breakthrough to Overcome the Barriers of Current CAR-T Cell Therapy.. **2022**, 12, 809754	1
119	Advances in CAR-T Cell Genetic Engineering Strategies to Overcome Hurdles in Solid Tumors Treatment.. **2022**, 13, 830292	0
118	The era of in vivo T cell engineering.. **2022**, 3, 85-86	
117	Nanomaterials to improve cancer immunotherapy based on ex vivo engineered T cells and NK cells.. **2022**, 343, 379-379	1
116	Biomimetic nanoparticles deliver mRNAs encoding costimulatory receptors and enhance T cell mediated cancer immunotherapy.. **2021**, 12, 7264	9
115	Immune cell targeting nanoparticles: a review.. **2021**, 25, 44	2
114	Cancer Precision Drug Discovery Using Big Data and Artificial Intelligence Technologies. **2022**, 109-136	
113	Nanomedicine and Its Potential Therapeutic and Diagnostic Applications in Human Pathologies. **2022**, 315-342	
112	Polymeric Systems for Cancer Immunotherapy: A Review.. **2022**, 13, 826876	0
111	In vivo mRNA delivery to virus-specific T cells by light-induced ligand exchange of MHC class I antigen-presenting nanoparticles.. **2022**, 8, eabm7950	1
110	Lighting the way to personalized mRNA immune cell therapies.. **2022**, 8, eabo2423	0
109	Metallic Nanoparticles for the Modulation of Tumor Microenvironment; A New Horizon.. **2022**, 10, 847433	2
108	Prospect of Prostate Cancer Treatment: Armed CAR-T or Combination Therapy.. **2022**, 14,	1
107	Nano-immunotherapeutics: targeting approach as strategic regulation at tumor microenvironment for cancer treatment. 22-42	0
106	Bioinstructive implantable scaffolds for rapid in vivo manufacture and release of CAR-T cells.. **2022**,	3
105	Design and development of Branched Poly(aminoester) nanoparticles for Interleukin-10 gene delivery in a mouse model of atherosclerosis.. **2022**,	1
104	Recent advances of nanodrug delivery system in the treatment of hematologic malignancies.. **2022**,	0

| 103 | Advances in Nanotechnology Development to Overcome Current Roadblocks in CAR-T Therapy for Solid Tumors.. **2022**, 13, 849759 | 0 |

| 102 | Advanced Biomaterials for Cell-Specific Modulation and Restore of Cancer Immunotherapy.. **2022**, e2200027 | 3 |

| 101 | Non-viral siRNA delivery to T cells: Challenges and opportunities in cancer immunotherapy. **2022**, 121510 | 1 |

| 100 | Poly(beta-amino ester)-Based Nanoparticles Enable Nonviral Delivery of Base Editors for Targeted Tumor Gene Editing.. **2022**, | 1 |

| 99 | Inflammation targeted nanomedicines: patents and applications in cancer therapy.. **2022**, | 0 |

| 98 | Advancement of cancer immunotherapy using nanoparticles-based nanomedicine.. **2022**, | 5 |

| 97 | Immune evader cancer stem cells direct the perspective approaches to cancer immunotherapy.. **2022**, 13, 150 | 0 |

| 96 | Changing Fate: Reprogramming Cells via Engineered Nanoscale Delivery Materials.. **2022**, e2108757 | 1 |

| 95 | Nanoparticles for Neural Applications. **2022**, 149-184 | 1 |

| 94 | Anti-MicroRNA-21 Oligonucleotide Loaded Spermine-Modified Acetalated Dextran Nanoparticles for B1 Receptor-Targeted Gene Therapy and Antiangiogenesis Therapy.. **2021**, e2103812 | 1 |

| 93 | NK Cells Armed with Chimeric Antigen Receptors (CAR): Roadblocks to Successful Development.. **2021**, 10, | 4 |

| 92 | Emerging Nanotherapeutic Approaches to Overcome Drug Resistance in Cancers with Update on Clinical Trials.. **2022**, 14, | 4 |

| 91 | Targeted Transposition of Minicircle DNA Using Single-Chain Antibody Conjugated Cyclodextrin-Modified Poly (Propylene Imine) Nanocarriers.. **2022**, 14, | |

| 90 | Nanodelivery of nucleic acids.. **2022**, 2, | 11 |

| 89 | Modulating Tumor Physical Microenvironment for Fueling CAR-T Cell Therapy.. **2022**, 114301 | 1 |

| 88 | Data_Sheet_1.PDF. **2018**, | |

| 87 | Synthesis and Characterization of Poly (ᵦamino Ester) and Applied PEGylated and Non-PEGylated Poly (ᵦamino ester)/Plasmid DNA Nanoparticles for Efficient Gene Delivery.. **2022**, 13, 854859 | 1 |

| 86 | Nanotechnology-enabled immunoengineering approaches to advance therapeutic applications.. **2022**, 9, 19 | 1 |

85	Biomedical polymers: synthesis, properties, and applications.. **2022**, 1-66	11
84	Potentiating Cancer Immune Therapy via Nanomaterials and Purinergic Signaling. **2022**, 10,	
83	Precision Medicine: In Vivo CAR Therapy as a Showcase for Receptor-Targeted Vector Platforms. **2022**,	1
82	CAR-T cells for cancer immunotherapy: The barriers ahead and the paths through. 1-15	1
81	Selective B cell depletion upon intravenous infusion of replication-incompetent anti-CD19 CAR lentivirus. **2022**,	0
80	In Situ Micro Nano Conversion Augmented Tumor-Localized Immunochemotherapy.	1
79	Nanotechnology for Enhanced Cytoplasmic and Organelle Delivery of Bioactive Molecules to Immune Cells.	0
78	Single-hit genome edition for expression of single-chain immunoglobulins by edited B cells.	
77	Advancements in the Field of Oral, Intravenous, and Inhaled Immunomodulators Using Nanotechnology. **2022**, 187-207	
76	Tracing New Landscapes in the Arena of Nanoparticle-Based Cancer Immunotherapy. 4,	0
75	The Past, Present, and Future of Non-Viral CAR T Cells. 13,	2
74	Development of disulfide-stabilized Fabs for targeting of antibody-directed nanotherapeutics. **2022**, 14,	
73	Hybrid Polyelectrolyte Nanocomplexes for Non-Viral Gene Delivery with Favorable Efficacy and Safety Profile. **2022**, 14, 1310	
72	In vivo engineered B cells secrete high titers of broadly neutralizing anti-HIV antibodies in mice.	0
71	Approaches towards biomaterial-mediated gene editing for cancer immunotherapy.	1
70	Nonviral vector system for cancer immunogene therapy. **2022**, 1,	0
69	Nanomaterial-Based Drug Delivery System Targeting Lymph Nodes. **2022**, 14, 1372	0
68	Multimodal Therapies Against Pancreatic Ductal Adenocarcinoma: A Review on Synergistic Approaches Towards Ultimate Nanomedicine Treatments. 2200079	2

67	Application Perspectives of Nanomedicine in Cancer Treatment. 13,	0
66	Enhancing Adoptive Cell Therapy by T Cell Loading of SHP2 Inhibitor Nanocrystals before Infusion.	
65	The role of imaging in targeted delivery of nanomedicine for cancer therapy. **2022**, 114447	2
64	Non-viral CRISPR activation system targeting VEGF-A and TGF-β1 for enhanced osteogenesis of pre-osteoblasts implanted with dual-crosslinked hydrogel. **2022**, 100356	0
63	Tumor microbiome metabolism: A game changer in cancer development and therapy. 12,	1
62	Chitosan-Based Nanocomposites for Biological Applications.	0
61	New progress in tumor treatment based on nanoparticles combined with irreversible electroporation.	
60	Current progress in CAR-T cell therapy for tumor treatment (Review). **2022**, 24,	1
59	Application of nanotechnology in CAR-T-cell immunotherapy. **2022**, 107747	
58	Intracavity generation of glioma stem cell⬚specific CAR macrophages primes locoregional immunity for postoperative glioblastoma therapy. **2022**, 14,	3
57	Cell type-programmable genome editing with enveloped delivery vehicles.	1
56	Engineering nanosystems to overcome barriers to cancer diagnosis and treatment. **2022**, 189, 114482	2
55	Lipid nanoparticles produce chimeric antigen receptor T cells with interleukin-6 knockdown in vivo. **2022**, 350, 298-307	0
54	Nano-drug delivery systems for T cell-based immunotherapy. **2022**, 46, 101621	2
53	Access to and affordability of CAR T-cell therapy in multiple myeloma: an EBMT position paper. **2022**, 9, e786-e795	0
52	Lipid Nanoparticles to Harness the Therapeutic Potential of mRNA for Cancer Treatment. **2022**, 307-336	0
51	Influence of sugar concentration on the vesicle compactness, deformation and membrane poration induced by anionic nanoparticles. **2022**, 17, e0275478	0
50	Bone Implants (Bone Regeneration and Bone Cancer Treatments). **2022**, 265-321	0

49   Cancer Resistance to Immunotherapy: Molecular Mechanisms and Tackling Strategies. **2022**, 23, 10906   0

48   Nanocarriers for cancer nano-immunotherapy.   2

47   Nanomaterial-Based Drug Delivery Systems: A New Weapon for Cancer Immunotherapy. Volume 17, 4677-4696   0

46   Recent advances in the production, reprogramming, and application of CAR-T cells for treating hematological malignancies. **2022**, 309, 121016   0

45   Clinical application of cell-based therapies opportunities and challenges. **2022**, 2,   0

44   Targeted Cancer Immunotherapy: Nanoformulation Engineering and Clinical Translation. 2204335   1

43   Cancer Gene Therapy. 1-11   0

42   Poly (beta-amino ester) as an In Vivo Nanocarrier for Therapeutic Nucleic Acids.   0

41   Living Leukocyte-Based Drug Delivery Systems. 2207787   2

40   Nanomedicine for advanced cancer immunotherapy. **2022**, 351, 1017-1037   0

39   Nanomodulation and nanotherapeutics of tumor-microenvironment. **2022**, 8, 100099   0

38   Current perspectives and trend of nanomedicine in cancer: A review and bibliometric analysis. **2022**, 352, 211-241   2

37   Challenges and opportunities in gene editing of B cells. **2022**, 206, 115285   0

36   Potential roles of hyaluronic acid in in vivo CAR T cell reprogramming for cancer immunotherapy.   0

35   Cytotoxicity of Materials. **2022**, 115-162   0

34   In vivo gene immunotherapy for cancer. **2022**, 14,   0

33   Recent progress in cancer immunotherapy: Overview of current status and challenges. **2023**, 241, 154241   0

32   Polymer- and lipid-based gene delivery technology for CAR T cell therapy. **2023**, 353, 196-215   0

31	Empowering gene delivery with protein engineering platforms.	0
30	Endosomal Escapable and Nuclear Localizing Cationic Polyaspartate-Based CRISPR Activation System for Preventing Respiratory Virus Infection by Specifically Inducing Interferon-□ 2022, 14, 55376-55391	0
29	Nanoparticle-induced immune response: health risk versus treatment opportunity?. 2022, 152317	0
28	Synthetic biodegradable polymeric materials in non-viral gene delivery. 1-12	0
27	Polymeric nanomaterial strategies to encapsulate and deliver biological drugs: Points to consider between methods.	0
26	Nanotechnology-based diagnostics and therapeutics in acute lymphoblastic leukemia: a systematic review of preclinical studies.	1
25	Non-viral nucleic acid delivery approach: A boon for state-of-the-art gene delivery. 2023, 80, 104152	0
24	Biodegradable silica nanocapsules enable efficient nuclear-targeted delivery of native proteins for cancer therapy. 2023, 294, 122000	2
23	Improved Targeting of Therapeutics by Nanocarrier-Based Delivery in Cancer Immunotherapy and Their Future Perspectives.	0
22	Absorption rate governs cell transduction in dry macroporous scaffolds.	0
21	Passive, active and endogenous organ-targeted lipid and polymer nanoparticles for delivery of genetic drugs.	2
20	Targeted modulation of immune cells and tissues using engineered biomaterials.	0
19	Extracellular vesicles: A dive into their role in the tumor microenvironment and cancer progression. 11,	0
18	Progress in nanoparticle-based regulation of immune cells. 2023,	0
17	Myeloid cell-mediated drug delivery: from nanomedicine to cell therapy. 2023, 114827	0
16	Nano-immunoengineering of CAR-T cell therapy against tumor microenvironment: The way forward in combating cancer. 2023, 10, 100124	0
15	Immunogenic antitumor potential of Prakasine nanoparticles in zebrafish by gene expression stimulation. 2023, 51, 41-56	0
14	Microfluidics-enabled Serial Assembly of Lipid-siRNA-sorafenib Nanoparticles for Synergetic Hepatocellular Carcinoma Therapy. 2023, 35,	0

13	CAR immune cells: design principles, resistance and the next generation. **2023**, 614, 635-648	0
12	Specific activation of cGAS-STING pathway by nanotherapeutics-mediated ferroptosis evoked endogenous signaling for boosting systemic tumor immunotherapy. **2023**, 68, 622-636	0
11	Nanoparticle-Based Chimeric Antigen Receptor Therapy for Cancer Immunotherapy.	0
10	In situ MUC1-specific CAR engineering of tumor-supportive macrophages stimulates tumoricidal immunity against pancreatic adenocarcinoma. **2023**, 49, 101805	0
9	Current and future concepts for the generation and application of genetically engineered CAR-T and TCR-T cells. 14,	1
8	Current Advances and Future Prospects in Cancer Immunotherapeutics. **2023**, 38, 88-94	0
7	Preclinical proof of concept for VivoVec, a lentiviral-based platform for in vivo CAR T-cell engineering. **2023**, 11, e006292	0
6	Antibacterial and pH-sensitive methacrylate poly-L-Arginine/poly (βamino ester) polymer for soft tissue engineering. **2023**, 34,	0
5	Biomaterial-Based Delivery Systems for Chemotherapeutics. **2023**, 105-178	0
4	In vivo CAR T cells and targeted gene delivery: A theme for the Pharmaceuticals and Medical Devices Agency Science Board to address. 10,	0
3	Engineering T Cell Development for the Next Generation of Stem Cell-Derived Immunotherapies. **2023**, 2, 106-119	0
2	Biomaterials promote in vivo generation and immunotherapy of CAR-T cells. 14,	0
1	Engineering cells for precision drug delivery: New advances, clinical translation, and emerging strategies. **2023**, 114840	0