

Katalin KarikÃ³

List of Publications by Year in descending order

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74
papers

16,872
citations

66343

42
h-index

79698

73
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77
all docs

77
docs citations

77
times ranked

16655
citing authors

#	ARTICLE	IF	CITATIONS
1	Suppression of RNA Recognition by Toll-like Receptors: The Impact of Nucleoside Modification and the Evolutionary Origin of RNA. <i>Immunity</i> , 2005, 23, 165-175.	14.3	1,650
2	COVID-19 vaccine BNT162b1 elicits human antibody and TH1 T cell responses. <i>Nature</i> , 2020, 586, 594-599.	27.8	1,520
3	mRNA-based therapeutics – developing a new class of drugs. <i>Nature Reviews Drug Discovery</i> , 2014, 13, 759-780.	46.4	1,501
4	Incorporation of Pseudouridine Into mRNA Yields Superior Nonimmunogenic Vector With Increased Translational Capacity and Biological Stability. <i>Molecular Therapy</i> , 2008, 16, 1833-1840.	8.2	1,106
5	mRNA Is an Endogenous Ligand for Toll-like Receptor 3. <i>Journal of Biological Chemistry</i> , 2004, 279, 12542-12550.	3.4	892
6	Sequence- and target-independent angiogenesis suppression by siRNA via TLR3. <i>Nature</i> , 2008, 452, 591-597.	27.8	868
7	Zika virus protection by a single low-dose nucleoside-modified mRNA vaccination. <i>Nature</i> , 2017, 543, 248-251.	27.8	699
8	Expression kinetics of nucleoside-modified mRNA delivered in lipid nanoparticles to mice by various routes. <i>Journal of Controlled Release</i> , 2015, 217, 345-351.	9.9	629
9	Generating the optimal mRNA for therapy: HPLC purification eliminates immune activation and improves translation of nucleoside-modified, protein-encoding mRNA. <i>Nucleic Acids Research</i> , 2011, 39, e142-e142.	14.5	586
10	BNT162b2 vaccine induces neutralizing antibodies and poly-specific T cells in humans. <i>Nature</i> , 2021, 595, 572-577.	27.8	583
11	DICER1 deficit induces Alu RNA toxicity in age-related macular degeneration. <i>Nature</i> , 2011, 471, 325-330.	27.8	573
12	Small Interfering RNAs Mediate Sequence-Independent Gene Suppression and Induce Immune Activation by Signaling through Toll-Like Receptor 3. <i>Journal of Immunology</i> , 2004, 172, 6545-6549.	0.8	418
13	Incorporation of pseudouridine into mRNA enhances translation by diminishing PKR activation. <i>Nucleic Acids Research</i> , 2010, 38, 5884-5892.	14.5	400
14	Nucleoside-modified mRNA vaccines induce potent T follicular helper and germinal center B cell responses. <i>Journal of Experimental Medicine</i> , 2018, 215, 1571-1588.	8.5	366
15	Inhibition of HIV-1 Infection by Small Interfering RNA-Mediated RNA Interference. <i>Journal of Immunology</i> , 2002, 169, 5196-5201.	0.8	290
16	A Facile Method for the Removal of dsRNA Contaminant from In Vitro-Transcribed mRNA. <i>Molecular Therapy - Nucleic Acids</i> , 2019, 15, 26-35.	5.1	271
17	A Single Immunization with Nucleoside-Modified mRNA Vaccines Elicits Strong Cellular and Humoral Immune Responses against SARS-CoV-2 in Mice. <i>Immunity</i> , 2020, 53, 724-732.e7.	14.3	267
18	Lipid nanoparticles enhance the efficacy of mRNA and protein subunit vaccines by inducing robust T follicular helper cell and humoral responses. <i>Immunity</i> , 2021, 54, 2877-2892.e7.	14.3	260

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19	Administration of nucleoside-modified mRNA encoding broadly neutralizing antibody protects humanized mice from HIV-1 challenge. <i>Nature Communications</i> , 2017, 8, 14630.	12.8	259
20	A noninflammatory mRNA vaccine for treatment of experimental autoimmune encephalomyelitis. <i>Science</i> , 2021, 371, 145-153.	12.6	253
21	Increased Erythropoiesis in Mice Injected With Submicrogram Quantities of Pseudouridine-containing mRNA Encoding Erythropoietin. <i>Molecular Therapy</i> , 2012, 20, 948-953.	8.2	240
22	Inhibition of Toll-like Receptor and Cytokine Signaling—A Unifying Theme in Ischemic Tolerance. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2004, 24, 1288-1304.	4.3	238
23	Nucleoside modifications in RNA limit activation of 2'-5'-oligoadenylate synthetase and increase resistance to cleavage by RNase L. <i>Nucleic Acids Research</i> , 2011, 39, 9329-9338.	14.5	227
24	Nucleoside-modified mRNA immunization elicits influenza virus hemagglutinin stalk-specific antibodies. <i>Nature Communications</i> , 2018, 9, 3361.	12.8	189
25	Elimination of large tumors in mice by mRNA-encoded bispecific antibodies. <i>Nature Medicine</i> , 2017, 23, 815-817.	30.7	182
26	HIV Gag mRNA Transfection of Dendritic Cells (DC) Delivers Encoded Antigen to MHC Class I and II Molecules, Causes DC Maturation, and Induces a Potent Human In Vitro Primary Immune Response. <i>Journal of Immunology</i> , 2000, 165, 4710-4717.	0.8	154
27	Toll-like receptor 4 contributes to poor outcome after intracerebral hemorrhage. <i>Annals of Neurology</i> , 2011, 70, 646-656.	5.3	146
28	In Vitro Transcription of Long RNA Containing Modified Nucleosides. <i>Methods in Molecular Biology</i> , 2013, 969, 29-42.	0.9	130
29	HPLC Purification of In Vitro Transcribed Long RNA. <i>Methods in Molecular Biology</i> , 2013, 969, 43-54.	0.9	130
30	Increased radioresistance of ras-transformed human osteosarcoma cells and its modulation by lovastatin, an inhibitor of p21 ^{ras} isoprenylation. <i>International Journal of Cancer</i> , 1993, 53, 302-307.	5.1	127
31	Cutting Edge: Innate Immune System Discriminates between RNA Containing Bacterial versus Eukaryotic Structural Features That Prime for High-Level IL-12 Secretion by Dendritic Cells. <i>Journal of Immunology</i> , 2004, 172, 3989-3993.	0.8	112
32	Lyophilization provides long-term stability for a lipid nanoparticle-formulated, nucleoside-modified mRNA vaccine. <i>Molecular Therapy</i> , 2022, 30, 1941-1951.	8.2	98
33	Rapid method for screening and cloning cDNAs generated in differential mRNA display: application of Northern blot for affinity capturing of cDNAs. <i>Nucleic Acids Research</i> , 1994, 22, 1764-1765.	14.5	93
34	Platelet factor 4 binds to low-density lipoprotein receptors and disrupts the endocytic itinerary, resulting in retention of low-density lipoprotein on the cell surface. <i>Blood</i> , 2002, 99, 3613-3622.	1.4	93
35	gp340 Expressed on Human Genital Epithelia Binds HIV-1 Envelope Protein and Facilitates Viral Transmission. <i>Journal of Immunology</i> , 2007, 179, 3126-3132.	0.8	85
36	Purification of mRNA Encoding Chimeric Antigen Receptor Is Critical for Generation of a Robust T-Cell Response. <i>Human Gene Therapy</i> , 2019, 30, 168-178.	2.7	81

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37	Characterization of HIV-1 Nucleoside-Modified mRNA Vaccines in Rabbits and Rhesus Macaques. <i>Molecular Therapy - Nucleic Acids</i> , 2019, 15, 36-47.	5.1	79
38	Local delivery of mRNA-encoded cytokines promotes antitumor immunity and tumor eradication across multiple preclinical tumor models. <i>Science Translational Medicine</i> , 2021, 13, eabc7804.	12.4	79
39	mRNA: Fulfilling the Promise of Gene Therapy. <i>Molecular Therapy</i> , 2015, 23, 1416-1417.	8.2	77
40	Exogenous siRNA Mediates Sequence-Independent Gene Suppression by Signaling through Toll-Like Receptor 3. <i>Cells Tissues Organs</i> , 2004, 177, 132-138.	2.3	73
41	The Emerging Role of In Vitro-Transcribed mRNA in Adoptive T Cell Immunotherapy. <i>Molecular Therapy</i> , 2019, 27, 747-756.	8.2	66
42	Short Interfering RNA-Mediated Inhibition of Herpes Simplex Virus Type 1 Gene Expression and Function during Infection of Human Keratinocytes. <i>Journal of Virology</i> , 2004, 78, 10276-10281.	3.4	52
43	Extracellular mRNA Induces Dendritic Cell Activation by Stimulating Tumor Necrosis Factor- α Secretion and Signaling through a Nucleotide Receptor. <i>Journal of Biological Chemistry</i> , 2002, 277, 12689-12696.	3.4	49
44	Phosphate-enhanced transfection of cationic lipid-complexed mRNA and plasmid DNA. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1998, 1369, 320-334.	2.6	43
45	In Vitro-Transcribed mRNA Therapeutics: Out of the Shadows and Into the Spotlight. <i>Molecular Therapy</i> , 2019, 27, 691-692.	8.2	39
46	Effect of Cortical Spreading Depression on the Levels of mRNA Coding for Putative Neuroprotective Proteins in Rat Brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1998, 18, 1308-1315.	4.3	38
47	Lipofectin-aided cell delivery of ribozyme targeted to human urokinase receptor mRNA. <i>FEBS Letters</i> , 1994, 352, 41-44.	2.8	33
48	Thermal Preconditioning Before Rat Arterial Balloon Injury. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 1998, 18, 120-126.	2.4	30
49	Nucleoside-modified VEGFC mRNA induces organ-specific lymphatic growth and reverses experimental lymphedema. <i>Nature Communications</i> , 2021, 12, 3460.	12.8	30
50	n-Decyl-NHpppA2â€²p5â€²A2â€²p5â€²A a phosphatase-resistant, active pppA2â€²p5â€²A2â€²p5â€²A analog. <i>Biochemical and Biophysical Research Communications</i> , 1985, 128, 695-698.	2.1	28
51	Oxidative damage of SP-D abolishes control of eosinophil extracellular DNA trap formation. <i>Journal of Leukocyte Biology</i> , 2018, 104, 205-214.	3.3	28
52	Induction of Tolerance to Focal Ischemia in Rat Brain: Dissociation between Cortical Lesioning and Spreading Depression. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2004, 24, 1167-1171.	4.3	27
53	Stimulatory effect of unsaturated fatty acids on the level of plasminogen activator inhibitor-1 mRNA in cultured human endothelial cells. <i>FEBS Letters</i> , 1995, 361, 118-122.	2.8	24
54	Transfection of pseudouridine-modified mRNA encoding CPD-photolyase leads to repair of DNA damage in human keratinocytes: A new approach with future therapeutic potential. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 2013, 129, 93-99.	3.8	24

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55	Ribozyme Assays to Quantify the Capping Efficiency of In Vitro-Transcribed mRNA. <i>Pharmaceutics</i> , 2022, 14, 328.	4.5	20
56	In vivo protein expression from mRNA delivered into adult rat brain. <i>Journal of Neuroscience Methods</i> , 2001, 105, 77-86.	2.5	18
57	Dose-dependent induction of mRNAs encoding brain-derived neurotrophic factor and heat-shock protein-72 after cortical spreading depression in the rat. <i>Molecular Brain Research</i> , 2001, 88, 103-112.	2.3	17
58	Lipid nanoparticles enhance the efficacy of mRNA and protein subunit vaccines by inducing robust T follicular helper cell and humoral responses. <i>Immunity</i> , 2022, 55, 1136-1138.	14.3	15
59	Sequence analysis of the 5.34-kb 5' flanking region of the human rhodopsin-encoding gene. <i>Gene</i> , 1995, 167, 317-320.	2.2	12
60	Preconditioning with cortical spreading depression does not upregulate Cu/Zn-SOD or Mn-SOD in the cerebral cortex of rats. <i>Molecular Brain Research</i> , 2001, 96, 50-58.	2.3	11
61	A systematic dissection of determinants and consequences of snoRNA-guided pseudouridylation of human mRNA. <i>Nucleic Acids Research</i> , 2022, 50, 4900-4916.	14.5	11
62	What does the success of mRNA vaccines tell us about the future of biological therapeutics?. <i>Cell Systems</i> , 2021, 12, 757-758.	6.2	10
63	Identification of Cyclobutane Pyrimidine Dimer-Responsive Genes Using UVB-Irradiated Human Keratinocytes Transfected with In Vitro-Synthesized Photolyase mRNA. <i>PLoS ONE</i> , 2015, 10, e0131141.	2.5	8
64	Modified uridines are the key to a successful message. <i>Nature Reviews Immunology</i> , 2021, 21, 619-619.	22.7	7
65	Phosphorothioate Analogs of 2'5A: Elucidation of the Stereochemical Course of the Enzymes of the 2'5A Synthetase/RNase L System. <i>Nucleosides & Nucleotides</i> , 1987, 6, 173-184.	0.5	5
66	Developing mRNA for Therapy. <i>Keio Journal of Medicine</i> , 2022, 71, 31-31.	1.1	5
67	Positive and negative elements mediate control of alternative splicing in the AMPD1 gene. <i>Gene</i> , 2000, 246, 365-372.	2.2	4
68	Cerebral preconditioning using cortical application of hypertonic salt solutions: Upregulation of mRNAs encoding inhibitors of inflammation. <i>Brain Research</i> , 2006, 1097, 31-38.	2.2	3
69	Transfection of Human Keratinocytes with Nucleoside-Modified mRNA Encoding CPD-Photolyase to Repair DNA Damage. <i>Methods in Molecular Biology</i> , 2016, 1428, 219-228.	0.9	3
70	Cordycepin Analogs of 2'5a as Activators of RNase L: Study of the Structural Requirements for RNase L Activation. <i>Nucleosides & Nucleotides</i> , 1987, 6, 497-500.	0.5	2
71	Decreased Epstein-Barr virus-induced transformation, and elevated 2'5A synthetase and RNase L activity in peripheral blood mononuclear cells from patients treated with recombinant interferon alfa 2b. <i>Biochemical and Biophysical Research Communications</i> , 1988, 153, 448-453.	2.1	2
72	Measuring Hematocrit in Mice Injected with In Vitro-Transcribed Erythropoietin mRNA. <i>Methods in Molecular Biology</i> , 2016, 1428, 297-306.	0.9	2

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73	Generating an Anti-HIV Vaccine Using Nucleoside-modified mRNA Encoding Envelope. <i>AIDS Research and Human Retroviruses</i> , 2014, 30, A249-A249.	1.1	1
74	A small cortical lesion increases the expression of feedback inhibitors of proinflammatory cytokine signaling. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2005, 25, S295-S295.	4.3	0