Venigallabasaveswara Rao

List of Publications by Year
in descending order

114 papers	5,455 citations	61984 43 h-index	95266 68 g-index
123 all docs	123 docs citations	123 times ranked	3146 citing authors

#	Article	IF	Citations
1	CRISPR Engineering of Bacteriophage T4 to Design Vaccines Against SARS-CoV-2 and Emerging Pathogens. Methods in Molecular Biology, 2022, 2410, 209-228.	0.9	7
2	Bacteriophage Vaccines. , 2021, , 259-264.		0
3	Bacteriophage T4 Escapes CRISPR Attack by Minihomology Recombination and Repair. MBio, 2021, 12, e0136121.	4.1	22
4	A phage-encoded nucleoid associated protein compacts both host and phage DNA and derepresses H-NS silencing. Nucleic Acids Research, 2021, 49, 9229-9245.	14.5	5
5	A universal bacteriophage T4 nanoparticle platform to design multiplex SARS-CoV-2 vaccine candidates by CRISPR engineering. Science Advances, 2021, 7, eabh1547.	10.3	44
6	Engineering T4 Bacteriophage for <i>In Vivo</i> Display by Type V CRISPR-Cas Genome Editing. ACS Synthetic Biology, 2021, 10, 2639-2648.	3.8	15
7	Bacteriophage T4 Vaccine Platform for Next-Generation Influenza Vaccine Development. Frontiers in Immunology, 2021, 12, 745625.	4.8	15
8	The remarkable viral portal vertex: structure and a plausible model for mechanism. Current Opinion in Virology, 2021, 51, 65-73.	5.4	13
9	A viral genome packaging ring-ATPase is a flexibly coordinated pentamer. Nature Communications, 2021, 12, 6548.	12.8	10
10	Covalent Modifications of the Bacteriophage Genome Confer a Degree of Resistance to Bacterial CRISPR Systems. Journal of Virology, 2020, 94, .	3.4	32
11	Primary HIV-1 and Infectious Molecular Clones Are Differentially Susceptible to Broadly Neutralizing Antibodies. Vaccines, 2020, 8, 782.	4.4	0
12	Dynamic Shifts in the HIV Proviral Landscape During Long Term Combination Antiretroviral Therapy: Implications for Persistence and Control of HIV Infections. Viruses, 2020, 12, 136.	3.3	32
13	Structural morphing in a symmetry-mismatched viral vertex. Nature Communications, 2020, 11, 1713.	12.8	27
14	Function of a viral genome packaging motor from bacteriophage T4 is insensitive to DNA sequence. Nucleic Acids Research, 2020, 48, 11602-11614.	14.5	3
15	Preparation of a Bacteriophage T4-based Prokaryotic-eukaryotic Hybrid Viral Vector for Delivery of Large Cargos of Genes and Proteins into Human Cells. Bio-protocol, 2020, 10, e3573.	0.4	7
16	Selection and immune recognition of HIV-1 MPER mimotopes. Virology, 2020, 550, 99-108.	2.4	4
17	Bacteriophage T4 nanoparticles for vaccine delivery against infectious diseases. Advanced Drug Delivery Reviews, 2019, 145, 57-72.	13.7	83
18	A prokaryotic-eukaryotic hybrid viral vector for delivery of large cargos of genes and proteins into human cells. Science Advances, 2019, 5, eaax0064.	10.3	28

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19	Genetic Engineering of Bacteriophages Against Infectious Diseases. Frontiers in Microbiology, 2019, 10, 954.	3.5	101
20	Humoral Response to the HIV-1 Envelope V2 Region in a Thai Early Acute Infection Cohort. Cells, 2019, 8, 365.	4.1	6
21	A sequestered fusion peptide in the structure of an HIV-1 transmitted founder envelope trimer. Nature Communications, 2019, 10, 873.	12.8	17
22	Molecular anatomy of the receptor binding module of a bacteriophage long tail fiber. PLoS Pathogens, 2019, 15, e1008193.	4.7	38
23	Unexpected evolutionary benefit to phages imparted by bacterial CRISPR-Cas9. Science Advances, 2018, 4, eaar4134.	10.3	47
24	Nucleotide-dependent DNA gripping and an end-clamp mechanism regulate the bacteriophage T4 viral packaging motor. Nature Communications, 2018, 9, 5434.	12.8	24
25	A Bacteriophage T4 Nanoparticle-Based Dual Vaccine against Anthrax and Plague. MBio, 2018, 9, .	4.1	62
26	Bacteriophage T4 as a Nanoparticle Platform to Display and Deliver Pathogen Antigens: Construction of an Effective Anthrax Vaccine. Methods in Molecular Biology, 2017, 1581, 255-267.	0.9	20
27	Cryo-EM structure of the bacteriophage T4 isometric head at 3.3-Ã… resolution and its relevance to the assembly of icosahedral viruses. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8184-E8193.	7.1	63
28	Engineering of Bacteriophage T4 Genome Using CRISPR-Cas9. ACS Synthetic Biology, 2017, 6, 1952-1961.	3.8	96
29	Altering the speed of a DNA packaging motor from bacteriophage T4. Nucleic Acids Research, 2017, 45, 11437-11448.	14.5	9
30	A Bivalent Anthraxâ€"Plague Vaccine That Can Protect against Two Tier-1 Bioterror Pathogens, Bacillus anthracis and Yersinia pestis. Frontiers in Immunology, 2017, 8, 687.	4.8	26
31	Quantitative analyses reveal distinct sensitivities of the capture of HIV-1 primary viruses and pseudoviruses to broadly neutralizing antibodies. Virology, 2017, 508, 188-198.	2.4	7
32	Glycosylation and oligomeric state of envelope protein might influence HIV-1 virion capture by Î±4Î²7 integrin. Virology, 2017, 508, 199-212.	2.4	18
33	Mechanism of Coordination of the Bacteriophage T4 DNA Packaging Motor Analyzed by Real-Time Single Molecule Fluorescence Assay. Biophysical Journal, 2016, 110, 46a.	0.5	1
34	Highly Effective Soluble and Bacteriophage T4 Nanoparticle Plague Vaccines Against Yersinia pestis. Methods in Molecular Biology, 2016, 1403, 499-518.	0.9	24
35	Exclusion of small terminase mediated DNA threading models for genome packaging in bacteriophage T4. Nucleic Acids Research, 2016, 44, 4425-4439.	14.5	11
36	Effect of cytokines on Siglec-1 and HIV-1 entry in monocyteâ€"derived macrophages: the importance of HIV-1 envelope V1V2 region. Journal of Leukocyte Biology, 2016, 99, 1089-1106.	3.3	19

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37	Cryo-EM structure of the bacteriophage T4 portal protein assembly at near-atomic resolution. Nature Communications, 2015, 6, 7548.	12.8	88
38	Mechanisms of DNA Packaging by Large Double-Stranded DNA Viruses. Annual Review of Virology, 2015, 2, 351-378.	6.7	132
39	A New Approach to Produce HIV-1 Envelope Trimers. Journal of Biological Chemistry, 2015, 290, 19780-19795.	3.4	22
40	Designing a nine cysteine-less DNA packaging motor from bacteriophage T4 reveals new insights into ATPase structure and function. Virology, 2014, 468-470, 660-668.	2.4	4
41	Single-molecule packaging initiation in real time by a viral DNA packaging machine from bacteriophage T4. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15096-15101.	7.1	22
42	Characterization of the Binding Affinity of Siglec-1 to gp120, gp145, and V2 Loop via Sialic Acid Binding Motif. AIDS Research and Human Retroviruses, 2014, 30, A119-A120.	1.1	0
43	Evidence for an electrostatic mechanism of force generation by the bacteriophage T4 DNA packaging motor. Nature Communications, 2014, 5, 4173.	12.8	26
44	Structureâ€"Function Analysis of the DNA Translocating Portal of the Bacteriophage T4 Packaging Machine. Journal of Molecular Biology, 2014, 426, 1019-1038.	4.2	26
45	The Molecular Architecture of the Bacteriophage T4 Neck. Journal of Molecular Biology, 2013, 425, 1731-1744.	4.2	66
46	Mutated and Bacteriophage T4 Nanoparticle Arrayed F1-V Immunogens from Yersinia pestis as Next Generation Plague Vaccines. PLoS Pathogens, 2013, 9, e1003495.	4.7	56
47	Designing a Soluble Near Full-length HIV-1 gp41 Trimer. Journal of Biological Chemistry, 2013, 288, 234-246.	3.4	19
48	Testing a structural model for viral DNA packaging motor function by optical tweezers measurements, site directed mutagenesis, and molecular dynamics calculations. , 2013, , .		0
49	In vitro and in vivo delivery of genes and proteins using the bacteriophage T4 DNA packaging machine. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5846-5851.	7.1	92
50	HIV-1 Variable Loop 2 and its Importance in HIV-1 Infection and Vaccine Development. Current HIV Research, 2013, 11, 427-438.	0.5	25
51	Anthrax Vaccine Antigen-Adjuvant Formulations Completely Protect New Zealand White Rabbits against Challenge with Bacillus anthracis Ames Strain Spores. Vaccine Journal, 2012, 19, 11-16.	3.1	43
52	Portal-Large Terminase Interactions of the Bacteriophage T4 DNA Packaging Machine Implicate a Molecular Lever Mechanism for Coupling ATPase to DNA Translocation. Journal of Virology, 2012, 86, 4046-4057.	3.4	27
53	The dynamic pause-unpackaging state, an off-translocation recovery state of a DNA packaging motor from bacteriophage T4. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20000-20005.	7.1	34
54	Adenine Recognition Is a Key Checkpoint in the Energy Release Mechanism of Phage T4 DNA Packaging Motor. Journal of Molecular Biology, 2012, 415, 329-342.	4.2	7

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55	Structure, Assembly, and DNA Packaging of the Bacteriophage T4 Head. Advances in Virus Research, 2012, 82, 119-153.	2.1	65
56	Viruses: Sophisticated Biological Machines. Advances in Experimental Medicine and Biology, 2012, 726, 1-3.	1.6	8
57	Structure and function of the small terminase component of the DNA packaging machine in T4-like bacteriophages. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 817-822.	7.1	87
58	The Bacteriophage DNA Packaging Machine. Advances in Experimental Medicine and Biology, 2012, 726, 489-509.	1.6	111
59	Liposomes containing glucosyl ceramide specifically bind T4 bacteriophage: a self-assembling nanocarrier formulation. Journal of Liposome Research, 2011, 21, 279-285.	3.3	0
60	Specificity of Interactions among the DNA-packaging Machine Components of T4-related Bacteriophages. Journal of Biological Chemistry, 2011, 286, 3944-3956.	3.4	28
61	Highly effective generic adjuvant systems for orphan or poverty-related vaccines. Vaccine, 2011, 29, 873-877.	3.8	35
62	Structure of the Three N-Terminal Immunoglobulin Domains of the Highly Immunogenic Outer Capsid Protein from a T4-Like Bacteriophage. Journal of Virology, 2011, 85, 8141-8148.	3.4	64
63	Regulation by interdomain communication of a headful packaging nuclease from bacteriophage T4. Nucleic Acids Research, 2011, 39, 2742-2755.	14.5	29
64	A Promiscuous DNA Packaging Machine from Bacteriophage T4. PLoS Biology, 2011, 9, e1000592.	5.6	53
65	Functional analysis of the highly antigenic outer capsid protein, Hoc, a virus decoration protein from T4â€like bacteriophages. Molecular Microbiology, 2010, 77, 444-455.	2.5	54
66	Mutations Altering a Structurally Conserved Loop-Helix-Loop Region of a Viral Packaging Motor Change DNA Translocation Velocity and Processivity. Journal of Biological Chemistry, 2010, 285, 24282-24289.	3.4	29
67	Structure and assembly of bacteriophage T4 head. Virology Journal, 2010, 7, 356.	3.4	91
68	Structure of the Small Outer Capsid Protein, Soc: A Clamp for Stabilizing Capsids of T4-like Phages. Journal of Molecular Biology, 2010, 395, 728-741.	4.2	81
69	Genome packaging in viruses. Current Opinion in Structural Biology, 2010, 20, 114-120.	5.7	124
70	The Small Terminase, gp16, of Bacteriophage T4 Is a Regulator of the DNA Packaging Motor. Journal of Biological Chemistry, 2009, 284, 24490-24500.	3.4	46
71	A virus DNA gate: Zipping and unzipping the packed viral genome. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 8403-8404.	7.1	3
72	Anthrax LFn-PA Hybrid Antigens: Biochemistry, Immunogenicity, and Protection Against Lethal Ames Spore Challenge in Rabbits. The Open Vaccine Journal, 2009, 2, 92-99.	0.6	15

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73	The headful packaging nuclease of bacteriophage T4. Molecular Microbiology, 2008, 69, 1180-1190.	2.5	43
74	The Bacteriophage DNA Packaging Motor. Annual Review of Genetics, 2008, 42, 647-681.	7.6	338
75	The ATPase Domain of the Large Terminase Protein, gp17, from Bacteriophage T4 Binds DNA: Implications to the DNA Packaging Mechanism. Journal of Molecular Biology, 2008, 376, 1272-1281.	4.2	25
76	The Structure of the Phage T4 DNA Packaging Motor Suggests a Mechanism Dependent on Electrostatic Forces. Cell, 2008, 135, 1251-1262.	28.9	226
77	Single phage T4 DNA packaging motors exhibit large force generation, high velocity, and dynamic variability. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 16868-16873.	7.1	175
78	Studies of viral DNA packaging motors with optical tweezers: a comparison of motor function in bacteriophages Ï†29, Î», and T4. Proceedings of SPIE, 2007, , .	0.8	0
79	Multicomponent anthrax toxin display and delivery using bacteriophage T4. Vaccine, 2007, 25, 1225-1235.	3.8	68
80	An ATP Hydrolysis Sensor in the DNA Packaging Motor from Bacteriophage T4 Suggests an Inchworm-Type Translocation Mechanism. Journal of Molecular Biology, 2007, 369, 79-94.	4.2	48
81	Assembly of the Small Outer Capsid Protein, Soc, on Bacteriophage T4: A Novel System for High Density Display of Multiple Large Anthrax Toxins and Foreign Proteins on Phage Capsid. Journal of Molecular Biology, 2007, 370, 1006-1019.	4.2	52
82	The Structure of the ATPase that Powers DNA Packaging into Bacteriophage T4 Procapsids. Molecular Cell, 2007, 25, 943-949.	9.7	116
83	Cryo-electron microscopy study of bacteriophage T4 displaying anthrax toxin proteins. Virology, 2007, 367, 422-427.	2.4	17
84	A Critical Coiled Coil Motif in the Small Terminase, gp16, from Bacteriophage T4: Insights into DNA Packaging Initiation and Assembly of Packaging Motor. Journal of Molecular Biology, 2006, 358, 67-82.	4.2	24
85	Bacteriophage T4 Capsid: A Unique Platform for Efficient Surface Assembly of Macromolecular Complexes. Journal of Molecular Biology, 2006, 363, 577-588.	4.2	44
86	The DNA Translocating ATPase of Bacteriophage T4 Packaging Motor. Journal of Molecular Biology, 2006, 363, 786-799.	4.2	64
87	In vitro binding of anthrax protective antigen on bacteriophage T4 capsid surface through Hocâ€“capsid interactions: A strategy for efficient display of large full-length proteins. Virology, 2006, 345, 190-198.	2.4	60
88	Functional Analysis of the Bacteriophage T4 DNA-packaging ATPase Motor. Journal of Biological Chemistry, 2006, 281, 518-527.	3.4	33
89	Assembly of Human Immunodeficiency Virus (HIV) Antigens on Bacteriophage T4: a Novel In Vitro Approach To Construct Multicomponent HIV Vaccines. Journal of Virology, 2006, 80, 7688-7698.	3.4	78
90	Correlation between Lethal Toxin-Neutralizing Antibody Titers and Protection from Intranasal Challenge with Bacillus anthracis Ames Strain Spores in Mice after Transcutaneous Immunization with Recombinant Anthrax Protective Antigen. Infection and Immunity, 2006, 74, 794-797.	2.2	56

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91	DNA Packaging in Bacteriophage T4. , 2005, , 40-58.		18
92	Molecular architecture of the prolate head of bacteriophage T4. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 6003-6008.	7.1	271
93	The Functional Domains of Bacteriophage T4 Terminase. Journal of Biological Chemistry, 2004, 279, 40795-40801.	3.4	78
94	Novel and deviant Walker A ATP-binding motifs in bacteriophage large terminaseâ€“DNA packaging proteins. Virology, 2004, 321, 217-221.	2.4	37
95	Defining the Bacteriophage T4 DNA Packaging Machine: Evidence for a C-terminal DNA Cleavage Domain in the Large Terminase/Packaging Protein gp17. Journal of Molecular Biology, 2003, 334, 37-52.	4.2	36
96	Defining the ATPase Center of Bacteriophage T4 DNA Packaging Machine: Requirement for a Catalytic Glutamate Residue in the Large Terminase Protein gp17. Journal of Molecular Biology, 2003, 331, 139-154.	4.2	35
97	Sequence analysis of bacteriophage T4 DNA packaging/terminase genes 16 and 17 reveals a common ATPase center in the large subunit of viral terminases. Nucleic Acids Research, 2002, 30, 4009-4021.	14.5	115
98	The N-terminal ATPase site in the large terminase protein gp17 is critically required for DNA packaging in bacteriophage T4 1 1Edited by M. Gottesman. Journal of Molecular Biology, 2001, 314, 401-411.	4.2	69
99	Molecular Architecture of Bacteriophage T4 Capsid: Vertex Structure and Bimodal Binding of the Stabilizing Accessory Protein, Soc. Virology, 2000, 271, 321-333.	2.4	71
100	Biochemical Characterization of an ATPase Activity Associated with the Large Packaging Subunit gp17 from Bacteriophage T4. Journal of Biological Chemistry, 2000, 275, 37127-37136.	3.4	91
101	Analysis of capsid portal protein and terminase functional domains: interaction sites required for DNA packaging in bacteriophage T4. Journal of Molecular Biology, 1999, 289, 249-260.	4.2	59
102	Functional analysis of the DNA-packaging/terminase protein gp17 from bacteriophage T4 1 1Edited by M. Gottesman. Journal of Molecular Biology, 1998, 281, 803-814.	4.2	44
103	A Discontinuous Headful Packaging Model for Packaging Less Than Headful Length DNA Molecules by Bacteriophage T4. Journal of Molecular Biology, 1996, 258, 839-850.	4.2	38
104	Novel Mutants in the 5â€² Upstream Region of the Portal Protein Gene20Overcome a gp40-dependent Prohead Assembly Block in Bacteriophage T4. Journal of Molecular Biology, 1996, 263, 539-550.	4.2	16
105	Direct Sequencing of Polymerase Chain Reaction-Amplified DNA. Analytical Biochemistry, 1994, 216, 1-14.	2.4	52
106	Structural analysis of DNA cleaved in vivo by bacteriophage T4 terminase. Gene, 1994, 146, 67-72.	2.2	36
107	Purification and Characterization of Giant Empty Proheads from Packaging-Defective 23ptg Mutants of Bacteriophage T4. Virology, 1993, 196, 896-899.	2.4	5
108	A rapid and sensitive PCR strategy employed for amplification and sequencing of porA from a single colony-forming unit of Neisseria meningitidis. Gene, 1993, 137, 153-162.	2.2	61

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109	A phage T4 in vitro packaging system for cloning long DNA molecules. Gene, 1992, 113, 25-33.	2.2	24
110	A rapid polymerase-chain-reaction-directed sequencing strategy using a thermostable DNA polymerase from Thermus flavus. Gene, 1992, 113, 17-23.	2.2	31
111	Membrane-associated assembly of a phage T4 DNA entrance vertex structure studied with expression vectors. Journal of Molecular Biology, 1989, 209, 667-681.	4.2	27
112	Cloning, overexpression and purification of the terminase proteins gp16 and gp17 of bacteriophage T4. Journal of Molecular Biology, 1988, 200, 475-488.	4.2	120
113	Evidence that a phage T4 DNA packaging enzyme is a processed form of the major capsid gene product. Cell, 1985, 42, 967-977.	28.9	26
114	DNA packaging of bacteriophage T4 proheads in vitro evidence that prohead expansion is not coupled to DNA packaging. Journal of Molecular Biology, 1985, 185, 565-578.	4.2	65