

# Mosaic nanoparticles elicit cross-reactive immune response in mice

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Citation Report

#	ARTICLE	IF	CITATIONS
4	mRNA vaccine-elicited antibodies to SARS-CoV-2 and circulating variants. <i>Nature</i> , 2021, 592, 616-622.	13.7	1,232
12	Profiles of current COVID-19 vaccines. <i>Wiener Klinische Wochenschrift</i> , 2021, 133, 271-283.	1.0	32
13	Quadrivalent influenza nanoparticle vaccines induce broad protection. <i>Nature</i> , 2021, 592, 623-628.	13.7	180
15	A Comprehensive Review of the Global Efforts on COVID-19 Vaccine Development. <i>ACS Central Science</i> , 2021, 7, 512-533.	5.3	217
18	Molecular Aspects Concerning the Use of the SARS-CoV-2 Receptor Binding Domain as a Target for Preventive Vaccines. <i>ACS Central Science</i> , 2021, 7, 757-767.	5.3	46
19	Development of Spike Receptor-Binding Domain Nanoparticles as a Vaccine Candidate against SARS-CoV-2 Infection in Ferrets. <i>MBio</i> , 2021, 12, .	1.8	40
23	Neutralizing antibody vaccine for pandemic and pre-emergent coronaviruses. <i>Nature</i> , 2021, 594, 553-559.	13.7	199
26	COVID-19: vaccine™s progress. <i>Microbial Biotechnology</i> , 2021, 14, 1246-1257.	2.0	16
27	Advances of nanomaterials-based strategies for fighting against COVID-19. <i>View</i> , 2021, 2, 20200180.	2.7	16
32	Intestinal Host Response to SARS-CoV-2 Infection and COVID-19 Outcomes in Patients With Gastrointestinal Symptoms. <i>Gastroenterology</i> , 2021, 160, 2435-2450.e34.	0.6	118
33	Nanomedicine: A Diagnostic and Therapeutic Approach to COVID-19. <i>Frontiers in Medicine</i> , 2021, 8, 648005.	1.2	25
34	Stabilization of the SARS-CoV-2 Spike Receptor-Binding Domain Using Deep Mutational Scanning and Structure-Based Design. <i>Frontiers in Immunology</i> , 2021, 12, 710263.	2.2	32
35	Structure-based design of novel polyhedral protein nanomaterials. <i>Current Opinion in Microbiology</i> , 2021, 61, 51-57.	2.3	24
37	Tackling COVID-19 with neutralizing monoclonal antibodies. <i>Cell</i> , 2021, 184, 3086-3108.	13.5	309
38	B cell genomics behind cross-neutralization of SARS-CoV-2 variants and SARS-CoV. <i>Cell</i> , 2021, 184, 3205-3221.e24.	13.5	73
40	Molecular Display on Protein Nanocompartments: Design Strategies and Systems Applications. <i>ChemSystemsChem</i> , 2022, 4, .	1.1	8
41	Fusion Protein of Rotavirus VP6 and SARS-CoV-2 Receptor Binding Domain Induces T Cell Responses. <i>Vaccines</i> , 2021, 9, 733.	2.1	4
43	Polymersomes Decorated with the SARS-CoV-2 Spike Protein Receptor-Binding Domain Elicit Robust Humoral and Cellular Immunity. <i>ACS Central Science</i> , 2021, 7, 1368-1380.	5.3	21

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44	SARS-CoV-2 RBD-Tetanus Toxoid Conjugate Vaccine Induces a Strong Neutralizing Immunity in Preclinical Studies. <i>ACS Chemical Biology</i> , 2021, 16, 1223-1233.	1.6	57
45	Elicitation of Neutralizing Antibody Responses to HIV-1 Immunization with Nanoparticle Vaccine Platforms. <i>Viruses</i> , 2021, 13, 1296.	1.5	3
46	Cross-reactive antibodies against human coronaviruses and the animal coronavirus suggest diagnostics for future zoonotic spillovers. <i>Science Immunology</i> , 2021, 6, .	5.6	26
49	Broad sarbecovirus neutralization by a human monoclonal antibody. <i>Nature</i> , 2021, 597, 103-108.	13.7	220
50	Possible Targets of Pan-Coronavirus Antiviral Strategies for Emerging or Re-Emerging Coronaviruses. <i>Microorganisms</i> , 2021, 9, 1479.	1.6	10
51	SARS-CoV-2 RBD antibodies that maximize breadth and resistance to escape. <i>Nature</i> , 2021, 597, 97-102.	13.7	385
52	Novel attempts launched toward universal Sarbecovirus vaccine. <i>Cell Research</i> , 2021, 31, 1226-1227.	5.7	0
53	Single-dose immunisation with a multimerised SARS-CoV-2 receptor binding domain (RBD) induces an enhanced and protective response in mice. <i>FEBS Letters</i> , 2021, 595, 2323-2340.	1.3	24
55	Accelerated COVID-19 vaccine development: milestones, lessons, and prospects. <i>Immunity</i> , 2021, 54, 1636-1651.	6.6	165
56	Detection and characterization of the SARS-CoV-2 lineage B.1.526 in New York. <i>Nature Communications</i> , 2021, 12, 4886.	5.8	65
57	Affinity maturation of SARS-CoV-2 neutralizing antibodies confers potency, breadth, and resilience to viral escape mutations. <i>Immunity</i> , 2021, 54, 1853-1868.e7.	6.6	230
58	Chimeric spike mRNA vaccines protect against Sarbecovirus challenge in mice. <i>Science</i> , 2021, 373, 991-998.	6.0	144
59	Structural and energetic profiling of SARS-CoV-2 receptor binding domain antibody recognition and the impact of circulating variants. <i>PLoS Computational Biology</i> , 2021, 17, e1009380.	1.5	13
60	Broad cross-reactivity across sarbecoviruses exhibited by a subset of COVID-19 donor-derived neutralizing antibodies. <i>Cell Reports</i> , 2021, 36, 109760.	2.9	80
61	Potent neutralization of SARS-CoV-2 including variants of concern by vaccines presenting the receptor-binding domain multivalently from nanoscaffolds. <i>Bioengineering and Translational Medicine</i> , 2021, 6, e10253.	3.9	19
62	Live imaging of SARS-CoV-2 infection in mice reveals that neutralizing antibodies require Fc function for optimal efficacy. <i>Immunity</i> , 2021, 54, 2143-2158.e15.	6.6	155
66	A universal bacteriophage T4 nanoparticle platform to design multiplex SARS-CoV-2 vaccine candidates by CRISPR engineering. <i>Science Advances</i> , 2021, 7, eabh1547.	4.7	44
68	SARS-COV-2 recombinant Receptor-Binding-Domain (RBD) induces neutralizing antibodies against variant strains of SARS-CoV-2 and SARS-CoV-1. <i>Vaccine</i> , 2021, 39, 5769-5779.	1.7	23

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70	Recent progress on the mutations of SARS-CoV-2 spike protein and suggestions for prevention and controlling of the pandemic. <i>Infection, Genetics and Evolution</i> , 2021, 93, 104971.	1.0	19
71	Bio-mimic particles for the enhanced vaccinations: Lessons learnt from the natural traits and pathogenic invasion. <i>Advanced Drug Delivery Reviews</i> , 2021, 176, 113871.	6.6	13
73	Elicitation of broadly protective sarbecovirus immunity by receptor-binding domain nanoparticle vaccines. <i>Cell</i> , 2021, 184, 5432-5447.e16.	13.5	131
74	N-terminal Modification of Glycine-tagged Proteins with Azidogluconolactone. <i>ChemBioChem</i> , 2021, 22, 3199-3207.	1.3	6
75	Engineered SARS-CoV-2 receptor binding domain improves manufacturability in yeast and immunogenicity in mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	68
78	Naive human B cells engage the receptor binding domain of SARS-CoV-2, variants of concern, and related sarbecoviruses. <i>Science Immunology</i> , 2021, 6, eabl5842.	5.6	33
79	Development of a Platform for Producing Recombinant Protein Components of Epitope Vaccines for the Prevention of COVID-19. <i>Biochemistry (Moscow)</i> , 2021, 86, 1275-1287.	0.7	3
81	Mechanism of a COVID-19 nanoparticle vaccine candidate that elicits a broadly neutralizing antibody response to SARS-CoV-2 variants. <i>Science Advances</i> , 2021, 7, eabj3107.	4.7	23
82	Scientific rationale for developing potent RBD-based vaccines targeting COVID-19. <i>Npj Vaccines</i> , 2021, 6, 128.	2.9	102
83	Immunizations with diverse sarbecovirus receptor-binding domains elicit SARS-CoV-2 neutralizing antibodies against a conserved site of vulnerability. <i>Immunity</i> , 2021, 54, 2908-2921.e6.	6.6	35
84	Virus-like particles against infectious disease and cancer: guidance for the nano-architect. <i>Current Opinion in Biotechnology</i> , 2022, 73, 346-354.	3.3	14
85	Nanopartikel als Adjuvantien. <i>Journal of Anatolian Environmental and Animal Sciences</i> , 0, .	0.2	1
86	A Novel Double Mosaic Virus-like Particle-Based Vaccine against SARS-CoV-2 Incorporates Both Receptor Binding Motif (RBM) and Fusion Domain. <i>Vaccines</i> , 2021, 9, 1287.	2.1	10
87	Strategies for eliciting multiple lineages of broadly neutralizing antibodies to HIV by vaccination. <i>Current Opinion in Virology</i> , 2021, 51, 172-178.	2.6	13
88	Rationally Designed Immunogens Enable Immune Focusing Following SARS-CoV-2 Spike Imprinting. <i>SSRN Electronic Journal</i> , 0, .	0.4	0
90	Cross-reactive antibodies after SARS-CoV-2 infection and vaccination. <i>ELife</i> , 2021, 10, .	2.8	63
91	VLP-Based COVID-19 Vaccines: An Adaptable Technology against the Threat of New Variants. <i>Vaccines</i> , 2021, 9, 1409.	2.1	22

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92	Scalable, methanol-free manufacturing of the SARS-CoV-2 receptor-binding domain in engineered <i>Komagataella phaffii</i> . <i>Biotechnology and Bioengineering</i> , 2022, 119, 657-662.	1.7	17
93	Sustained Delivery of SARS-CoV-2 RBD Subunit Vaccine Using a High Affinity Injectable Hydrogel Scaffold. <i>Advanced Healthcare Materials</i> , 2022, 11, e2101714.	3.9	17
94	Current and future nanoparticle vaccines for COVID-19. <i>EBioMedicine</i> , 2021, 74, 103699.	2.7	57
95	Protein engineering strategies for rational immunogen design. <i>Npj Vaccines</i> , 2021, 6, 154.	2.9	26
96	A novel STING agonist-adjuvanted pan-sarbecovirus vaccine elicits potent and durable neutralizing antibody and T cell responses in mice, rabbits and NHPs. <i>Cell Research</i> , 2022, 32, 269-287.	5.7	54
97	Innovative vaccine approaches—a Keystone Symposia report. <i>Annals of the New York Academy of Sciences</i> , 2022, 1511, 59-86.	1.8	5
98	SARS-CoV-2 breakthrough infections elicit potent, broad, and durable neutralizing antibody responses. <i>Cell</i> , 2022, 185, 872-880.e3.	13.5	165
99	Covalent coupling of Spike™s receptor binding domain to a multimeric carrier produces a high immune response against SARS-CoV-2. <i>Scientific Reports</i> , 2022, 12, 692.	1.6	9
100	Immunization with synthetic SARS-CoV-2 S glycoprotein virus-like particles protects macaques from infection. <i>Cell Reports Medicine</i> , 2022, 3, 100528.	3.3	6
101	Rapid identification of neutralizing antibodies against SARS-CoV-2 variants by mRNA display. <i>Cell Reports</i> , 2022, 38, 110348.	2.9	14
102	Use of Nanoparticles to Combat COVID-19. <i>Advances in Chemical and Materials Engineering Book Series</i> , 2022, , 412-440.	0.2	0
103	Nanoparticle and virus-like particle vaccine approaches against SARS-CoV-2. <i>Journal of Microbiology</i> , 2022, 60, 335-346.	1.3	18
104	Developing pan- $\beta$ -coronavirus vaccines against emerging SARS-CoV-2 variants of concern. <i>Trends in Immunology</i> , 2022, 43, 170-172.	2.9	25
105	Nucleic acid delivery of immune-focused SARS-CoV-2 nanoparticles drives rapid and potent immunogenicity capable of single-dose protection. <i>Cell Reports</i> , 2022, 38, 110318.	2.9	17
107	Advanced Materials for SARS-CoV-2 Vaccines. <i>Advanced Materials</i> , 2022, 34, e2107781.	11.1	25
109	Elicitation of potent SARS-CoV-2 neutralizing antibody responses through immunization with a versatile adenovirus-inspired multimerization platform. <i>Molecular Therapy</i> , 2022, 30, 1913-1925.	3.7	21
110	SARS-CoV-2 ferritin nanoparticle vaccines elicit broad SARS coronavirus immunogenicity. <i>Cell Reports</i> , 2021, 37, 110143.	2.9	94
113	Molecular basis of immune evasion by the Delta and Kappa SARS-CoV-2 variants. <i>Science</i> , 2021, 374, 1621-1626.	6.0	232

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114	Structural basis of SARS-CoV-2 Omicron immune evasion and receptor engagement. <i>Science</i> , 2022, 375, 864-868.	6.0	394
116	Design of a mutation-integrated trimeric RBD with broad protection against SARS-CoV-2. <i>Cell Discovery</i> , 2022, 8, 17.	3.1	23
117	Boosting immunity to Omicron. <i>Nature Medicine</i> , 2022, 28, 445-446.	15.2	29
119	A SARS-CoV-2 ferritin nanoparticle vaccine elicits protective immune responses in nonhuman primates. <i>Science Translational Medicine</i> , 2022, 14, .	5.8	73
120	Broad ultra-potent neutralization of SARS-CoV-2 variants by monoclonal antibodies specific to the tip of RBD. <i>Cell Discovery</i> , 2022, 8, 16.	3.1	18
122	Rationally designed immunogens enable immune focusing following SARS-CoV-2 spike imprinting. <i>Cell Reports</i> , 2022, 38, 110561.	2.9	16
123	A Coarse-Grained Model of Affinity Maturation Indicates the Importance of B-Cell Receptor Avidity in Epitope Subdominance. <i>Frontiers in Immunology</i> , 2022, 13, 816634.	2.2	2
125	SARS-CoV-2 receptor binding domain displayed on HBsAg virus-like particles elicits protective immunity in macaques. <i>Science Advances</i> , 2022, 8, eabl6015.	4.7	27
126	Broad anti-SARS-CoV-2 antibody immunity induced by heterologous ChAdOx1/mRNA-1273 vaccination. <i>Science</i> , 2022, 375, 1041-1047.	6.0	59
129	Architecture and antigenicity of the Nipah virus attachment glycoprotein. <i>Science</i> , 2022, 375, 1373-1378.	6.0	33
132	Vaccination with SARS-CoV-2 spike protein lacking glycan shields elicits enhanced protective responses in animal models. <i>Science Translational Medicine</i> , 2022, 14, eabm0899.	5.8	68
135	A Stabilized, Monomeric, Receptor Binding Domain Elicits High-Titer Neutralizing Antibodies Against All SARS-CoV-2 Variants of Concern. <i>Frontiers in Immunology</i> , 2021, 12, 765211.	2.2	16
136	Looking to the future: is a universal coronavirus vaccine feasible?. <i>Expert Review of Vaccines</i> , 2022, 21, 277-280.	2.0	9
137	Protein-Based Nanoparticle Vaccines for SARS-CoV-2. <i>International Journal of Molecular Sciences</i> , 2021, 22, 13445.	1.8	12
138	Scope of SARS-CoV-2 variants, mutations, and vaccine technologies. <i>The Egyptian Journal of Internal Medicine</i> , 2022, 34, 34.	0.3	5
139	An antibody class with a common CDRH3 motif broadly neutralizes sarbecoviruses. <i>Science Translational Medicine</i> , 2022, 14, eabn6859.	5.8	31
140	Protein engineering responses to the COVID-19 pandemic. <i>Current Opinion in Structural Biology</i> , 2022, 74, 102385.	2.6	11
141	Structure of a Vaccine-Induced, Germline-Encoded Human Antibody Defines a Neutralizing Epitope on the SARS-CoV-2 Spike N-Terminal Domain. <i>MBio</i> , 2022, 13, e0358021.	1.8	12

#	ARTICLE	IF	CITATIONS
142	Engineering Self-Assembling Protein Nanoparticles for Therapeutic Delivery. <i>Bioconjugate Chemistry</i> , 2022, 33, 2018-2034.	1.8	28
143	Instructing durable humoral immunity for COVID-19 and other vaccinable diseases. <i>Immunity</i> , 2022, 55, 945-964.	6.6	32
144	Receptor-binding domain recombinant protein on alum-CpG induces broad protection against SARS-CoV-2 variants of concern. <i>Vaccine</i> , 2022, 40, 3655-3663.	1.7	21
145	Quadrivalent mosaic HexaPro-bearing nanoparticle vaccine protects against infection of SARS-CoV-2 variants. <i>Nature Communications</i> , 2022, 13, 2674.	5.8	26
146	Phage-like particle vaccines are highly immunogenic and protect against pathogenic coronavirus infection and disease. <i>Npj Vaccines</i> , 2022, 7, .	2.9	8
150	Targeted isolation of diverse human protective broadly neutralizing antibodies against SARS-like viruses. <i>Nature Immunology</i> , 2022, 23, 960-970.	7.0	39
151	Materials-based vaccines for infectious diseases. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2022, 14, .	3.3	4
152	Influenza Virus-like Particle-Based Hybrid Vaccine Containing RBD Induces Immunity against Influenza and SARS-CoV-2 Viruses. <i>Vaccines</i> , 2022, 10, 944.	2.1	5
153	Severe acute respiratory syndrome coronavirus 2 variants—Possibility of universal vaccine design: A review. <i>Computational and Structural Biotechnology Journal</i> , 2022, 20, 3533-3544.	1.9	3
154	Superimmunity by pan-sarbecovirus nanobodies. <i>Cell Reports</i> , 2022, 39, 111004.	2.9	13
155	Safety and immunogenicity of a hybrid-type vaccine booster in BBIBP-CorV recipients in a randomized phase 2 trial. <i>Nature Communications</i> , 2022, 13, .	5.8	26
156	SpySwitch enables pH- or heat-responsive capture and release for plug-and-display nanoassembly. <i>Nature Communications</i> , 2022, 13, .	5.8	12
158	A broad and potent neutralization epitope in SARS-related coronaviruses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	34
159	The humoral response and antibodies against SARS-CoV-2 infection. <i>Nature Immunology</i> , 2022, 23, 1008-1020.	7.0	84
160	Multiplexed LNP-mRNA vaccination against pathogenic coronavirus species. <i>Cell Reports</i> , 2022, 40, 111160.	2.9	9
161	Mosaic RBD nanoparticles protect against challenge by diverse sarbecoviruses in animal models. <i>Science</i> , 2022, 377, .	6.0	120
162	Vaccination with a bacterial peptide conjugated to SARS-CoV-2 receptor-binding domain accelerates immunity and protects against COVID-19. <i>iScience</i> , 2022, 25, 104719.	1.9	0
163	Nanocarriers based on bacterial membrane materials for cancer vaccine delivery. <i>Nature Protocols</i> , 2022, 17, 2240-2274.	5.5	42

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164	A mRNA Vaccine Encoding for a RBD 60-mer Nanoparticle Elicits Neutralizing Antibodies and Protective Immunity Against the SARS-CoV-2 Delta Variant in Transgenic K18-hACE2 Mice. <i>Frontiers in Immunology</i> , 0, 13, .	2.2	1
165	Omicron spike function and neutralizing activity elicited by a comprehensive panel of vaccines. <i>Science</i> , 2022, 377, 890-894.	6.0	142
166	SARS-CoV-2 S2-targeted vaccination elicits broadly neutralizing antibodies. <i>Science Translational Medicine</i> , 2022, 14, .	5.8	57
167	Vaccines against SARS-CoV-2 variants and future pandemics. <i>Expert Review of Vaccines</i> , 2022, 21, 1363-1376.	2.0	6
169	A mosaic-type trimeric RBD-based COVID-19 vaccine candidate induces potent neutralization against Omicron and other SARS-CoV-2 variants. <i>ELife</i> , 0, 11, .	2.8	10
170	Humoral responses to the SARS-CoV-2 spike and receptor binding domain in context of pre-existing immunity confer broad sarbecovirus neutralization. <i>Frontiers in Immunology</i> , 0, 13, .	2.2	2
172	Development of robust, indigenous ELISA for detection of IgG antibodies against CoV-2-N and S proteins: mass screening. <i>Applied Microbiology and Biotechnology</i> , 0, , .	1.7	2
173	Broadly neutralizing antibodies to SARS-related viruses can be readily induced in rhesus macaques. <i>Science Translational Medicine</i> , 2022, 14, .	5.8	15
174	Modular capsid decoration boosts adenovirus vaccine-induced humoral immunity against SARS-CoV-2. <i>Molecular Therapy</i> , 2022, 30, 3639-3657.	3.7	6
177	Intranasal immunization with recombinant Vaccinia virus encoding trimeric SARS-CoV-2 spike receptor-binding domain induces neutralizing antibody. <i>Vaccine</i> , 2022, 40, 5757-5763.	1.7	5
178	A critical overview of current progress for COVID-19: development of vaccines, antiviral drugs, and therapeutic antibodies. <i>Journal of Biomedical Science</i> , 2022, 29, .	2.6	64
179	Development of variant-proof severe acute respiratory syndrome coronavirus 2, pan-sarbecovirus, and pan-coronavirus vaccines. <i>Journal of Medical Virology</i> , 2023, 95, .	2.5	12
181	COVID-19 vaccine update: vaccine effectiveness, SARS-CoV-2 variants, boosters, adverse effects, and immune correlates of protection. <i>Journal of Biomedical Science</i> , 2022, 29, .	2.6	77
182	Imprinted antibody responses against SARS-CoV-2 Omicron sublineages. <i>Science</i> , 2022, 378, 619-627.	6.0	117
183	Narrative review on century of respiratory pandemics from Spanish flu to COVID-19 and impact of nanotechnology on COVID-19 diagnosis and immune system boosting. <i>Virology Journal</i> , 2022, 19, .	1.4	7
184	Neutralizing monoclonal antibodies elicited by mosaic RBD nanoparticles bind conserved sarbecovirus epitopes. <i>Immunity</i> , 2022, 55, 2419-2435.e10.	6.6	23
186	SpyStapler-mediated assembly of nanoparticle vaccines. <i>Nano Research</i> , 0, , .	5.8	0
187	Computational design of vaccine immunogens. <i>Current Opinion in Biotechnology</i> , 2022, 78, 102821.	3.3	11



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188	SARS-CoV-2 spike conformation determines plasma neutralizing activity elicited by a wide panel of human vaccines. <i>Science Immunology</i> , 2022, 7, .	5.6	42
190	A potent, broadly protective vaccine against SARS-CoV-2 variants of concern. <i>Npj Vaccines</i> , 2022, 7, .	2.9	8
191	Success of nano-vaccines against COVID-19: a transformation in nanomedicine. <i>Expert Review of Vaccines</i> , 2022, 21, 1739-1761.	2.0	2
192	An epitope-enriched immunogen expands responses to a conserved viral site. <i>Cell Reports</i> , 2022, 41, 111628.	2.9	8
193	Multivalent S2-based vaccines provide broad protection against SARS-CoV-2 variants of concern and pangolin coronaviruses. <i>EBioMedicine</i> , 2022, 86, 104341.	2.7	20
194	The Pandemic is in Progress: Long Covid, Omicrons, Vaccination and Vaccines. <i>Epidemiologiya I Vaktsinoprofilaktika</i> , 2022, 21, 120-137.	0.2	2
195	Revealing the role of tunable amino acid residues in elastin-like polypeptides (ELPs)-mediated biomimetic silicification. <i>International Journal of Biological Macromolecules</i> , 2023, 227, 105-112.	3.6	1
196	Ferritin nanocages as efficient nanocarriers and promising platforms for COVID-19 and other vaccines development. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2023, 1867, 130288.	1.1	4
197	Stimulation of the immune system by a tumor antigen-bearing adenovirus-inspired VLP allows control of melanoma growth. <i>Molecular Therapy - Methods and Clinical Development</i> , 2023, 28, 76-89.	1.8	4
201	Induction of cross-neutralizing antibodies by a permuted hepatitis C virus glycoprotein nanoparticle vaccine candidate. <i>Nature Communications</i> , 2022, 13, .	5.8	18
202	Advances in Next-Generation Coronavirus Vaccines in Response to Future Virus Evolution. <i>Vaccines</i> , 2022, 10, 2035.	2.1	3
203	A modular and self-adjuvanted multivalent vaccine platform based on porcine circovirus virus-like nanoparticles. <i>Journal of Nanobiotechnology</i> , 2022, 20, .	4.2	6
204	Challenges and developments in universal vaccine design against SARS-CoV-2 variants. <i>Npj Vaccines</i> , 2022, 7, .	2.9	25
205	Application of nanomaterials against SARS-CoV-2: An emphasis on their usefulness against emerging variants of concern. <i>Frontiers in Nanotechnology</i> , 0, 4, .	2.4	2
206	Functionalizing DNA origami to investigate and interact with biological systems. <i>Nature Reviews Materials</i> , 2023, 8, 123-138.	23.3	39
208	Design and immunological evaluation of two-component protein nanoparticle vaccines for East Coast fever. <i>Frontiers in Immunology</i> , 0, 13, .	2.2	3
209	Characterization of cross-reactive monoclonal antibodies against SARS-CoV-1 and SARS-CoV-2: Implication for rational design and development of pan-sarbecovirus vaccines and neutralizing antibodies. <i>Journal of Medical Virology</i> , 2023, 95, .	2.5	1
210	Vaccination with S<sub>pan</sub>, an antigen guided by SARS-CoV-2 S protein evolution, protects against challenge with viral variants in mice. <i>Science Translational Medicine</i> , 2023, 15, .	5.8	14

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211	Molecular engineering of a cryptic epitope in Spike RBD improves manufacturability and neutralizing breadth against SARS-CoV-2 variants. <i>Vaccine</i> , 2022, , .	1.7	1
213	Mosaic RBD nanoparticles induce intergenus cross-reactive antibodies and protect against SARS-CoV-2 challenge. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2023, 120, .	3.3	9
214	Neutralizing Efficacy of Encapsulin Nanoparticles against SARS-CoV2 Variants of Concern. <i>Viruses</i> , 2023, 15, 346.	1.5	4
215	Structural basis for a conserved neutralization epitope on the receptor-binding domain of SARS-CoV-2. <i>Nature Communications</i> , 2023, 14, .	5.8	8
217	Emerging technologies for COVID-19, diagnosis, prevention, and management. , 2023, , 389-404.		1
218	Advanced Vaccine Design Strategies against SARS-CoV-2 and Emerging Variants. <i>Bioengineering</i> , 2023, 10, 148.	1.6	3
219	Human neutralizing antibodies to cold linear epitopes and subdomain 1 of the SARS-CoV-2 spike glycoprotein. <i>Science Immunology</i> , 2023, 8, .	5.6	33
220	Viral immunity: Basic mechanisms and therapeutic applicationsâ€”a Keystone Symposia report. <i>Annals of the New York Academy of Sciences</i> , 2023, 1521, 32-45.	1.8	0
221	A research and development (R&D) roadmap for broadly protective coronavirus vaccines: A pandemic preparedness strategy. <i>Vaccine</i> , 2023, 41, 2101-2112.	1.7	6
222	Protein-based nano-vaccines against SARS-CoV-2: Current design strategies and advances of candidate vaccines. <i>International Journal of Biological Macromolecules</i> , 2023, 236, 123979.	3.6	4
223	Germline-targeting HIV-1 Env vaccination induces VRC01-class antibodies with rare insertions. <i>Cell Reports Medicine</i> , 2023, 4, 101003.	3.3	7
224	CD4 binding site immunogens elicit heterologous antiâ€”HIV-1 neutralizing antibodies in transgenic and wild-type animals. <i>Science Immunology</i> , 2023, 8, .	5.6	8
225	Molecular superglue-mediated higher-order assembly of TRAIL variants with superior apoptosis induction and antitumor activity. <i>Biomaterials</i> , 2023, 295, 121994.	5.7	2
226	Engineered Norovirus-Derived Nanoparticles as a Plug-and-Play Cancer Vaccine Platform. <i>ACS Nano</i> , 2023, 17, 3412-3429.	7.3	8
227	Carbohydrate fatty acid monosulphate: oil-in-water adjuvant enhances SARS-CoV-2 RBD nanoparticle-induced immunogenicity and protection in mice. <i>Npj Vaccines</i> , 2023, 8, .	2.9	3
228	SARS-CoV-2 S Glycoprotein Stabilization Strategies. <i>Viruses</i> , 2023, 15, 558.	1.5	1
230	Mechanisms that promote the evolution of cross-reactive antibodies upon vaccination with designed influenza immunogens. <i>Cell Reports</i> , 2023, 42, 112160.	2.9	1
231	Design of a stabilized RBD enables potently neutralizing SARS-CoV-2 single-component nanoparticle vaccines. <i>Cell Reports</i> , 2023, 42, 112266.	2.9	6

#	ARTICLE	IF	CITATIONS
232	Site-specific Modification of Virus-like Particles for Exogenous Tumor Antigen Display and Minimizing Preexisting Immunity. <i>Small</i> , 2023, 19, .	5.2	1
233	Improving the secretion of designed protein assemblies through negative design of cryptic transmembrane domains. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2023, 120, .	3.3	6
234	The diversity of the glycan shield of sarbecoviruses related to SARS-CoV-2. <i>Cell Reports</i> , 2023, 42, 112307.	2.9	7
236	Effective Multivalent Oriented Presentation of Meningococcal NadA Antigen Trimers by Self-Assembling Ferritin Nanoparticles. <i>International Journal of Molecular Sciences</i> , 2023, 24, 6183.	1.8	3
237	A multivalent <i>Plasmodium falciparum</i> circumsporozoite protein-based nanoparticle malaria vaccine elicits a robust and durable antibody response against the junctional epitope and the major repeats. <i>Bioengineering and Translational Medicine</i> , 2023, 8, .	3.9	0
238	Leveraging deep learning to improve vaccine design. <i>Trends in Immunology</i> , 2023, 44, 333-344.	2.9	3
239	Fc-mediated pan-sarbecovirus protection after alphavirus vector vaccination. <i>Cell Reports</i> , 2023, 42, 112326.	2.9	13
240	Modular adjuvant-free pan-HLA-DR-immunotargeting subunit vaccine against SARS-CoV-2 elicits broad sarbecovirus-neutralizing antibody responses. <i>Cell Reports</i> , 2023, 42, 112391.	2.9	1
241	De Novo Design of Polyhedral Protein Assemblies: Before and After the AI Revolution. <i>ChemBioChem</i> , 2023, 24, .	1.3	3
242	SARS-CoV-2 RBD Conjugated to Polyglucin, Spermidine, and dsRNA Elicits a Strong Immune Response in Mice. <i>Vaccines</i> , 2023, 11, 808.	2.1	1
243	A ferritin-based COVID-19 nanoparticle vaccine that elicits robust, durable, broad-spectrum neutralizing antisera in non-human primates. <i>Nature Communications</i> , 2023, 14, .	5.8	21
244	ESCRT recruitment to SARS-CoV-2 spike induces virus-like particles that improve mRNA vaccines. <i>Cell</i> , 2023, 186, 2380-2391.e9.	13.5	9
245	Targetable elements in SARS-CoV-2 S2 subunit for the design of pan-coronavirus fusion inhibitors and vaccines. <i>Signal Transduction and Targeted Therapy</i> , 2023, 8, .	7.1	15
277	Immune imprinting and next-generation coronavirus vaccines. <i>Nature Microbiology</i> , 2023, 8, 1971-1985.	5.9	4
289	In search of a pan-coronavirus vaccine: next-generation vaccine design and immune mechanisms. , 2024, 21, 103-118.		4
293	Bringing immunofocusing into focus. <i>Npj Vaccines</i> , 2024, 9, .	2.9	1
302	Machine learning for functional protein design. <i>Nature Biotechnology</i> , 2024, 42, 216-228.	9.4	1