

David B Volkin

List of Publications by Year in descending order

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146
papers

6,188
citations

61984

43
h-index

88630

70
g-index

152
all docs

152
docs citations

152
times ranked

4904
citing authors

#	ARTICLE	IF	CITATIONS
1	Protein-excipient interactions: Mechanisms and biophysical characterization applied to protein formulation development. <i>Advanced Drug Delivery Reviews</i> , 2011, 63, 1118-1159.	13.7	416
2	Addressing the Cold Reality of mRNA Vaccine Stability. <i>Journal of Pharmaceutical Sciences</i> , 2021, 110, 997-1001.	3.3	302
3	Vaccine instability in the cold chain: Mechanisms, analysis and formulation strategies. <i>Biologicals</i> , 2014, 42, 237-259.	1.4	296
4	Protein Instability and Immunogenicity: Roadblocks to Clinical Application of Injectable Protein Delivery Systems for Sustained Release. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 946-954.	3.3	205
5	Development of stable liquid formulations for adenovirus-based vaccines. <i>Journal of Pharmaceutical Sciences</i> , 2004, 93, 2458-2475.	3.3	141
6	Disassembly and reassembly of yeast-derived recombinant human papillomavirus virus-like particles (HPV VLPs). <i>Journal of Pharmaceutical Sciences</i> , 2006, 95, 2195-2206.	3.3	126
7	Characterization of the photodegradation of a human IgG1 monoclonal antibody formulated as a high-concentration liquid dosage form. <i>Journal of Pharmaceutical Sciences</i> , 2009, 98, 3117-3130.	3.3	117
8	Evaluation of Degradation Pathways for Plasmid DNA in Pharmaceutical Formulations via Accelerated Stability Studies. , 2000, 89, 76-87.		113
9	Structural Characterization of IgG1 mAb Aggregates and Particles Generated Under Various Stress Conditions. <i>Journal of Pharmaceutical Sciences</i> , 2014, 103, 796-809.	3.3	111
10	High-Throughput Biophysical Analysis of Protein Therapeutics to Examine Interrelationships Between Aggregate Formation and Conformational Stability. <i>AAPS Journal</i> , 2014, 16, 48-64.	4.4	106
11	Formulation design of acidic fibroblast growth factor. <i>Pharmaceutical Research</i> , 1993, 10, 649-659.	3.5	105
12	Degradative covalent reactions important to protein stability. <i>Molecular Biotechnology</i> , 1997, 8, 105-122.	2.4	104
13	Stabilization of human papillomavirus virus-like particles by non-ionic surfactants. <i>Journal of Pharmaceutical Sciences</i> , 2005, 94, 1538-1551.	3.3	103
14	Comparability assessments of process and product changes made during development of two different monoclonal antibodies. <i>Biologicals</i> , 2011, 39, 9-22.	1.4	100
15	Multidimensional methods for the formulation of biopharmaceuticals and vaccines. <i>Journal of Pharmaceutical Sciences</i> , 2011, 100, 4171-4197.	3.3	97
16	Effects of Salts from the Hofmeister Series on the Conformational Stability, Aggregation Propensity, and Local Flexibility of an IgG1 Monoclonal Antibody. <i>Biochemistry</i> , 2013, 52, 3376-3389.	2.5	96
17	Correlating Excipient Effects on Conformational and Storage Stability of an IgG1 Monoclonal Antibody with Local Dynamics as Measured by Hydrogen/Deuterium-Exchange Mass Spectrometry. <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 2136-2151.	3.3	92
18	Development of a Microflow Digital Imaging Assay to Characterize Protein Particulates During Storage of a High Concentration IgG1 Monoclonal Antibody Formulation. <i>Journal of Pharmaceutical Sciences</i> , 2010, 99, 3343-3361.	3.3	90

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19	Compatibility, Physical Stability, and Characterization of an IgG4 Monoclonal Antibody After Dilution into Different Intravenous Administration Bags. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 3636-3650.	3.3	86
20	Application of a High-Throughput Screening Procedure with PEG-Induced Precipitation to Compare Relative Protein Solubility During Formulation Development with IgG1 Monoclonal Antibodies. <i>Journal of Pharmaceutical Sciences</i> , 2011, 100, 1009-1021.	3.3	85
21	Charge-mediated Fab-Fc interactions in an IgG1 antibody induce reversible self-association, cluster formation, and elevated viscosity. <i>MAbs</i> , 2016, 8, 1561-1574.	5.2	81
22	Formulation and stabilization of recombinant protein based virus-like particle vaccines. <i>Advanced Drug Delivery Reviews</i> , 2015, 93, 42-55.	13.7	75
23	Postproduction Handling and Administration of Protein Pharmaceuticals and Potential Instability Issues. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 2013-2019.	3.3	75
24	Hydrogen exchange mass spectrometry reveals protein interfaces and distant dynamic coupling effects during the reversible self-association of an IgG1 monoclonal antibody. <i>MAbs</i> , 2015, 7, 525-539.	5.2	69
25	Hydrogen-Deuterium Exchange Mass Spectrometry as an Emerging Analytical Tool for Stabilization and Formulation Development of Therapeutic Monoclonal Antibodies. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 327-345.	3.3	68
26	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, .	7.1	68
27	Minimizing Carry-Over in an Online Pepsin Digestion System used for the H/D Exchange Mass Spectrometric Analysis of an IgG1 Monoclonal Antibody. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 2140-2148.	2.8	64
28	Correlations between changes in conformational dynamics and physical stability in a mutant IgG1 mAb engineered for extended serum half-life. <i>MAbs</i> , 2015, 7, 84-95.	5.2	64
29	Analytical lessons learned from selected therapeutic protein drug comparability studies. <i>Biologicals</i> , 2013, 41, 131-147.	1.4	63
30	Safety, immunogenicity and efficacy in healthy infants of G1 and G2 human reassortant rotavirus vaccine in a new stabilizer/buffer liquid formulation. <i>Pediatric Infectious Disease Journal</i> , 2003, 22, 914-920.	2.0	62
31	Effect of polyanions on the unfolding of acidic fibroblast growth factor. <i>Biochemistry</i> , 1993, 32, 6419-6426.	2.5	61
32	Evaluating the Role of the Air-Solution Interface on the Mechanism of Subvisible Particle Formation Caused by Mechanical Agitation for an IgG1 mAb. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 1643-1656.	3.3	60
33	Evaluation of a Dual-Wavelength Size Exclusion HPLC Method With Improved Sensitivity to Detect Protein Aggregates and Its Use to Better Characterize Degradation Pathways of an IgG1 Monoclonal Antibody. <i>Journal of Pharmaceutical Sciences</i> , 2010, 99, 2582-2597.	3.3	58
34	Comparison of High-Throughput Biophysical Methods to Identify Stabilizing Excipients for a Model IgG2 Monoclonal Antibody: Conformational Stability and Kinetic Aggregation Measurements. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 1701-1720.	3.3	58
35	Physical Characterization and In Vitro Biological Impact of Highly Aggregated Antibodies Separated into Size-Enriched Populations by Fluorescence-Activated Cell Sorting. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 1575-1591.	3.3	57
36	Sucralfate and soluble sucrose octasulfate bind and stabilize acidic fibroblast growth factor. <i>BBA - Proteins and Proteomics</i> , 1993, 1203, 18-26.	2.1	56

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37	Origin of the isoelectric heterogeneity of monoclonal immunoglobulin h1B4. <i>Pharmaceutical Research</i> , 1993, 10, 1580-1586.	3.5	56
38	Excipients Differentially Influence the Conformational Stability and Pretransition Dynamics of Two IgG1 Monoclonal Antibodies. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 3062-3077.	3.3	56
39	A Formulation Development Approach to Identify and Select Stable Ultra-High-Concentration Monoclonal Antibody Formulations With Reduced Viscosities. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 3230-3241.	3.3	55
40	Effect of solution properties on the counting and sizing of subvisible particle standards as measured by light obscuration and digital imaging methods. <i>European Journal of Pharmaceutical Sciences</i> , 2014, 53, 95-108.	4.0	53
41	Effects of Protein Conformation, Apparent Solubility, and Protein-Protein Interactions on the Rates and Mechanisms of Aggregation for an IgG1 Monoclonal Antibody. <i>Journal of Physical Chemistry B</i> , 2016, 120, 7062-7075.	2.6	51
42	Development of spirulina for the manufacture and oral delivery of protein therapeutics. <i>Nature Biotechnology</i> , 2022, 40, 956-964.	17.5	50
43	The adsorption of proteins to pharmaceutical container surfaces. <i>International Journal of Pharmaceutics</i> , 1992, 86, 89-93.	5.2	49
44	Ultraviolet Absorption Spectroscopy. , 1995, 40, 91-114.		48
45	Protein comparability assessments and potential applicability of high throughput biophysical methods and data visualization tools to compare physical stability profiles. <i>Frontiers in Pharmacology</i> , 2014, 5, 39.	3.5	47
46	Size and Conformational Stability of the Hepatitis a Virus used to Prepare VAQTA, a Highly Purified Inactivated Vaccine. <i>Journal of Pharmaceutical Sciences</i> , 1997, 86, 666-673.	3.3	45
47	Characterization of the Physical Stability of a Lyophilized IgG1 mAb after Accelerated Shipping-Like Stress. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 495-507.	3.3	43
48	Improved data visualization techniques for analyzing macromolecule structural changes. <i>Protein Science</i> , 2012, 21, 1540-1553.	7.6	42
49	The Science is There: Key Considerations for Stabilizing Viral Vector-Based Covid-19 Vaccines. <i>Journal of Pharmaceutical Sciences</i> , 2021, 110, 627-634.	3.3	42
50	Effect of Ionic Strength and pH on the Physical and Chemical Stability of a Monoclonal Antibody Antigen-Binding Fragment. <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 2520-2537.	3.3	40
51	High-Definition Mapping of Four Spatially Distinct Neutralizing Epitope Clusters on RiVax, a Candidate Ricin Toxin Subunit Vaccine. <i>Vaccine Journal</i> , 2017, 24, .	3.1	39
52	Preformulation studies—The next advance in aluminum adjuvant-containing vaccines. <i>Vaccine</i> , 2010, 28, 4868-4870.	3.8	38
53	Calculating the Mass of Subvisible Protein Particles with Improved Accuracy Using Microflow Imaging Data. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 536-547.	3.3	38
54	Radar Chart Array Analysis to Visualize Effects of Formulation Variables on IgG1 Particle Formation as Measured by Multiple Analytical Techniques. <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 4256-4267.	3.3	37

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55	Characterization and biological evaluation of a microparticle adjuvant formulation for plasmid DNA vaccines. <i>Journal of Pharmaceutical Sciences</i> , 2004, 93, 1924-1939.	3.3	33
56	Biophysical Characterization and Stabilization of the Recombinant Albumin Fusion Protein sEphB4-HSA. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 1969-1984.	3.3	31
57	High-Throughput Biophysical Analysis and Data Visualization of Conformational Stability of an IgG1 Monoclonal Antibody After Deglycosylation. <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 3942-3956.	3.3	31
58	Physical Stability Comparisons of IgG1-Fc Variants: Effects of N-Glycosylation Site Occupancy and Asp/Gln Residues at Site Asn 297. <i>Journal of Pharmaceutical Sciences</i> , 2014, 103, 1613-1627.	3.3	31
59	High-Resolution Epitope Positioning of a Large Collection of Neutralizing and Nonneutralizing Single-Domain Antibodies on the Enzymatic and Binding Subunits of Ricin Toxin. <i>Vaccine Journal</i> , 2017, 24, .	3.1	31
60	Analytical Comparability Assessments of 5 Recombinant CRM 197 Proteins From Different Manufacturers and Expression Systems. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 1806-1819.	3.3	31
61	Ongoing Challenges to Develop High Concentration Monoclonal Antibody-based Formulations for Subcutaneous Administration: Quo Vadis?. <i>Journal of Pharmaceutical Sciences</i> , 2022, 111, 861-867.	3.3	30
62	A Micro-Polyethylene Glycol Precipitation Assay as a Relative Solubility Screening Tool for Monoclonal Antibody Design and Formulation Development. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 2319-2327.	3.3	29
63	Investigation of Protein Conformational Stability Employing a Multimodal Spectrometer. <i>Analytical Chemistry</i> , 2011, 83, 9399-9405.	6.5	28
64	Preformulation Characterization of an Aluminum Salt-Adjuvanted Trivalent Recombinant Protein-Based Vaccine Candidate Against <i>Streptococcus Pneumoniae</i> . <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 3078-3090.	3.3	28
65	Correlating the Effects of Antimicrobial Preservatives on Conformational Stability, Aggregation Propensity, and Backbone Flexibility of an IgG1 mAb. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 1508-1518.	3.3	28
66	Production, Characterization, and Biological Evaluation of Well-Defined IgG1 Fc Glycoforms as a Model System for Biosimilarity Analysis. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 559-574.	3.3	27
67	SARS-CoV-2 receptor binding domain displayed on HBsAg virus-like particles elicits protective immunity in macaques. <i>Science Advances</i> , 2022, 8, eabl6015.	10.3	27
68	Glassy-State Stabilization of a Dominant Negative Inhibitor Anthrax Vaccine Containing Aluminum Hydroxide and Glycopyranoside Lipid A Adjuvants. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 627-639.	3.3	26
69	Preformulation Characterization and Stability Assessments of Secretory IgA Monoclonal Antibodies as Potential Candidates for Passive Immunization by Oral Administration. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 407-421.	3.3	26
70	Physical Characterization and Stabilization of a Lentiviral Vector Against Adsorption and Freeze-Thaw. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 2764-2774.	3.3	25
71	An empirical phase diagram approach to investigate conformational stability of second-generation functional mutants of acidic fibroblast growth factor-1. <i>Protein Science</i> , 2012, 21, 418-432.	7.6	24
72	Correlating the Impact of Well-Defined Oligosaccharide Structures on Physical Stability Profiles of IgG1-Fc Glycoforms. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 588-601.	3.3	24

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73	Effect of Aluminum Adjuvant and Preservatives on Structural Integrity and Physicochemical Stability Profiles of Three Recombinant Subunit Rotavirus Vaccine Antigens. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 476-487.	3.3	24
74	Physical Characterization and Formulation Development of a Recombinant Pneumolysoid Protein-Based Pneumococcal Vaccine. <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 387-400.	3.3	23
75	Evaluation of Hydrogen Exchange Mass Spectrometry as a Stability-Indicating Method for Formulation Excipient Screening for an IgG4 Monoclonal Antibody. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 1009-1019.	3.3	23
76	Vaccines as physically and chemically well-defined pharmaceutical dosage forms. <i>Expert Review of Vaccines</i> , 2010, 9, 689-691.	4.4	22
77	Combined semi-empirical screening and design of experiments (DOE) approach to identify candidate formulations of a lyophilized live attenuated tetravalent viral vaccine candidate. <i>Vaccine</i> , 2018, 36, 3169-3179.	3.8	22
78	Local Dynamics and Their Alteration by Excipients Modulate the Global Conformational Stability of an IgG1 Monoclonal Antibody. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 4444-4457.	3.3	21
79	Development of a Stable Virus-Like Particle Vaccine Formulation against Chikungunya Virus and Investigation of the Effects of Polyanions. <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 4305-4314.	3.3	21
80	Comparative Evaluation of the Chemical Stability of 4 Well-Defined Immunoglobulin G1-Fc Glycoforms. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 575-587.	3.3	20
81	A C-terminal Pfs48/45 malaria transmission-blocking vaccine candidate produced in the baculovirus expression system. <i>Scientific Reports</i> , 2020, 10, 395.	3.3	20
82	An Improved Methodology for Multidimensional High-Throughput Preformulation Characterization of Protein Conformational Stability. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 2017-2024.	3.3	19
83	Probing structurally altered and aggregated states of therapeutically relevant proteins using <i>roEL</i> coupled to bio-layer interferometry. <i>Protein Science</i> , 2014, 23, 1461-1478.	7.6	19
84	Development of Stabilizing Formulations of a Trivalent Inactivated Poliovirus Vaccine in a Dried State for Delivery in the Nanopatch [®] Microprojection Array. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 1540-1551.	3.3	19
85	Understanding the relevance of local conformational stability and dynamics to the aggregation propensity of an IgG1 and IgG2 monoclonal antibodies. <i>Protein Science</i> , 2013, 22, 1295-1305.	7.6	18
86	Coformulation of Broadly Neutralizing Antibodies 3BNC117 and PGT121: Analytical Challenges During Preformulation Characterization and Storage Stability Studies. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 3032-3046.	3.3	18
87	Structural Changes and Aggregation Mechanisms of Two Different Dimers of an IgG2 Monoclonal Antibody. <i>Biochemistry</i> , 2018, 57, 5466-5479.	2.5	18
88	Biophysical and formulation studies of the <i>Schistosoma mansoni</i> TSP-2 extracellular domain recombinant protein, a lead vaccine candidate antigen for intestinal schistosomiasis. <i>Human Vaccines and Immunotherapeutics</i> , 2013, 9, 2351-2361.	3.3	17
89	Impact of Polysorbate 80 Grade on the Interfacial Properties and Interfacial Stress Induced Subvisible Particle Formation in Monoclonal Antibodies. <i>Journal of Pharmaceutical Sciences</i> , 2021, 110, 746-759.	3.3	17
90	Infrared Spectroscopy. , 1995, 40, 137-156.		16

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91	Comparison of the Structural Stability and Dynamic Properties of Recombinant Anthrax Protective Antigen and its 2-Fluorohistidine-Labeled Analogue. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 4118-4128.	3.3	16
92	Characterization of an Oncolytic Herpes Simplex Virus Drug Candidate. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 485-494.	3.3	16
93	Using homology modeling to interrogate binding affinity in neutralization of ricin toxin by a family of single domain antibodies. <i>Proteins: Structure, Function and Bioinformatics</i> , 2017, 85, 1994-2008.	2.6	16
94	Empirical Correction for Differences in Chemical Exchange Rates in Hydrogen Exchange-Mass Spectrometry Measurements. <i>Analytical Chemistry</i> , 2017, 89, 8931-8941.	6.5	16
95	The Pfs230 N-terminal fragment, Pfs230D1+: expression and characterization of a potential malaria transmission-blocking vaccine candidate. <i>Malaria Journal</i> , 2019, 18, 356.	2.3	16
96	Developability Assessment of Physicochemical Properties and Stability Profiles of HIV-1 BG505 SOSIP.664 and BG505 SOSIP.v4.1-GT1.1 gp140 Envelope Glycoprotein Trimers as Candidate Vaccine Antigens. <i>Journal of Pharmaceutical Sciences</i> , 2019, 108, 2264-2277.	3.3	16
97	Two Decades of Publishing Excellence in Pharmaceutical Biotechnology. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 290-300.	3.3	15
98	Impact of Glycosylation on the Local Backbone Flexibility of Well-Defined IgG1-Fc Glycoforms Using Hydrogen Exchange-Mass Spectrometry. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 2315-2324.	3.3	15
99	Characterization of Excipient Effects on Reversible Self-Association, Backbone Flexibility, and Solution Properties of an IgG1 Monoclonal Antibody at High Concentrations: Part 1. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 340-352.	3.3	15
100	Fine-Specificity Epitope Analysis Identifies Contact Points on Ricin Toxin Recognized by Protective Monoclonal Antibodies. <i>ImmunoHorizons</i> , 2018, 2, 262-273.	1.8	15
101	Comparative Signature Diagrams to Evaluate Biophysical Data for Differences in Protein Structure Across Various Formulations. <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 43-51.	3.3	14
102	Mechanism of a Decrease in Potency for the Recombinant Influenza A Virus Hemagglutinin H3 Antigen During Storage. <i>Journal of Pharmaceutical Sciences</i> , 2014, 103, 821-827.	3.3	14
103	Development of a candidate stabilizing formulation for bulk storage of a double mutant heat labile toxin (dmLT) protein based adjuvant. <i>Vaccine</i> , 2017, 35, 5471-5480.	3.8	14
104	The Botanical Drug Substance Crofelemer as a Model System for Comparative Characterization of Complex Mixture Drugs. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 3242-3256.	3.3	14
105	Investigation of a monoclonal antibody against enterotoxigenic <i>Escherichia coli</i> , expressed as secretory IgA1 and IgA2 in plants. <i>Gut Microbes</i> , 2021, 13, 1-14.	9.8	14
106	Adsorption of recombinant poxvirus L1-protein to aluminum hydroxide/CpG vaccine adjuvants enhances immune responses and protection of mice from vaccinia virus challenge. <i>Vaccine</i> , 2013, 31, 319-326.	3.8	13
107	Characterizing and Minimizing Aggregation and Particle Formation of Three Recombinant Fusion-Protein Bulk Antigens for Use in a Candidate Trivalent Rotavirus Vaccine. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 394-406.	3.3	13
108	Recombinant Subunit Rotavirus Trivalent Vaccine Candidate: Physicochemical Comparisons and Stability Evaluations of Three Protein Antigens. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 380-393.	3.3	13

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109	Rapid Developability Assessments to Formulate Recombinant Protein Antigens as Stable, Low-Cost, Multi-Dose Vaccine Candidates: Case-Study With Non-Replicating Rotavirus (NRRV) Vaccine Antigens. <i>Journal of Pharmaceutical Sciences</i> , 2021, 110, 1042-1053.	3.3	13
110	Characterization and Stabilization of Recombinant Human Protein Pentraxin (rhPTX-2). <i>Journal of Pharmaceutical Sciences</i> , 2013, 102, 827-841.	3.3	12
111	Short-term and longer-term protective immune responses generated by subunit vaccination with smallpox A33, B5, L1 or A27 proteins adjuvanted with aluminum hydroxide and CpG in mice challenged with vaccinia virus. <i>Vaccine</i> , 2020, 38, 6007-6018.	3.8	12
112	Holistic process development to mitigate proteolysis of a subunit rotavirus vaccine candidate produced in <i>Pichia pastoris</i> by means of an acid pH pulse during fed-batch fermentation. <i>Biotechnology Progress</i> , 2020, 36, e2966.	2.6	12
113	Antigen-adjuvant interactions, stability, and immunogenicity profiles of a SARS-CoV-2 receptor-binding domain (RBD) antigen formulated with aluminum salt and CpG adjuvants. <i>Human Vaccines and Immunotherapeutics</i> , 2022, 18, .	3.3	12
114	The Characterization, Stabilization, and Formulation of Acidic Fibroblast Growth Factor. <i>Pharmaceutical Biotechnology</i> , 2002, 9, 181-217.	0.3	11
115	Identifying Stabilizers of Plasmid DNA for Pharmaceutical Use. <i>Journal of Pharmaceutical Sciences</i> , 2011, 100, 904-914.	3.3	11
116	Biosimilarity Assessments of Model IgG1-Fc Glycoforms Using a Machine Learning Approach. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 602-612.	3.3	11
117	Formulation Development and Improved Stability of a Combination Measles and Rubella Live-Viral Vaccine Dried for Use in the Nanopatch TM Microneedle Delivery System. <i>Human Vaccines and Immunotherapeutics</i> , 2021, 17, 2501-2516.	3.3	11
118	Evaluation of lumazine synthase from <i>Bacillus anthracis</i> as a presentation platform for polyvalent antigen display. <i>Protein Science</i> , 2017, 26, 2059-2072.	7.6	10
119	A Collection of Single-Domain Antibodies that Crowd Ricin Toxin's Active Site. <i>Antibodies</i> , 2018, 7, 45.	2.5	10
120	Effect of 2 Emulsion-Based Adjuvants on the Structure and Thermal Stability of <i>Staphylococcus aureus</i> Alpha-Toxin. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 2325-2334.	3.3	10
121	Structural Characterization and Physicochemical Stability Profile of a Double Mutant Heat Labile Toxin Protein Based Adjuvant. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 3474-3485.	3.3	9
122	Effect of Formulation Variables on the Stability of a Live, Rotavirus (RV3-BB) Vaccine Candidate using <i>In Vitro</i> Gastric Digestion Models to Mimic Oral Delivery. <i>Journal of Pharmaceutical Sciences</i> , 2021, 110, 760-770.	3.3	9
123	Formulation development of a live attenuated human rotavirus (RV3-BB) vaccine candidate for use in low- and middle-income countries. <i>Human Vaccines and Immunotherapeutics</i> , 2021, 17, 2298-2310.	3.3	9
124	Novel Ricin Subunit Antigens With Enhanced Capacity to Elicit Toxin-Neutralizing Antibody Responses in Mice. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 1603-1613.	3.3	8
125	The Use of a GroEL-BLI Biosensor to Rapidly Assess Preaggregate Populations for Antibody Solutions Exhibiting Different Stability Profiles. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 559-570.	3.3	8
126	Molecular engineering improves antigen quality and enables integrated manufacturing of a trivalent subunit vaccine candidate for rotavirus. <i>Microbial Cell Factories</i> , 2021, 20, 94.	4.0	8

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127	Challenges and opportunities of using liquid chromatography and mass spectrometry methods to develop complex vaccine antigens as pharmaceutical dosage forms. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2016, 1032, 23-38.	2.3	7
128	Site-Specific Hydrolysis Reaction C-Terminal of Methionine in Met-His during Metal-Catalyzed Oxidation of IgG-1. <i>Molecular Pharmaceutics</i> , 2016, 13, 1317-1328.	4.6	7
129	Stabilization and formulation of a recombinant Human Cytomegalovirus vector for use as a candidate HIV-1 vaccine. <i>Vaccine</i> , 2019, 37, 6696-6706.	3.8	7
130	Mechanism of Thimerosal-Induced Structural Destabilization of a Recombinant Rotavirus P[4] Protein Antigen Formulated as a Multi-Dose Vaccine. <i>Journal of Pharmaceutical Sciences</i> , 2021, 110, 1054-1066.	3.3	7
131	Chemical Stability of the Botanical Drug Substance Crofelemer: A Model System for Comparative Characterization of Complex Mixture Drugs. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 3257-3269.	3.3	6
132	Characterization of Excipient Effects on Reversible Self-Association, Backbone Flexibility, and Solution Properties of an IgG1 Monoclonal Antibody at High Concentrations: Part 2. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 353-363.	3.3	6
133	Evaluating the Combined Impact of Temperature and Application of Interfacial Dilatational Stresses on Surface-mediated Protein Particle Formation in Monoclonal Antibody Formulations. <i>Journal of Pharmaceutical Sciences</i> , 2022, 111, 680-689.	3.3	6
134	Case Studies Applying Biophysical Techniques to Better Characterize Protein Aggregates and Particulates of Varying Size. , 2013, , 205-243.		5
135	Comparative Characterization of Crofelemer Samples Using Data Mining and Machine Learning Approaches With Analytical Stability Data Sets. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 3270-3279.	3.3	5
136	Developing a manufacturing process to deliver a cost effective and stable liquid human rotavirus vaccine. <i>Vaccine</i> , 2021, 39, 2048-2059.	3.8	5
137	Improved Comparative Signature Diagrams to Evaluate Similarity of Storage Stability Profiles of Different IgG1 mAbs. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 1028-1035.	3.3	4
138	Preformulation Characterization, Stabilization, and Formulation Design for the Acrylodan-Labeled Glucose-Binding Protein SM4-AC. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 1197-1210.	3.3	4
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140	Production of Well-Characterized Virus-like Particles in an Escherichia coli-Based Expression Platform for Preclinical Vaccine Assessments. <i>Methods in Molecular Biology</i> , 2016, 1404, 437-457.	0.9	3
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143	Crystallization of a nonreplicating rotavirus vaccine candidate. <i>Biotechnology and Bioengineering</i> , 2021, 118, 1750-1756.	3.3	2
144	Interaction of Aluminum-Adjuvanted Recombinant P[4] Protein Antigen With Preservatives: Storage Stability and Backbone Flexibility Studies. <i>Journal of Pharmaceutical Sciences</i> , 2022, 111, 970-981.	3.3	2

#	ARTICLE	IF	CITATIONS
145	Development of a high-throughput RT-PCR based viral infectivity assay for monitoring the stability of a replicating recombinant Lymphocytic Choriomeningitis viral vector. <i>Journal of Virological Methods</i> , 2022, 301, 114440.	2.1	1
146	Formulation Studies During Preclinical Development of Influenza Hemagglutinin and Virus-Like Particle Vaccine Candidates. <i>Methods in Molecular Biology</i> , 2016, 1404, 393-421.	0.9	0