

# Patrick Garidel

## List of Publications by Year in descending order

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64  
papers

2,862  
citations

172457

29  
h-index

175258

52  
g-index

70  
all docs

70  
docs citations

70  
times ranked

2950  
citing authors

#	ARTICLE	IF	CITATIONS
1	Strategies for the Assessment of Protein Aggregates in Pharmaceutical Biotech Product Development. <i>Pharmaceutical Research</i> , 2011, 28, 920-933.	3.5	312
2	High-concentration protein formulations: How high is high?. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2017, 119, 353-360.	4.3	126
3	Polysorbate degradation in biotherapeutic formulations: Identification and discussion of current root causes. <i>International Journal of Pharmaceutics</i> , 2018, 552, 422-436.	5.2	120
4	Prediction and Reduction of the Aggregation of Monoclonal Antibodies. <i>Journal of Molecular Biology</i> , 2017, 429, 1244-1261.	4.2	112
5	Nanoparticle tracking analysis of particle size and concentration detection in suspensions of polymer and protein samples: Influence of experimental and data evaluation parameters. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2016, 104, 30-41.	4.3	109
6	Membranolytic Activity of Bile Salts: Influence of Biological Membrane Properties and Composition. <i>Molecules</i> , 2007, 12, 2292-2326.	3.8	104
7	A critical evaluation of self-interaction chromatography as a predictive tool for the assessment of protein-protein interactions in protein formulation development: A case study of a therapeutic monoclonal antibody. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2010, 75, 16-25.	4.3	100
8	A thermodynamic analysis of the binding interaction between polysorbate 20 and 80 with human serum albumins and immunoglobulins: A contribution to understand colloidal protein stabilisation. <i>Biophysical Chemistry</i> , 2009, 143, 70-78.	2.8	99
9	A rapid, sensitive and economical assessment of monoclonal antibody conformational stability by intrinsic tryptophan fluorescence spectroscopy. <i>Biotechnology Journal</i> , 2008, 3, 1201-1211.	3.5	98
10	Conformational analysis of protein secondary structure during spray-drying of antibody/mannitol formulations. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2007, 65, 1-9.	4.3	92
11	Thermodynamics of Demicellization of Mixed Micelles Composed of Sodium Oleate and Bile Salts. <i>Langmuir</i> , 2004, 20, 320-328.	3.5	90
12	Divalent cations affect chain mobility and aggregate structure of lipopolysaccharide from <i>Salmonella minnesota</i> reflected in a decrease of its biological activity. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2005, 1715, 122-131.	2.6	81
13	1,2-Dimyristoyl-sn-glycero-3-phosphoglycerol (DMPG) monolayers: influence of temperature, pH, ionic strength and binding of alkaline earth cations. <i>Chemistry and Physics of Lipids</i> , 2005, 138, 50-59.	3.2	70
14	Insights into protein-polysorbate interactions analysed by means of isothermal titration and differential scanning calorimetry. <i>European Biophysics Journal</i> , 2009, 38, 557-568.	2.2	66
15	Subvisible (2-100 µm) Particle Analysis During Biotherapeutic Drug Product Development: Part 1, Considerations and Strategy. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 1899-1908.	3.3	64
16	Systematic Investigation of the Effect of Lyophilizate Collapse on Pharmaceutically Relevant Proteins, Part 2: Stability During Storage at Elevated Temperatures. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 2288-2306.	3.3	63
17	Boosting antibody developability through rational sequence optimization. <i>MAbs</i> , 2015, 7, 505-515.	5.2	60
18	Buffer capacity of biologics—from buffer salts to buffering by antibodies. <i>Biotechnology Progress</i> , 2013, 29, 480-492.	2.6	53

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19	Mechanisms of endotoxin neutralization by synthetic cationic compounds. Journal of Endotoxin Research, 2006, 12, 261-277.	2.5	48
20	Prediction of colloidal stability of high concentration protein formulations. Pharmaceutical Development and Technology, 2015, 20, 367-374.	2.4	46
21	Liquid-liquid phase separation of a monoclonal antibody at low ionic strength: Influence of anion charge and concentration. Biophysical Chemistry, 2017, 220, 7-19.	2.8	45
22	Thermodynamics of Lipid Organization and Domain Formation in Phospholipid Bilayers. Journal of Liposome Research, 2000, 10, 131-158.	3.3	38
23	Lysozyme self-interactions as assessed by the osmotic second virial coefficient: Impact for physical protein stabilization. Biotechnology Journal, 2009, 4, 1305-1319.	3.5	37
24	Resolving power of dynamic light scattering for protein and polystyrene nanoparticles. Pharmaceutical Development and Technology, 2015, 20, 84-89.	2.4	37
25	Poloxamer 188 as surfactant in biological formulations – An alternative for polysorbate 20/80?. International Journal of Pharmaceutics, 2022, 620, 121706.	5.2	34
26	Particle Detection and Characterization for Biopharmaceutical Applications: Current Principles of Established and Alternative Techniques. Pharmaceutics, 2020, 12, 1112.	4.5	33
27	Stability of buffer-free freeze-dried formulations: A feasibility study of a monoclonal antibody at high protein concentrations. European Journal of Pharmaceutics and Biopharmaceutics, 2015, 97, 125-139.	4.3	32
28	Complex Micellization Behavior of the Polysorbates Tween 20 and Tween 80. Molecular Pharmaceutics, 2021, 18, 3147-3157.	4.6	31
29	Correlation of protein-protein interactions as assessed by affinity chromatography with colloidal protein stability: A case study with lysozyme. Pharmaceutical Development and Technology, 2010, 15, 421-430.	2.4	30
30	Acidic and alkaline hydrolysis of polysorbates under aqueous conditions: Towards understanding polysorbate degradation in biopharmaceutical formulations. European Journal of Pharmaceutical Sciences, 2020, 144, 105211.	4.0	29
31	Surface Tension and Self-association Properties of Aqueous Polysorbate 20 HP and 80 HP Solutions: Insights into Protein Stabilisation Mechanisms. Journal of Pharmaceutical Innovation, 2021, 16, 726-734.	2.4	28
32	Industry Perspective on the use and Characterization of Polysorbates for Biopharmaceutical Products Part 1: Survey Report on Current State and Common Practices for Handling and Control of Polysorbates. Journal of Pharmaceutical Sciences, 2022, 111, 1280-1291.	3.3	27
33	Improved Solution-State Properties of Monoclonal Antibodies by Targeted Mutations. Journal of Physical Chemistry B, 2017, 121, 10818-10827.	2.6	25
34	An in-depth examination of fatty acid solubility limits in biotherapeutic protein formulations containing polysorbate 20 and polysorbate 80. International Journal of Pharmaceutics, 2020, 591, 119934.	5.2	25
35	Cathelicidin and PMB neutralize endotoxins by multifactorial mechanisms including LPS interaction and targeting of host cell membranes. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	25
36	Structural organisation and phase behaviour of a stratum corneum lipid analogue: ceramide 3A. Physical Chemistry Chemical Physics, 2006, 8, 2265.	2.8	24

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37	Buffer-free therapeutic antibody preparations provide a viable alternative to conventionally buffered solutions: From protein buffer capacity prediction to bioprocess applications. <i>Biotechnology Journal</i> , 2015, 10, 610-622.	3.5	23
38	Hydrophobic interactions are the driving force for the binding of peptide mimotopes and Staphylococcal protein A to recombinant human IgG1. <i>European Biophysics Journal</i> , 2007, 36, 647-660.	2.2	21
39	Development and validation of a selective marker-based quantification of polysorbate 20 in biopharmaceutical formulations using UPLC QDa detection. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2020, 1157, 122287.	2.3	21
40	Assessing the polysorbate degradation fingerprints and kinetics of lipases – how the activity of polysorbate degrading hydrolases is influenced by the assay and assay conditions. <i>European Journal of Pharmaceutical Sciences</i> , 2021, 166, 105980.	4.0	21
41	Spectroscopic methods for assessing the molecular origins of macroscopic solution properties of highly concentrated liquid protein solutions. <i>Analytical Biochemistry</i> , 2018, 561-562, 70-88.	2.4	19
42	Thermal and Chemical Unfolding of a Monoclonal IgG1 Antibody: Application of the Multistate Zimm-Bragg Theory. <i>Biophysical Journal</i> , 2020, 118, 1067-1075.	0.5	19
43	Albumin displacement at the air-water interface by Tween (Polysorbate) surfactants. <i>European Biophysics Journal</i> , 2020, 49, 533-547.	2.2	18
44	Structure of a Therapeutic Full-Length Anti-NPRA IgG4 Antibody: Dissecting Conformational Diversity. <i>Biophysical Journal</i> , 2019, 116, 1637-1649.	0.5	17
45	HP- $\beta$ -CD for the formulation of IgG and Ig-based biotherapeutics. <i>International Journal of Pharmaceutics</i> , 2021, 601, 120531.	5.2	17
46	The electrokinetic potential of therapeutic proteins and its modulation: Impact on protein stability. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2012, 415, 421-430.	4.7	16
47	Viscosity measurements of antibody solutions by photon correlation spectroscopy: an indirect approach – limitations and applicability for high-concentration liquid protein solutions. <i>Pharmaceutical Development and Technology</i> , 2013, 18, 963-970.	2.4	16
48	Rational optimization of a monoclonal antibody improves the aggregation propensity and enhances the CMC properties along the entire pharmaceutical process chain. <i>MAbs</i> , 2020, 12, 1787121.	5.2	15
49	An Infrared Reflection-Absorption Spectroscopic (IRRAS) Study of the Interaction of Lipid A and Lipopolysaccharide Re with Endotoxin-Binding Proteins. <i>Medicinal Chemistry</i> , 2009, 5, 535-542.	1.5	13
50	Characterizing protein-protein-interaction in high-concentration monoclonal antibody systems with the quartz crystal microbalance. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 32698-32707.	2.8	13
51	Hydrogel formulations for biologicals: current spotlight from a commercial perspective. <i>Therapeutic Delivery</i> , 2018, 9, 221-230.	2.2	13
52	Photo-Oxidation of Therapeutic Protein Formulations: From Radical Formation to Analytical Techniques. <i>Pharmaceutics</i> , 2022, 14, 72.	4.5	11
53	Concentration Effects in the Interaction of Monoclonal Antibodies (mAbs) with their Immediate Environment Characterized by EPR Spectroscopy. <i>Molecules</i> , 2019, 24, 2528.	3.8	10
54	Hydrolytic polysorbate 20 degradation – Sensitive detection of free fatty acids in biopharmaceuticals via UPLC-QDa analytics with isolator column. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2021, 1174, 122717.	2.3	8

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55	Biophysical Mechanisms of the Neutralization of Endotoxins by Lipopolyamines. The Open Biochemistry Journal, 2013, 7, 82-93.	0.5	8
56	Lyophilization of High-Concentration Protein Formulations. Methods in Pharmacology and Toxicology, 2019, , 291-325.	0.2	7
57	Investigating photodegradation of antibodies governed by the light dosage. International Journal of Pharmaceutics, 2021, 604, 120723.	5.2	7
58	Thermodynamic Unfolding and Aggregation Fingerprints of Monoclonal Antibodies Using Thermal Profiling. Pharmaceutical Research, 2020, 37, 78.	3.5	6
59	An Interlaboratory Comparison on the Characterization of a Sub-micrometer Polydisperse Particle Dispersion. Journal of Pharmaceutical Sciences, 2022, 111, 699-709.	3.3	6
60	Dipolar Interactions and Protein Hydration in Highly Concentrated Antibody Formulations. Molecular Pharmaceutics, 2022, 19, 494-507.	4.6	6
61	Fast pH-mediated changes of the viscosity of protein solutions studied with a voltage-modulated quartz crystal microbalance. Biointerphases, 2020, 15, 021004.	1.6	4
62	Characterization of radicals in polysorbate 80 using electron paramagnetic resonance (EPR) spectroscopy and spin trapping. International Journal of Pharmaceutics: X, 2022, , 100123.	1.6	2
63	Expanding the toolbox for predictive parameters describing antibody stability considering thermodynamic and kinetic determinants. Pharmaceutical Research, 2021, 38, 2065-2089.	3.5	1
64	Physico-chemistry of Lipopolysaccharides. , 2020, , 1-18.		0