Raquel L Lieberman

List of Publications by Year
in descending order

81 papers	3,522 citations	201575 27 h-index	143943 57 g-index
83 all docs	83 docs citations	83 times ranked	4449 citing authors

#	Article	IF	Citations
1	Catalytically active holo<i>Homo sapiens</i>adenosine deaminase I adopts a closed conformation. Acta Crystallographica Section D: Structural Biology, 2022, 78, 91-103.	1.1	3
2	Consensus Recommendation for Mouse Models of Ocular Hypertension to Study Aqueous Humor Outflow and Its Mechanisms. , 2022, 63, 12.		20
3	Structure and activity of a thermally stable mutant of <i>Acanthamoeba</i> actophorin. Acta Crystallographica Section F, Structural Biology Communications, 2022, 78, 150-160.	0.4	2
4	Calcium dysregulation potentiates wild-type myocilin misfolding: implications for glaucoma pathogenesis. Journal of Biological Inorganic Chemistry, 2022, 27, 553-564.	1.1	4
5	Archaeal roots of intramembrane aspartyl protease siblings signal peptide peptidase and presenilin. Proteins: Structure, Function and Bioinformatics, 2021, 89, 232-241.	1.5	7
6	Preparation of a Deuterated Membrane Protein for Small-Angle Neutron Scattering. Methods in Molecular Biology, 2021, 2302, 219-235.	0.4	0
7	Structural Arrangement within a Peptide Fibril Derived from the Glaucoma-Associated Myocilin Olfactomedin Domain. Journal of Physical Chemistry B, 2021, 125, 2886-2897.	1.2	1
8	Molecular Insights into Myocilin and Its Glaucoma-Causing Misfolded Olfactomedin Domain Variants. Accounts of Chemical Research, 2021, 54, 2205-2215.	7.6	13
9	Optically Modulated and Optically Activated Delayed Fluorescent Proteins through Dark State Engineering. Journal of Physical Chemistry B, 2021, 125, 5200-5209.	1.2	5
10	Common and rare myocilin variants: Predicting glaucoma pathogenicity based on genetics, clinical, and laboratory misfolding data. Human Mutation, 2021, 42, 903-946.	1.1	13
11	E. coli Ribonucleotide Reductase Î²2 Subunit Inactivation by Triapine Occurs through Binding of a Triapineâ€“Fe(II) Adduct. Journal of Physical Chemistry Letters, 2021, 12, 9020-9025.	2.1	0
12	Recombinant antibodies recognize conformation-dependent epitopes of the leucine zipper of misfolding-prone myocilin. Journal of Biological Chemistry, 2021, 297, 101067.	1.6	1
13	Molecular architecture and modifications of full-length myocilin. Experimental Eye Research, 2021, 211, 108729.	1.2	5
14	Improved resolution crystal structure of <i>Acanthamoeba</i> actophorin reveals structural plasticity not induced by microgravity. Acta Crystallographica Section F, Structural Biology Communications, 2021, 77, 452-458.	0.4	3
15	Mainly on the Plane: Deep Subsurface Bacterial Proteins Bind and Alter Clathrate Structure. Crystal Growth and Design, 2020, 20, 6290-6295.	1.4	5
16	A blueprint for academic laboratories to produce SARS-CoV-2 quantitative RT-PCR test kits. Journal of Biological Chemistry, 2020, 295, 15438-15453.	1.6	31
17	Substrateâ€“Enzyme Interactions in Intramembrane Proteolysis: Î³-Secretase as the Prototype. Frontiers in Molecular Neuroscience, 2020, 13, 65.	1.4	3
18	Progranulin deficiency leads to reduced glucocerebrosidase activity. PLoS ONE, 2019, 14, e0212382.	1.1	57

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19	Stable calcium-free myocilin olfactomedin domain variants reveal challenges in differentiating between benign and glaucoma-causing mutations. Journal of Biological Chemistry, 2019, 294, 12717-12728.	1.6	13
20	Different Grp94 components interact transiently with the myocilin olfactomedin domain in vitro to enhance or retard its amyloid aggregation. Scientific Reports, 2019, 9, 12769.	1.6	11
21	Antibodies Used to Detect Glaucoma-Associated Myocilin: More or Less Than Meets the Eye?. , 2019, 60, 2034.		1
22	How does a proteinâ€™s structure spell the difference between health and disease? Our journey to understand glaucoma-associated myocilin. PLoS Biology, 2019, 17, e3000237.	2.6	4
23	Exploring substituent diversity on pyrrolidine-aryltriazole iminosugars: Structural basis of Î²-glucocerebrosidase inhibition. Bioorganic Chemistry, 2019, 86, 652-664.	2.0	17
24	Differential Misfolding Properties of Glaucoma-Associated Olfactomedin Domains from Humans and Mice. Biochemistry, 2019, 58, 1718-1727.	1.2	9
25	Atomic Structure of a Fluorescent Ag₈ Cluster Templated by a Multistranded DNA Scaffold. Journal of the American Chemical Society, 2019, 141, 11465-11470.	6.6	112
26	Calcium-ligand variants of the myocilin olfactomedin propeller selected from invertebrate phyla reveal cross-talk with N-terminal blade and surface helices. Acta Crystallographica Section D: Structural Biology, 2019, 75, 817-824.	1.1	6
27	Solution Structure of an Intramembrane Aspartyl Protease via Small Angle Neutron Scattering. Biophysical Journal, 2018, 114, 602-608.	0.2	11
28	Both positional and chemical variables control in vitro proteolytic cleavage of a presenilin ortholog. Journal of Biological Chemistry, 2018, 293, 4653-4663.	1.6	14
29	Trifunctional High-Throughput Screen Identifies Promising Scaffold To Inhibit Grp94 and Treat Myocilin-Associated Glaucoma. ACS Chemical Biology, 2018, 13, 933-941.	1.6	17
30	Simulations and Experiments Delineate Amyloid Fibrilization by Peptides Derived from Glaucoma-Associated Myocilin. Journal of Physical Chemistry B, 2018, 122, 5845-5850.	1.2	9
31	Consensus recommendations for trabecular meshwork cell isolation, characterization and culture. Experimental Eye Research, 2018, 171, 164-173.	1.2	221
32	Contrast-Matching Detergent in Small-Angle Neutron Scattering Experiments for Membrane Protein Structural Analysis and Ab Initio Modeling. Journal of Visualized Experiments, 2018, , .	0.2	1
33	Neutron scattering in the biological sciences: progress and prospects. Acta Crystallographica Section D: Structural Biology, 2018, 74, 1129-1168.	1.1	47
34	Epitope mapping of commercial antibodies that detect myocilin. Experimental Eye Research, 2018, 173, 109-112.	1.2	5
35	Progress toward development of a proteostasis drug for myocilin-associated glaucoma. Future Medicinal Chemistry, 2018, 10, 1391-1393.	1.1	5
36	Second Generation Grp94â€Selective Inhibitors Provide Opportunities for the Inhibition of Metastatic Cancer. Chemistry - A European Journal, 2017, 23, 15775-15782.	1.7	29

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37	De novo design of antibody complementarity determining regions binding a FLAG tetra-peptide. Scientific Reports, 2017, 7, 10295.	1.6	27
38	Structure and Misfolding of the Flexible Tripartite Coiled-Coil Domain of Glaucoma-Associated Myocilin. Structure, 2017, 25, 1697-1707.e5.	1.6	26
39	Isoform-selective Hsp90 inhibition rescues model of hereditary open-angle glaucoma. Scientific Reports, 2017, 7, 17951.	1.6	28
40	Metal ion coordination in the E. coli Nudix hydrolase dihydroneopterin triphosphate pyrophosphatase: New clues into catalytic mechanism. PLoS ONE, 2017, 12, e0180241.	1.1	3
41	Myocilin Regulates Metalloprotease 2 Activity Through Interaction With TIMP3. , 2017, 58, 5308.		12
42	Development of Glucose Regulated Protein 94-Selective Inhibitors Based on the BnIm and Radamide Scaffold. Journal of Medicinal Chemistry, 2016, 59, 3471-3488.	2.9	54
43	Enzymatic hydrolysis by transition-metal-dependent nucleophilic aromatic substitution. Nature Chemical Biology, 2016, 12, 1031-1036.	3.9	12
44	Lessons from an Î±-Helical Membrane Enzyme: Expression, Purification, and Detergent Optimization for Biophysical and Structural Characterization. Methods in Molecular Biology, 2016, 1432, 281-301.	0.4	1
45	Automated Structure- and Sequence-Based Design of Proteins for High Bacterial Expression and Stability. Molecular Cell, 2016, 63, 337-346.	4.5	363
46	Discovery of Molecular Therapeutics for Glaucoma: Challenges, Successes, and Promising Directions. Journal of Medicinal Chemistry, 2016, 59, 788-809.	2.9	55
47	Structural basis for misfolding in myocilin-associated glaucoma. Human Molecular Genetics, 2015, 24, 2111-2124.	1.4	72
48	Catalytic Properties of Intramembrane Aspartyl Protease Substrate Hydrolysis Evaluated Using a FRET Peptide Cleavage Assay. ACS Chemical Biology, 2015, 10, 2166-2174.	1.6	13
49	Structural and biophysical characterization of an epitope-specific engineered Fab fragment and complexation with membrane proteins: implications for co-crystallization. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 896-906.	2.5	13
50	Increased Fab thermoresistance via V_H-targeted directed evolution. Protein Engineering, Design and Selection, 2015, 28, 365-377.	1.0	9
51	Molecular Details of Olfactomedin Domains Provide Pathway to Structure-Function Studies. PLoS ONE, 2015, 10, e0130888.	1.1	16
52	Exploiting the interaction between Grp94 and aggregated myocilin to treat glaucoma. Human Molecular Genetics, 2014, 23, 6470-6480.	1.4	38
53	Protein Structure and Function: An Interdisciplinary Multimedia-Based Guided-Inquiry Education Module for the High School Science Classroom. Journal of Chemical Education, 2014, 91, 52-55.	1.1	21
54	Ligands for Glaucoma-Associated Myocilin Discovered by a Generic Binding Assay. ACS Chemical Biology, 2014, 9, 517-525.	1.6	15

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55	Molecular Basis of 1-Deoxygalactonojirimycin Arylthiourea Binding to Human Î±-Galactosidase A: Pharmacological Chaperoning Efficacy on Fabry Disease Mutants. ACS Chemical Biology, 2014, 9, 1460-1469.	1.6	50
56	Effects of protein engineering and rational mutagenesis on crystal lattice of single chain antibody fragments. Proteins: Structure, Function and Bioinformatics, 2014, 82, 1884-1895.	1.5	5
57	The Glaucoma-Associated Olfactomedin Domain of Myocilin Forms Polymorphic Fibrils That Are Constrained by Partial Unfolding and Peptide Sequence. Journal of Molecular Biology, 2014, 426, 921-935.	2.0	30
58	Determination of Soluble and Membrane Protein Structures by X-Ray Crystallography. Methods in Molecular Biology, 2013, 955, 475-493.	0.4	6
59	New direction for glaucoma therapeutics: focus on the olfactomedin domain of myocilin. Future Medicinal Chemistry, 2012, 4, 2131-2134.	1.1	3
60	The Glaucoma-associated Olfactomedin Domain of Myocilin Is a Novel Calcium Binding Protein. Journal of Biological Chemistry, 2012, 287, 43370-43377.	1.6	25
61	Glucose-regulated Protein 94 Triage of Mutant Myocilin through Endoplasmic Reticulum-associated Degradation Subverts a More Efficient Autophagic Clearance Mechanism. Journal of Biological Chemistry, 2012, 287, 40661-40669.	1.6	66
62	Amyloid Fibril Formation by the Glaucoma-Associated Olfactomedin Domain of Myocilin. Journal of Molecular Biology, 2012, 421, 242-255.	2.0	48
63	The Stability of Myocilin Olfactomedin Domain Variants Provides New Insight into Glaucoma as a Protein Misfolding Disorder. Biochemistry, 2011, 50, 5824-5833.	1.2	47
64	Binding of 3,4,5,6-Tetrahydroxyazepanes to the Acid-Î²-glucosidase Active Site: Implications for Pharmacological Chaperone Design for Gaucher Disease. Biochemistry, 2011, 50, 10647-10657.	1.2	38
65	Crystallization chaperone strategies for membrane proteins. Methods, 2011, 55, 293-302.	1.9	32
66	Biophysical Characterization of the Olfactomedin Domain of Myocilin, an Extracellular Matrix Protein Implicated in Inherited Forms of Glaucoma. PLoS ONE, 2011, 6, e16347.	1.1	34
67	A Guided Tour of the Structural Biology of Gaucher Disease: Acid-Î²-Glucosidase and Saposin C. Enzyme Research, 2011, 2011, 1-15.	1.8	37
68	Sneak peak at galactocerebrosidase, Krabbe disease's lysosomal hydrolase. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 15017-15018.	3.3	4
69	Conversion of scFv peptide-binding specificity for crystal chaperone development. Protein Engineering, Design and Selection, 2011, 24, 419-428.	1.0	11
70	Rescue of Glaucoma-Causing Mutant Myocilin Thermal Stability by Chemical Chaperones. ACS Chemical Biology, 2010, 5, 477-487.	1.6	49
71	Detection of ligand binding hot spots on protein surfaces via fragment-based methods: application to DJ-1 and glucocerebrosidase. Journal of Computer-Aided Molecular Design, 2009, 23, 491-500.	1.3	77
72	Effects of pH and Iminosugar Pharmacological Chaperones on Lysosomal Glycosidase Structure and Stability. Biochemistry, 2009, 48, 4816-4827.	1.2	128

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73	Membrane-embedded protease poses for photoshoot. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 401-402.	3.3	8
74	From rhomboid function to structure and back again. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8199-8200.	3.3	4
75	Structure of acid Î²-glucosidase with pharmacological chaperone provides insight into Gaucher disease. Nature Chemical Biology, 2007, 3, 101-107.	3.9	213
76	Characterization of the Particulate Methane Monooxygenase Metal Centers in Multiple Redox States by X-ray Absorption Spectroscopy. Inorganic Chemistry, 2006, 45, 8372-8381.	1.9	89
77	Crystal structure of a membrane-bound metalloenzyme that catalyses the biological oxidation of methane. Nature, 2005, 434, 177-182.	13.7	613
78	X-ray Crystallography and Biological Metal Centers:Â Is Seeing Believing?. Inorganic Chemistry, 2005, 44, 770-778.	1.9	59
79	Biological Methane Oxidation: Regulation, Biochemistry, and Active Site Structure of Particulate Methane Monooxygenase. Critical Reviews in Biochemistry and Molecular Biology, 2004, 39, 147-164.	2.3	184
80	Purified particulate methane monooxygenase from Methylococcus capsulatus (Bath) is a dimer with both mononuclear copper and a copper-containing cluster. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 3820-3825.	3.3	145
81	Synthesis, structure and magnetic properties of a chromium(III)î—¸nicotinamide complex [Cr3O(O2CCH3)6(na)3]+ (na=nicotinamide). Inorganica Chimica Acta, 2000, 297, 1-5.	1.2	28