Michael E Harris

List of Publications by Year
in descending order

81 papers	2,588 citations	126907 33 h-index	214800 47 g-index
86 all docs	86 docs citations	86 times ranked	2140 citing authors

#	Article	IF	Citations
1	Beyond the Plateau: pL Dependence of Proton Inventories as a Tool for Studying Ribozyme and Ribonuclease Catalysis. Biochemistry, 2021, 60, 2810-2823.	2.5	1
2	Distributive enzyme binding controlled by local RNA context results in 3â€² to 5â€² directional processing of dicistronic tRNA precursors by<i>Escherichia coli</i>ribonuclease P. Nucleic Acids Research, 2019, 47, 1451-1467.	14.5	5
3	Structure-guided design of anti-cancer ribonucleotide reductase inhibitors. Journal of Enzyme Inhibition and Medicinal Chemistry, 2019, 34, 438-450.	5.2	14
4	An Ontology for Facilitating Discussion of Catalytic Strategies of RNA-Cleaving Enzymes. ACS Chemical Biology, 2019, 14, 1068-1076.	3.4	45
5	Structure-Guided Synthesis and Mechanistic Studies Reveal Sweetspots on Naphthyl Salicyl Hydrazone Scaffold as Non-Nucleosidic Competitive, Reversible Inhibitors of Human Ribonucleotide Reductase. Journal of Medicinal Chemistry, 2018, 61, 666-680.	6.4	12
6	Evidence That Nucleophile Deprotonation Exceeds Bond Formation in the HDV Ribozyme Transition State. Biochemistry, 2018, 57, 3465-3472.	2.5	4
7	Rules of RNA specificity of hnRNP A1 revealed by global and quantitative analysis of its affinity distribution. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2206-2211.	7.1	50
8	Mapping specificity landscapes of RNA-protein interactions by high throughput sequencing. Methods, 2017, 118-119, 111-118.	3.8	11
9	Phylogenetic sequence analysis and functional studies reveal compensatory amino acid substitutions in loop 2 of human ribonucleotide reductase. Journal of Biological Chemistry, 2017, 292, 16463-16476.	3.4	2
10	Potent competitive inhibition of human ribonucleotide reductase by a nonnucleoside small molecule. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8241-8246.	7.1	21
11	The contribution of the C5 protein subunit of <i>Escherichia coli</i> ribonuclease P to specificity for precursor tRNA is modulated by proximal 5â€² leader sequences. Rna, 2017, 23, 1502-1511.	3.5	12
12	Kinetic Isotope Effect Analysis of RNA 2â€²- O -Transphosphorylation. Methods in Enzymology, 2017, 596, 433-457.	1.0	3
13	Inhibition of yeast ribonucleotide reductase by Sml1 depends on the allosteric state of the enzyme. FEBS Letters, 2016, 590, 1704-1712.	2.8	4
14	POT1â€"TPP1 Binding and Unfolding of Telomere DNA Discriminates against Structural Polymorphism. Journal of Molecular Biology, 2016, 428, 2695-2708.	4.2	28
15	Analysis of the RNA Binding Specificity Landscape of C5 Protein Reveals Structure and Sequence Preferences that Direct RNase P Specificity. Cell Chemical Biology, 2016, 23, 1271-1281.	5.2	21
16	Inhibition of soluble guanylyl cyclase by small molecules targeting the catalytic domain. FEBS Letters, 2016, 590, 3669-3680.	2.8	7
17	Optimization of high-throughput sequencing kinetics for determining enzymatic rate constants of thousands of RNA substrates. Analytical Biochemistry, 2016, 510, 1-10.	2.4	10
18	Nucleoside Analogue Triphosphates Allosterically Regulate Human Ribonucleotide Reductase and Identify Chemical Determinants That Drive Substrate Specificity. Biochemistry, 2016, 55, 5884-5896.	2.5	7

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19	Determination of the Specificity Landscape for Ribonuclease P Processing of Precursor tRNA 5â€² Leader Sequences. ACS Chemical Biology, 2016, 11, 2285-2292.	3.4	10
20	A Two-Metal-Ion-Mediated Conformational Switching Pathway for HDV Ribozyme Activation. ACS Catalysis, 2016, 6, 1853-1869.	11.2	24
21	Isotope effect analyses provide evidence for an altered transition state for RNA 2â€²-O-transphosphorylation catalyzed by Zn2+. Chemical Communications, 2016, 52, 4462-4465.	4.1	8
22	Theme and Variation in tRNA 5â€² End Processing Enzymes: Comparative Analysis of Protein versus Ribonucleoprotein RNase P. Journal of Molecular Biology, 2016, 428, 5-9.	4.2	7
23	Assessment of metal-assisted nucleophile activation in the hepatitis delta virus ribozyme from molecular simulation and 3D-RISM. Rna, 2015, 21, 1566-1577.	3.5	18
24	Identification of Non-nucleoside Human Ribonucleotide Reductase Modulators. Journal of Medicinal Chemistry, 2015, 58, 9498-9509.	6.4	14
25	Interpretation of pHâ€"Activity Profiles for Acidâ€"Base Catalysis from Molecular Simulations. Biochemistry, 2015, 54, 1307-1313.	2.5	33
26	Synthetic, potentiometric and spectroscopic studies of chelation between Fe(III) and 2,5-DHBA supports salicylate-mode of siderophore binding interactions. Journal of Inorganic Biochemistry, 2015, 145, 1-10.	3.5	20
27	Effect of Zn2+ binding and enzyme active site on the transition state for RNA 2â€²-O-transphosphorylation interpreted through kinetic isotope effects. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2015, 1854, 1795-1800.	2.3	16
28	Determination of hepatitis delta virus ribozyme N(â€"1) nucleobase and functional group specificity using internal competition kinetics. Analytical Biochemistry, 2015, 483, 12-20.	2.4	6
29	Transition State Features in the Hepatitis Delta Virus Ribozyme Reaction Revealed by Atomic Perturbations. Journal of the American Chemical Society, 2015, 137, 8973-8982.	13.7	11
30	Exploring the Role of Residue 228 in Substrate and Inhibitor Recognition by VIM Metallo-Î²-lactamases. Biochemistry, 2015, 54, 3183-3196.	2.5	41
31	Integration of kinetic isotope effect analyses to elucidate ribonuclease mechanism. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2015, 1854, 1801-1808.	2.3	20
32	Specificity and nonspecificity in RNAâ€"protein interactions. Nature Reviews Molecular Cell Biology, 2015, 16, 533-544.	37.0	216
33	Mechanistic Insights into RNA Transphosphorylation from Kinetic Isotope Effects and Linear Free Energy Relationships of Model Reactions. Chemistry - A European Journal, 2014, 20, 14336-14343.	3.3	29
34	Determination of relative rate constants for in vitro RNA processing reactions by internal competition. Analytical Biochemistry, 2014, 467, 54-61.	2.4	6
35	Altered (transition) states: mechanisms of solution and enzyme catalyzed RNA 2â€²-O-transphosphorylation. Current Opinion in Chemical Biology, 2014, 21, 96-102.	6.1	34
36	Hidden specificity in an apparently nonspecific RNA-binding protein. Nature, 2013, 502, 385-388.	27.8	85

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37	Molecular Simulations of RNA 2â€²-<i>O</i>-Transesterification Reaction Models in Solution. Journal of Physical Chemistry B, 2013, 117, 94-103.	2.6	21
38	Experimental and computational analysis of the transition state for ribonuclease A-catalyzed RNA 2â€²-<i>O</i> -transphosphorylation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13002-13007.	7.1	62
39	Coordinated Interactions of Multiple POT1-TPP1 Proteins with Telomere DNA*. Journal of Biological Chemistry, 2013, 288, 16361-16370.	3.4	14
40	Alternative Substrate Kinetics of Escherichia coli Ribonuclease P. Journal of Biological Chemistry, 2013, 288, 8342-8354.	3.4	14
41	Effect of preâ€tRNA 5â€™ leader sequence variation on the thermodynamic coupling and shared molecular recognition between RNA and protein components of RNase P. FASEB Journal, 2013, 27, 777.2.	0.5	0
42	Experimental and computational evidence that ribonuclease A alters the transition state for RNA 2â€²â€Oâ€transphosphorylation. FASEB Journal, 2013, 27, 998.6.	0.5	0
43	Exploring the Role of a Conserved Class A Residue in the Î©-Loop of KPC-2 Î²-Lactamase. Journal of Biological Chemistry, 2012, 287, 31783-31793.	3.4	84
44	InnenrÃ¼cktitelbild: Characterization of the Reaction Path and Transition States for RNA Transphosphorylation Models from Theory and Experiment (Angew. Chem. 3/2012). Angewandte Chemie, 2012, 124, 847-847.	2.0	0
45	Characterization of the Reaction Path and Transition States for RNA Transphosphorylation Models from Theory and Experiment. Angewandte Chemie - International Edition, 2012, 51, 647-651.	13.8	49
46	Inside Back Cover: Characterization of the Reaction Path and Transition States for RNA Transphosphorylation Models from Theory and Experiment (Angew. Chem. Int. Ed. 3/2012). Angewandte Chemie - International Edition, 2012, 51, 823-823.	13.8	0
47	Characterization of the Structure and Dynamics of the HDV Ribozyme in Different Stages Along the Reaction Path. Journal of Physical Chemistry Letters, 2011, 2, 2538-2543.	4.6	30
48	Deconvolution of Raman spectroscopic signals for electrostatic, H-bonding, and inner-sphere interactions between ions and dimethyl phosphate in solution. Journal of Inorganic Biochemistry, 2011, 105, 538-547.	3.5	5
49	A Quantitative Raman Spectroscopic Signal for Metalâ^'Phosphodiester Interactions in Solution. Biochemistry, 2010, 49, 2869-2879.	2.5	22
50	Kinetic Isotope Effects for RNA Cleavage by 2â€²-O- Transphosphorylation: Nucleophilic Activation by Specific Base. Journal of the American Chemical Society, 2010, 132, 11613-11621.	13.7	46
51	Binding of C5 Protein to P RNA Enhances the Rate Constant for Catalysis for P RNA Processing of Pre-tRNAs Lacking a Consensus G(+1)/C(+72) Pair. Journal of Molecular Biology, 2010, 395, 1019-1037.	4.2	23
52	Proteinâ€“Precursor tRNA Contact Leads to Sequence-Specific Recognition of 5â€² Leaders by Bacterial Ribonuclease P. Journal of Molecular Biology, 2010, 396, 195-208.	4.2	37
53	RNA Crosslinking Methods. Methods in Enzymology, 2009, 468, 127-146.	1.0	45
54	Understanding the Role of Metal Ions in RNA Folding and Function: Lessons from RNase P, a Ribonucleoprotein Enzyme. Springer Series in Biophysics, 2009, , 183-213.	0.4	1

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55	Experimental analyses of the chemical dynamics of ribozyme catalysis. Current Opinion in Chemical Biology, 2008, 12, 626-639.	6.1	12
56	Efficient Synthesis of [2â€˜-18O]Uridine and Its Incorporation into Oligonucleotides:â€‰ A New Tool for Mechanistic Study of Nucleotidyl Transfer Reactions by Isotope Effect Analysis. Journal of Organic Chemistry, 2008, 73, 309-311.	3.2	29
57	Evidence that binding of C5 protein to P RNA enhances ribozyme catalysis by influencing active site metal ion affinity. Rna, 2007, 13, 1505-1515.	3.5	45
58	Inaccuracies in selected ion monitoring determination of isotope ratios obviated by profile acquisition: nucleotide 18O/16O measurements. Analytical Biochemistry, 2007, 367, 28-39.	2.4	17
59	Activation of Oxygen Nucleophiles in Enzyme Catalysis. Chemical Reviews, 2006, 106, 3236-3251.	47.7	37
60	RNA-dependent Folding and Stabilization of C5 Protein During Assembly of the E. coli RNase P Holoenzyme. Journal of Molecular Biology, 2006, 360, 190-203.	4.2	37
61	Evidence that substrate-specific effects of C5 protein lead to uniformity in binding and catalysis by RNase P. EMBO Journal, 2006, 25, 3998-4007.	7.8	82
62	The P4 metal binding site in RNase P RNA affects active site metal affinity through substrate positioning. Rna, 2006, 12, 1463-1467.	3.5	43
63	The Pre-tRNA Nucleotide Base and 2â€²-Hydroxyl at N(â^'1) Contribute to Fidelity in tRNA Processing by RNase P. Journal of Molecular Biology, 2005, 345, 969-985.	4.2	50
64	Analysis of Solvent Nucleophile Isotope Effects:Â Evidence for Concerted Mechanisms and Nucleophilic Activation by Metal Coordination in Nonenzymatic and Ribozyme-Catalyzed Phosphodiester Hydrolysisâ€. Biochemistry, 2004, 43, 10547-10559.	2.5	67
65	Understanding the transition states of phosphodiester bond cleavage: Insights from heavy atom isotope effects. Biopolymers, 2004, 73, 110-129.	2.4	47
66	Recent insights into the structure and function of the ribonucleoprotein enzyme ribonuclease P. Current Opinion in Structural Biology, 2003, 13, 325-333.	5.7	50
67	Recognition of the 5' leader of pre-tRNA substrates by the active site of ribonuclease P. Rna, 2003, 9, 734-745.	3.5	75
68	NAIM and Site-Specific Functional Group Modification Analysis of RNase P RNA:â€‰ Magnesium Dependent Structure within the Conserved P1â^'P4 Multihelix Junction Contributes to Catalysis. Biochemistry, 2002, 41, 4533-4545.	2.5	34
69	Evidence for Direct Attack by Hydroxide in Phosphodiester Hydrolysis. Journal of the American Chemical Society, 2002, 124, 10964-10965.	13.7	73
70	Pre-steady-state and stopped-flow fluorescence analysis of Escherichia coli ribonuclease III: insights into mechanism and conformational changes associated with binding and catalysis. Journal of Molecular Biology, 2002, 317, 21-40.	4.2	40
71	Conservation of Helical Structure Contributes to Functional Metal Ion Interactions in the Catalytic Domain of Ribonuclease P RNA. Journal of Molecular Biology, 2002, 324, 429-442.	4.2	42
72	Analysis of substrate recognition by the ribonucleoprotein endonuclease RNase P. Methods, 2002, 28, 307-322.	3.8	43

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73	Evidence for a polynuclear metal ion binding site in the catalytic domain of ribonuclease P RNA. EMBO Journal, 2002, 21, 2253-2262.	7.8	50
74	Helix P4 is a divalent metal ion binding site in the conserved core of the ribonuclease P ribozyme. Rna, 2000, 6, 511-519.	3.5	74
75	Identification of Adenosine Functional Groups Involved in Substrate Binding by the Ribonuclease P Ribozymeâ€. Biochemistry, 1999, 38, 1873-1883.	2.5	46
76	The Track of the Pre-tRNA 5â€˜ Leader in the Ribonuclease P Ribozymeâ˜'Substrate Complexâ€. Biochemistry, 1999, 38, 12629-12638.	2.5	40
77	Identification of Individual Nucleotides in the Bacterial Ribonuclease P Ribozyme Adjacent to the Pre-tRNA Cleavage Site by Short-Range Photo-Cross-Linking. Biochemistry, 1998, 37, 17618-17628.	2.5	57
78	Analysis of the tertiary structure of bacterial RNase P RNA. Molecular Biology Reports, 1996, 22, 115-123.	2.3	9
79	Rational Design of Self-Cleaving pre-tRNA-Ribonuclease P RNA Conjugates. Biochemistry, 1994, 33, 10800-10808.	2.5	63
80	RNA editing in kinetoplastid mitochondria.. FASEB Journal, 1993, 7, 54-63.	0.5	111
81	Co- and Post-Transcriptional Incorporation of Specific Modifications Including Photoreactive Groups into RNA Molecules. , 0, , 75-85.		1