

Samuel E Butcher

List of Publications by Year in descending order

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67
papers

3,085
citations

147566

31
h-index

168136

53
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70
all docs

70
docs citations

70
times ranked

2885
citing authors

#	ARTICLE	IF	CITATIONS
1	Pseudoknots: RNA Structures with Diverse Functions. <i>PLoS Biology</i> , 2005, 3, e213.	2.6	281
2	The Molecular Interactions That Stabilize RNA Tertiary Structure: RNA Motifs, Patterns, and Networks. <i>Accounts of Chemical Research</i> , 2011, 44, 1302-1311.	7.6	276
3	RNA Helical Packing in Solution: NMR Structure of a 30kDa GAAA Tetraloop-Receptor Complex. <i>Journal of Molecular Biology</i> , 2005, 351, 371-382.	2.0	142
4	Metal binding and base ionization in the U6 RNA intramolecular stem-loop structure. <i>Nature Structural Biology</i> , 2002, 9, 431-435.	9.7	135
5	Quantitative Analysis of the Isolated GAAA Tetraloop/Receptor Interaction in Solution: A Site-Directed Spin Labeling Study. <i>Biochemistry</i> , 2001, 40, 6929-6936.	1.2	125
6	U2-U6 RNA folding reveals a group II intron-like domain and a four-helix junction. <i>Nature Structural and Molecular Biology</i> , 2004, 11, 1237-1242.	3.6	123
7	Solution Structure and Thermodynamic Investigation of the HIV-1 Frameshift Inducing Element. <i>Journal of Molecular Biology</i> , 2005, 349, 1011-1023.	2.0	92
8	The life of U6 small nuclear RNA, from cradle to grave. <i>Rna</i> , 2018, 24, 437-460.	1.6	92
9	Identification of the SSB Binding Site on E. coli RecQ Reveals a Conserved Surface for Binding SSB's C Terminus. <i>Journal of Molecular Biology</i> , 2009, 386, 612-625.	2.0	84
10	Structure of the yeast U2/U6 snRNA complex. <i>Rna</i> , 2012, 18, 673-683.	1.6	78
11	Determination of Metal Ion Binding Sites within the Hairpin Ribozyme Domains by NMR. <i>Biochemistry</i> , 2000, 39, 2174-2182.	1.2	74
12	Core structure of the U6 small nuclear ribonucleoprotein at 1.7-Å resolution. <i>Nature Structural and Molecular Biology</i> , 2014, 21, 544-551.	3.6	65
13	Dynamics in the U6 RNA Intramolecular Stem-Loop: A Base Flipping Conformational Change. <i>Biochemistry</i> , 2004, 43, 13739-13747.	1.2	64
14	HIV-1 frameshift efficiency is primarily determined by the stability of base pairs positioned at the mRNA entrance channel of the ribosome. <i>Nucleic Acids Research</i> , 2013, 41, 1901-1913.	6.5	64
15	Dynamics and Metal Ion Binding in the U6 RNA Intramolecular Stem-Loop as Analyzed by NMR. <i>Journal of Molecular Biology</i> , 2005, 353, 540-555.	2.0	62
16	Through-bond correlation of imino and aromatic resonances in ¹³ C-, ¹⁵ N-labeled RNA via heteronuclear TOCSY. <i>Journal of Biomolecular NMR</i> , 1996, 7, 83-87.	1.6	59
17	Structural mechanisms of DNA binding and unwinding in bacterial RecQ helicases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 4292-4297.	3.3	58
18	Solution structure of the HIV-1 frameshift inducing stem-loop RNA. <i>Nucleic Acids Research</i> , 2003, 31, 4326-4331.	6.5	57

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19	Structure of the HIV-1 Frameshift Site RNA Bound to a Small Molecule Inhibitor of Viral Replication. ACS Chemical Biology, 2011, 6, 857-864.	1.6	55
20	Global Molecular Structure and Interfaces: Refining an RNA:RNA Complex Structure Using Solution X-ray Scattering Data. Journal of the American Chemical Society, 2008, 130, 3292-3293.	6.6	54
21	Targeting frameshifting in the human immunodeficiency virus. Expert Opinion on Therapeutic Targets, 2012, 16, 249-258.	1.5	49
22	Characterization of the kinetic and thermodynamic landscape of RNA folding using a novel application of isothermal titration calorimetry. Nucleic Acids Research, 2012, 40, 2140-2151.	6.5	47
23	Integrative NMR for biomolecular research. Journal of Biomolecular NMR, 2016, 64, 307-332.	1.6	47
24	Guanidinoneomycin B Recognition of an HIV-1 RNA Helix. ChemBioChem, 2008, 9, 93-102.	1.3	46
25	Structural Analysis of Multi-Helical RNAs by NMR-SAXS/WAXS: Application to the U4/U6 di-snRNA. Journal of Molecular Biology, 2016, 428, 777-789.	2.0	45
26	Rapid global structure determination of large RNA and RNA complexes using NMR and small-angle X-ray scattering. Methods, 2010, 52, 180-191.	1.9	44
27	DNA mimicry by a high-affinity anti-NF- κ B RNA aptamer. Nucleic Acids Research, 2008, 36, 1227-1236.	6.5	43
28	A novel occluded RNA recognition motif in Prp24 unwinds the U6 RNA internal stem loop. Nucleic Acids Research, 2011, 39, 7837-7847.	6.5	42
29	<i>N</i> -Methylation as a Strategy for Enhancing the Affinity and Selectivity of RNA-binding Peptides: Application to the HIV-1 Frameshift-Stimulating RNA. ACS Chemical Biology, 2016, 11, 88-94.	1.6	37
30	Structure and Interactions of the First Three RNA Recognition Motifs of Splicing Factor Prp24. Journal of Molecular Biology, 2007, 367, 1447-1458.	2.0	36
31	Selection and Characterization of Small Molecules That Bind the HIV-1 Frameshift Site RNA. ACS Chemical Biology, 2009, 4, 844-854.	1.6	35
32	Stability of HIV Frameshift Site RNA Correlates with Frameshift Efficiency and Decreased Virus Infectivity. Journal of Virology, 2016, 90, 6906-6917.	1.5	33
33	Structure of the U6 RNA intramolecular stem-loop harboring an SP-phosphorothioate modification. Rna, 2003, 9, 533-542.	1.6	31
34	Minimum-Energy Path for a U6 RNA Conformational Change Involving Protonation, Base-Pair Rearrangement and Base Flipping. Journal of Molecular Biology, 2009, 391, 894-905.	2.0	31
35	Structure and Dynamics of the HIV-1 Frameshift Element RNA. Biochemistry, 2014, 53, 4282-4291.	1.2	31
36	Structural Basis for a Lethal Mutation in U6 RNA. Biochemistry, 2003, 42, 1470-1477.	1.2	30

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37	Thermodynamics and Folding Pathway of Tetraloop Receptor-Mediated RNA Helical Packing. <i>Journal of Molecular Biology</i> , 2008, 384, 702-717.	2.0	28
38	A dynamic bulge in the U6 RNA internal stem-loop functions in spliceosome assembly and activation. <i>Rna</i> , 2007, 13, 2252-2265.	1.6	25
39	Measuring the dynamic surface accessibility of RNA with the small paramagnetic molecule TEMPOL. <i>Nucleic Acids Research</i> , 2008, 36, e20-e20.	6.5	25
40	Nucleic Acid Structure Characterization by Small Angle X-Ray Scattering (SAXS). <i>Current Protocols in Nucleic Acid Chemistry</i> , 2012, 51, Unit7.18.	0.5	24
41	Global shape mimicry of tRNA within a viral internal ribosome entry site mediates translational reading frame selection. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E6446-55.	3.3	24
42	Pathogenic TFG Mutations Underlying Hereditary Spastic Paraplegia Impair Secretory Protein Trafficking and Axon Fasciculation. <i>Cell Reports</i> , 2018, 24, 2248-2260.	2.9	24
43	Structure and functional implications of a complex containing a segment of U6 RNA bound by a domain of Prp24. <i>Rna</i> , 2010, 16, 792-804.	1.6	22
44	Structural requirements for protein-catalyzed annealing of U4 and U6 RNAs during di-snRNP assembly. <i>Nucleic Acids Research</i> , 2016, 44, 1398-1410.	6.5	22
45	Molecular basis for the distinct cellular functions of the Lsm1 ⁷ and Lsm2 ⁸ complexes. <i>Rna</i> , 2020, 26, 1400-1413.	1.6	22
46	The spliceosome as ribozyme hypothesis takes a second step. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 12211-12212.	3.3	20
47	Usb1 controls U6 snRNP assembly through evolutionarily divergent cyclic phosphodiesterase activities. <i>Nature Communications</i> , 2017, 8, 497.	5.8	20
48	8. The Spliceosome and Its Metal Ions. <i>Metal Ions in Life Sciences</i> , 2011, 9, 235-251.	1.0	18
49	Architecture of the U6 snRNP reveals specific recognition of 3 ² -end processed U6 snRNA. <i>Nature Communications</i> , 2018, 9, 1749.	5.8	17
50	tRNA-mimicry in IRES-mediated translation and recoding. <i>RNA Biology</i> , 2016, 13, 1068-1074.	1.5	16
51	Structural and mechanistic basis for preferential deadenylation of U6 snRNA by Usb1. <i>Nucleic Acids Research</i> , 2018, 46, 11488-11501.	6.5	16
52	RNA-PAIRS: RNA probabilistic assignment of imino resonance shifts. <i>Journal of Biomolecular NMR</i> , 2012, 52, 289-302.	1.6	15
53	A multi-step model for facilitated unwinding of the yeast U4/U6 RNA duplex. <i>Nucleic Acids Research</i> , 2016, 44, 10912-10928.	6.5	14
54	Measuring the Kinetics of Molecular Association by Isothermal Titration Calorimetry. <i>Methods in Enzymology</i> , 2016, 567, 181-213.	0.4	10

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55	Spliceosome assembly in the absence of stable U4/U6 RNA pairing. <i>Rna</i> , 2015, 21, 923-934.	1.6	9
56	Conformational flexibility in the enterovirus RNA replication platform. <i>Rna</i> , 2019, 25, 376-387.	1.6	9
57	Expanded DNA and RNA Trinucleotide Repeats in Myotonic Dystrophy Type 1 Select Their Own Multitarget, Sequence-Selective Inhibitors. <i>Biochemistry</i> , 2020, 59, 3463-3472.	1.2	8
58	Resonance assignments for the two N-terminal RNA recognition motifs (RRM) of the <i>S. cerevisiae</i> Pre-mRNA Processing Protein Prp24. <i>Journal of Biomolecular NMR</i> , 2006, 36, 58-58.	1.6	5
59	Structure and conformational plasticity of the U6 small nuclear ribonucleoprotein core. <i>Acta Crystallographica Section D: Structural Biology</i> , 2017, 73, 1-8.	1.1	5
60	Perturbing HIV-1 Ribosomal Frameshifting Frequency Reveals a Preference for Gag-Pol Incorporation into Assembling Virions. <i>Journal of Virology</i> , 2022, 96, JVI0134921.	1.5	5
61	Dynamic Motions of the HIV-1 Frameshift Site RNA. <i>Biophysical Journal</i> , 2015, 108, 644-654.	0.2	4
62	Structure of an RNA helix with pyrimidine mismatches and cross-strand stacking. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2019, 75, 652-656.	0.4	4
63	¹ H, ¹³ C and ¹⁵ N resonance assignments of a ribonucleoprotein complex consisting of Prp24-RRM2 bound to a fragment of U6 RNA. <i>Biomolecular NMR Assignments</i> , 2009, 3, 227-230.	0.4	3
64	Structural basis for the evolution of cyclic phosphodiesterase activity in the U6 snRNA exoribonuclease Usb1. <i>Nucleic Acids Research</i> , 2020, 48, 1423-1434.	6.5	1
65	8 The Spliceosome and Its Metal Ions. , 2015, , 235-252.		0
66	Investigating RNAs Involved in Translational Control by NMR and SAXS. , 2012, , 141-172.		0
67	RNA binding properties of the Lsm1â€“7 ring from <i>Schizosaccharomyces pombe</i> . <i>FASEB Journal</i> , 2019, 33, 460.12.	0.2	0