

# Samuel E Butcher

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

68  
papers

2,570  
citations

31  
h-index

50  
g-index

70  
ext. papers

2,853  
ext. citations

8.5  
avg, IF

5.12  
L-index

#	Paper	IF	Citations
68	Pseudoknots: RNA structures with diverse functions. <i>PLoS Biology</i> , <b>2005</b> , 3, e213	9.7	209
67	The molecular interactions that stabilize RNA tertiary structure: RNA motifs, patterns, and networks. <i>Accounts of Chemical Research</i> , <b>2011</b> , 44, 1302-11	24.3	205
66	RNA helical packing in solution: NMR structure of a 30 kDa GAAA tetraloop-receptor complex. <i>Journal of Molecular Biology</i> , <b>2005</b> , 351, 371-82	6.5	128
65	Metal binding and base ionization in the U6 RNA intramolecular stem-loop structure. <i>Nature Structural Biology</i> , <b>2002</b> , 9, 431-5		124
64	U2-U6 RNA folding reveals a group II intron-like domain and a four-helix junction. <i>Nature Structural and Molecular Biology</i> , <b>2004</b> , 11, 1237-42	17.6	115
63	Quantitative analysis of the isolated GAAA tetraloop/receptor interaction in solution: a site-directed spin labeling study. <i>Biochemistry</i> , <b>2001</b> , 40, 6929-36	3.2	111
62	Solution structure and thermodynamic investigation of the HIV-1 frameshift inducing element. <i>Journal of Molecular Biology</i> , <b>2005</b> , 349, 1011-23	6.5	85
61	Determination of metal ion binding sites within the hairpin ribozyme domains by NMR. <i>Biochemistry</i> , <b>2000</b> , 39, 2174-82	3.2	73
60	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> , <b>2009</b> , 386, 612-25	6.5	71
59	Structure of the yeast U2/U6 snRNA complex. <i>Rna</i> , <b>2012</b> , 18, 673-83	5.8	69
58	Dynamics in the U6 RNA intramolecular stem-loop: a base flipping conformational change. <i>Biochemistry</i> , <b>2004</b> , 43, 13739-47	3.2	64
57	Dynamics and metal ion binding in the U6 RNA intramolecular stem-loop as analyzed by NMR. <i>Journal of Molecular Biology</i> , <b>2005</b> , 353, 540-55	6.5	60
56	Through-bond correlation of imino and aromatic resonances in <sup>13</sup> C-, <sup>15</sup> N-labeled RNA via heteronuclear TOCSY. <i>Journal of Biomolecular NMR</i> , <b>1996</b> , 7, 83-7	3	54
55	Core structure of the U6 small nuclear ribonucleoprotein at 1.7-Å resolution. <i>Nature Structural and Molecular Biology</i> , <b>2014</b> , 21, 544-51	17.6	52
54	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> , <b>2013</b> , 41, 1901-13	20.1	52
53	Global molecular structure and interfaces: refining an RNA:RNA complex structure using solution X-ray scattering data. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 3292-3	16.4	52
52	Solution structure of the HIV-1 frameshift inducing stem-loop RNA. <i>Nucleic Acids Research</i> , <b>2003</b> , 31, 4326-31	20.1	52

51	Structure of the HIV-1 frameshift site RNA bound to a small molecule inhibitor of viral replication. <i>ACS Chemical Biology</i> , <b>2011</b> , 6, 857-64	4.9	48
50	The life of U6 small nuclear RNA, from cradle to grave. <i>Rna</i> , <b>2018</b> , 24, 437-460	5.8	46
49	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> , <b>2015</b> , 112, 4292-7	11.5	45
48	Targeting frameshifting in the human immunodeficiency virus. <i>Expert Opinion on Therapeutic Targets</i> , <b>2012</b> , 16, 249-58	6.4	43
47	Characterization of the kinetic and thermodynamic landscape of RNA folding using a novel application of isothermal titration calorimetry. <i>Nucleic Acids Research</i> , <b>2012</b> , 40, 2140-51	20.1	41
46	Rapid global structure determination of large RNA and RNA complexes using NMR and small-angle X-ray scattering. <i>Methods</i> , <b>2010</b> , 52, 180-91	4.6	40
45	Guanidinoneomycin B recognition of an HIV-1 RNA helix. <i>ChemBioChem</i> , <b>2008</b> , 9, 93-102	3.8	40
44	A novel occluded RNA recognition motif in Prp24 unwinds the U6 RNA internal stem loop. <i>Nucleic Acids Research</i> , <b>2011</b> , 39, 7837-47	20.1	37
43	Integrative NMR for biomolecular research. <i>Journal of Biomolecular NMR</i> , <b>2016</b> , 64, 307-32	3	36
42	Structure and interactions of the first three RNA recognition motifs of splicing factor prp24. <i>Journal of Molecular Biology</i> , <b>2007</b> , 367, 1447-58	6.5	34
41	Structural Analysis of Multi-Helical RNAs by NMR-SAXS/WAXS: Application to the U4/U6 di-snRNA. <i>Journal of Molecular Biology</i> , <b>2016</b> , 428, 777-789	6.5	33
40	N-Methylation as a Strategy for Enhancing the Affinity and Selectivity of RNA-binding Peptides: Application to the HIV-1 Frameshift-Stimulating RNA. <i>ACS Chemical Biology</i> , <b>2016</b> , 11, 88-94	4.9	33
39	DNA mimicry by a high-affinity anti-NF-kappaB RNA aptamer. <i>Nucleic Acids Research</i> , <b>2008</b> , 36, 1227-36	20.1	33
38	Minimum-energy path for a u6 RNA conformational change involving protonation, base-pair rearrangement and base flipping. <i>Journal of Molecular Biology</i> , <b>2009</b> , 391, 894-905	6.5	31
37	Selection and characterization of small molecules that bind the HIV-1 frameshift site RNA. <i>ACS Chemical Biology</i> , <b>2009</b> , 4, 844-54	4.9	30
36	Structure of the U6 RNA intramolecular stem-loop harboring an S(P)-phosphorothioate modification. <i>Rna</i> , <b>2003</b> , 9, 533-42	5.8	30
35	Structural basis for a lethal mutation in U6 RNA. <i>Biochemistry</i> , <b>2003</b> , 42, 1470-7	3.2	29
34	Structure and dynamics of the HIV-1 frameshift element RNA. <i>Biochemistry</i> , <b>2014</b> , 53, 4282-91	3.2	27

33	Thermodynamics and folding pathway of tetraloop receptor-mediated RNA helical packing. <i>Journal of Molecular Biology</i> , <b>2008</b> , 384, 702-17	6.5	26
32	Stability of HIV Frameshift Site RNA Correlates with Frameshift Efficiency and Decreased Virus Infectivity. <i>Journal of Virology</i> , <b>2016</b> , 90, 6906-6917	6.6	25
31	A dynamic bulge in the U6 RNA internal stem-loop functions in spliceosome assembly and activation. <i>Rna</i> , <b>2007</b> , 13, 2252-65	5.8	23
30	Measuring the dynamic surface accessibility of RNA with the small paramagnetic molecule TEMPOL. <i>Nucleic Acids Research</i> , <b>2008</b> , 36, e20	20.1	22
29	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> , <b>2015</b> , 112, E6446-55	11.5	20
28	Structure and functional implications of a complex containing a segment of U6 RNA bound by a domain of Prp24. <i>Rna</i> , <b>2010</b> , 16, 792-804	5.8	20
27	Nucleic acid structure characterization by small angle X-ray scattering (SAXS). <i>Current Protocols in Nucleic Acid Chemistry</i> , <b>2012</b> , Chapter 7, Unit7.18	0.5	19
26	The spliceosome as ribozyme hypothesis takes a second step. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 12211-2	11.5	19
25	Usb1 controls U6 snRNP assembly through evolutionarily divergent cyclic phosphodiesterase activities. <i>Nature Communications</i> , <b>2017</b> , 8, 497	17.4	16
24	The spliceosome and its metal ions. <i>Metal Ions in Life Sciences</i> , <b>2011</b> , 9, 235-51		16
23	Structural requirements for protein-catalyzed annealing of U4 and U6 RNAs during di-snRNP assembly. <i>Nucleic Acids Research</i> , <b>2016</b> , 44, 1398-410	20.1	15
22	Pathogenic TFG Mutations Underlying Hereditary Spastic Paraplegia Impair Secretory Protein Trafficking and Axon Fasciculation. <i>Cell Reports</i> , <b>2018</b> , 24, 2248-2260	10.6	15
21	RNA-PAIRS: RNA probabilistic assignment of imino resonance shifts. <i>Journal of Biomolecular NMR</i> , <b>2012</b> , 52, 289-302	3	13
20	tRNA-mimicry in IRES-mediated translation and recoding. <i>RNA Biology</i> , <b>2016</b> , 13, 1068-1074	4.8	12
19	Molecular basis for the distinct cellular functions of the Lsm1-7 and Lsm2-8 complexes. <i>Rna</i> , <b>2020</b> , 26, 1400-1413	5.8	9
18	Architecture of the U6 snRNP reveals specific recognition of 3'end processed U6 snRNA. <i>Nature Communications</i> , <b>2018</b> , 9, 1749	17.4	9
17	Structural and mechanistic basis for preferential deadenylation of U6 snRNA by Usb1. <i>Nucleic Acids Research</i> , <b>2018</b> , 46, 11488-11501	20.1	9
16	A multi-step model for facilitated unwinding of the yeast U4/U6 RNA duplex. <i>Nucleic Acids Research</i> , <b>2016</b> , 44, 10912-10928	20.1	8

15	Measuring the Kinetics of Molecular Association by Isothermal Titration Calorimetry. <i>Methods in Enzymology</i> , <b>2016</b> , 567, 181-213	1.7	7
14	Spliceosome assembly in the absence of stable U4/U6 RNA pairing. <i>Rna</i> , <b>2015</b> , 21, 923-34	5.8	6
13	Structure and conformational plasticity of the U6 small nuclear ribonucleoprotein core. <i>Acta Crystallographica Section D: Structural Biology</i> , <b>2017</b> , 73, 1-8	5.5	5
12	Conformational flexibility in the enterovirus RNA replication platform. <i>Rna</i> , <b>2019</b> , 25, 376-387	5.8	5
11	Dynamic motions of the HIV-1 frameshift site RNA. <i>Biophysical Journal</i> , <b>2015</b> , 108, 644-54	2.9	4
10	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> , <b>2006</b> , 36 Suppl 1, 58	3	4
9	Expanded DNA and RNA Trinucleotide Repeats in Myotonic Dystrophy Type 1 Select Their Own Multitarget, Sequence-Selective Inhibitors. <i>Biochemistry</i> , <b>2020</b> , 59, 3463-3472	3.2	4
8	(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> , <b>2009</b> , 3, 227-30	0.7	3
7	Structure of an RNA helix with pyrimidine mismatches and cross-strand stacking. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , <b>2019</b> , 75, 652-656	1.1	2
6	Perturbing HIV-1 ribosomal frameshifting frequency reveals a preference for Gag-Pol incorporation into assembling virions. <i>Journal of Virology</i> , <b>2021</b> , JVI0134921	6.6	1
5	Molecular basis for the distinct cellular functions of the Lsm1-7 and Lsm2-8 complexes		1
4	8 The Spliceosome and Its Metal Ions <b>2015</b> , 235-252		
3	RNA binding properties of the Lsm17 ring from <i>Schizosaccharomyces pombe</i> . <i>FASEB Journal</i> , <b>2019</b> , 33, 460.12	0.9	
2	Investigating RNAs Involved in Translational Control by NMR and SAXS <b>2012</b> , 141-172		
1	Structural basis for the evolution of cyclic phosphodiesterase activity in the U6 snRNA exoribonuclease Usb1. <i>Nucleic Acids Research</i> , <b>2020</b> , 48, 1423-1434	20.1	