

Samuel E Butcher

List of Publications by Year in descending order

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67
papers

3,085
citations

147801
31
h-index

168389
53
g-index

70
all docs

70
docs citations

70
times ranked

2885
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Perturbing HIV-1 Ribosomal Frameshifting Frequency Reveals a <i>cis</i> Preference for Gag-Pol Incorporation into Assembling Virions. <i>Journal of Virology</i> , 2022, 96, JVI0134921. | 3.4 | 5 |
| 2 | Structural basis for the evolution of cyclic phosphodiesterase activity in the U6 snRNA exoribonuclease Usb1. <i>Nucleic Acids Research</i> , 2020, 48, 1423-1434. | 14.5 | 1 |
| 3 | 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. | 2.5 | 8 |
| 4 | Molecular basis for the distinct cellular functions of the Lsm1 ⁷ and Lsm2 ⁸ complexes. <i>Rna</i> , 2020, 26, 1400-1413. | 3.5 | 22 |
| 5 | Conformational flexibility in the enterovirus RNA replication platform. <i>Rna</i> , 2019, 25, 376-387. | 3.5 | 9 |
| 6 | 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. | 0.8 | 4 |
| 7 | RNA binding properties of the Lsm1 ⁷ ring from <i>Schizosaccharomyces pombe</i> . <i>FASEB Journal</i> , 2019, 33, 460.12. | 0.5 | 0 |
| 8 | The life of U6 small nuclear RNA, from cradle to grave. <i>Rna</i> , 2018, 24, 437-460. | 3.5 | 92 |
| 9 | Architecture of the U6 snRNP reveals specific recognition of 3 ² -end processed U6 snRNA. <i>Nature Communications</i> , 2018, 9, 1749. | 12.8 | 17 |
| 10 | Structural and mechanistic basis for preferential deadenylation of U6 snRNA by Usb1. <i>Nucleic Acids Research</i> , 2018, 46, 11488-11501. | 14.5 | 16 |
| 11 | Pathogenic TFG Mutations Underlying Hereditary Spastic Paraplegia Impair Secretory Protein Trafficking and Axon Fasciculation. <i>Cell Reports</i> , 2018, 24, 2248-2260. | 6.4 | 24 |
| 12 | Usb1 controls U6 snRNP assembly through evolutionarily divergent cyclic phosphodiesterase activities. <i>Nature Communications</i> , 2017, 8, 497. | 12.8 | 20 |
| 13 | Structure and conformational plasticity of the U6 small nuclear ribonucleoprotein core. <i>Acta Crystallographica Section D: Structural Biology</i> , 2017, 73, 1-8. | 2.3 | 5 |
| 14 | A multi-step model for facilitated unwinding of the yeast U4/U6 RNA duplex. <i>Nucleic Acids Research</i> , 2016, 44, 10912-10928. | 14.5 | 14 |
| 15 | Integrative NMR for biomolecular research. <i>Journal of Biomolecular NMR</i> , 2016, 64, 307-332. | 2.8 | 47 |
| 16 | tRNA-mimicry in IRES-mediated translation and recoding. <i>RNA Biology</i> , 2016, 13, 1068-1074. | 3.1 | 16 |
| 17 | Measuring the Kinetics of Molecular Association by Isothermal Titration Calorimetry. <i>Methods in Enzymology</i> , 2016, 567, 181-213. | 1.0 | 10 |
| 18 | Stability of HIV Frameshift Site RNA Correlates with Frameshift Efficiency and Decreased Virus Infectivity. <i>Journal of Virology</i> , 2016, 90, 6906-6917. | 3.4 | 33 |

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|----|--|------|-----------|
| 19 | 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. | 4.2 | 45 |
| 20 | Structural requirements for protein-catalyzed annealing of U4 and U6 RNAs during di-snRNP assembly. Nucleic Acids Research, 2016, 44, 1398-1410. | 14.5 | 22 |
| 21 | <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. | 3.4 | 37 |
| 22 | Dynamic Motions of the HIV-1 Frameshift Site RNA. Biophysical Journal, 2015, 108, 644-654. | 0.5 | 4 |
| 23 | Spliceosome assembly in the absence of stable U4/U6 RNA pairing. Rna, 2015, 21, 923-934. | 3.5 | 9 |
| 24 | Structural mechanisms of DNA binding and unwinding in bacterial RecQ helicases. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4292-4297. | 7.1 | 58 |
| 25 | 8 The Spliceosome and Its Metal Ions. , 2015, , 235-252. | | 0 |
| 26 | Global shape mimicry of tRNA within a viral internal ribosome entry site mediates translational reading frame selection. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6446-55. | 7.1 | 24 |
| 27 | Core structure of the U6 small nuclear ribonucleoprotein at 1.7-Å resolution. Nature Structural and Molecular Biology, 2014, 21, 544-551. | 8.2 | 65 |
| 28 | Structure and Dynamics of the HIV-1 Frameshift Element RNA. Biochemistry, 2014, 53, 4282-4291. | 2.5 | 31 |
| 29 | HIV-1 frameshift efficiency is primarily determined by the stability of base pairs positioned at the mRNA entrance channel of the ribosome. Nucleic Acids Research, 2013, 41, 1901-1913. | 14.5 | 64 |
| 30 | 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. | 14.5 | 47 |
| 31 | Structure of the yeast U2/U6 snRNA complex. Rna, 2012, 18, 673-683. | 3.5 | 78 |
| 32 | Targeting frameshifting in the human immunodeficiency virus. Expert Opinion on Therapeutic Targets, 2012, 16, 249-258. | 3.4 | 49 |
| 33 | Nucleic Acid Structure Characterization by Small Angle X-Ray Scattering (SAXS). Current Protocols in Nucleic Acid Chemistry, 2012, 51, Unit7.18. | 0.5 | 24 |
| 34 | RNA-PAIRS: RNA probabilistic assignment of imino resonance shifts. Journal of Biomolecular NMR, 2012, 52, 289-302. | 2.8 | 15 |
| 35 | Investigating RNAs Involved in Translational Control by NMR and SAXS. , 2012, , 141-172. | | 0 |
| 36 | Structure of the HIV-1 Frameshift Site RNA Bound to a Small Molecule Inhibitor of Viral Replication. ACS Chemical Biology, 2011, 6, 857-864. | 3.4 | 55 |

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|----|--|------|-----------|
| 37 | The Molecular Interactions That Stabilize RNA Tertiary Structure: RNA Motifs, Patterns, and Networks. <i>Accounts of Chemical Research</i> , 2011, 44, 1302-1311. | 15.6 | 276 |
| 38 | A novel occluded RNA recognition motif in Prp24 unwinds the U6 RNA internal stem loop. <i>Nucleic Acids Research</i> , 2011, 39, 7837-7847. | 14.5 | 42 |
| 39 | 8. The Spliceosome and Its Metal Ions. <i>Metal Ions in Life Sciences</i> , 2011, 9, 235-251. | 1.0 | 18 |
| 40 | 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. | 3.5 | 22 |
| 41 | Rapid global structure determination of large RNA and RNA complexes using NMR and small-angle X-ray scattering. <i>Methods</i> , 2010, 52, 180-191. | 3.8 | 44 |
| 42 | 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. | 7.1 | 20 |
| 43 | 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. | 0.8 | 3 |
| 44 | Selection and Characterization of Small Molecules That Bind the HIV-1 Frameshift Site RNA. <i>ACS Chemical Biology</i> , 2009, 4, 844-854. | 3.4 | 35 |
| 45 | 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. | 4.2 | 84 |
| 46 | Minimum-Energy Path for a U6 RNA Conformational Change Involving Protonation, Base-Pair Rearrangement and Base Flipping. <i>Journal of Molecular Biology</i> , 2009, 391, 894-905. | 4.2 | 31 |
| 47 | Guanidinoneomycin B Recognition of an HIV-1 RNA Helix. <i>ChemBioChem</i> , 2008, 9, 93-102. | 2.6 | 46 |
| 48 | Thermodynamics and Folding Pathway of Tetraloop Receptor-Mediated RNA Helical Packing. <i>Journal of Molecular Biology</i> , 2008, 384, 702-717. | 4.2 | 28 |
| 49 | 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> , 2008, 130, 3292-3293. | 13.7 | 54 |
| 50 | DNA mimicry by a high-affinity anti-NF- κ B RNA aptamer. <i>Nucleic Acids Research</i> , 2008, 36, 1227-1236. | 14.5 | 43 |
| 51 | Measuring the dynamic surface accessibility of RNA with the small paramagnetic molecule TEMPOL. <i>Nucleic Acids Research</i> , 2008, 36, e20-e20. | 14.5 | 25 |
| 52 | A dynamic bulge in the U6 RNA internal stem-loop functions in spliceosome assembly and activation. <i>Rna</i> , 2007, 13, 2252-2265. | 3.5 | 25 |
| 53 | Structure and Interactions of the First Three RNA Recognition Motifs of Splicing Factor Prp24. <i>Journal of Molecular Biology</i> , 2007, 367, 1447-1458. | 4.2 | 36 |
| 54 | Resonance assignments for the two N-terminal RNA recognition motifs (RRM) of the S. cerevisiae Pre-mRNA Processing Protein Prp24. <i>Journal of Biomolecular NMR</i> , 2006, 36, 58-58. | 2.8 | 5 |

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|----|--|------|-----------|
| 55 | Solution Structure and Thermodynamic Investigation of the HIV-1 Frameshift Inducing Element. Journal of Molecular Biology, 2005, 349, 1011-1023. | 4.2 | 92 |
| 56 | RNA Helical Packing in Solution: NMR Structure of a 30kDa GAAA Tetraloop-Receptor Complex. Journal of Molecular Biology, 2005, 351, 371-382. | 4.2 | 142 |
| 57 | Dynamics and Metal Ion Binding in the U6 RNA Intramolecular Stem-Loop as Analyzed by NMR. Journal of Molecular Biology, 2005, 353, 540-555. | 4.2 | 62 |
| 58 | Pseudoknots: RNA Structures with Diverse Functions. PLoS Biology, 2005, 3, e213. | 5.6 | 281 |
| 59 | U2-U6 RNA folding reveals a group II intron-like domain and a four-helix junction. Nature Structural and Molecular Biology, 2004, 11, 1237-1242. | 8.2 | 123 |
| 60 | Dynamics in the U6 RNA Intramolecular Stem-Loop: A Base Flipping Conformational Change. Biochemistry, 2004, 43, 13739-13747. | 2.5 | 64 |
| 61 | Structural Basis for a Lethal Mutation in U6 RNA. Biochemistry, 2003, 42, 1470-1477. | 2.5 | 30 |
| 62 | Solution structure of the HIV-1 frameshift inducing stem-loop RNA. Nucleic Acids Research, 2003, 31, 4326-4331. | 14.5 | 57 |
| 63 | Structure of the U6 RNA intramolecular stem-loop harboring an SP-phosphorothioate modification. Rna, 2003, 9, 533-542. | 3.5 | 31 |
| 64 | Metal binding and base ionization in the U6 RNA intramolecular stem-loop structure. Nature Structural Biology, 2002, 9, 431-435. | 9.7 | 135 |
| 65 | Quantitative Analysis of the Isolated GAAA Tetraloop/Receptor Interaction in Solution: A Site-Directed Spin Labeling Study. Biochemistry, 2001, 40, 6929-6936. | 2.5 | 125 |
| 66 | Determination of Metal Ion Binding Sites within the Hairpin Ribozyme Domains by NMR. Biochemistry, 2000, 39, 2174-2182. | 2.5 | 74 |
| 67 | Through-bond correlation of imino and aromatic resonances in ¹³ C-, ¹⁵ N-labeled RNA via heteronuclear TOCSY. Journal of Biomolecular NMR, 1996, 7, 83-87. | 2.8 | 59 |