Barry S Cooperman

List of Publications by Year
in descending order

59 papers	2,122 citations	218677 26 h-index	243625 44 g-index
63 all docs	63 docs citations	63 times ranked	1951 citing authors

#	Article	IF	Citations
1	Kinetically Competent Intermediates in the Translocation Step of Protein Synthesis. Molecular Cell, 2007, 25, 519-529.	9.7	179
2	Crystal structure of an uncleaved serpin reveals the conformation of an inhibitory reactive loop. Nature Structural and Molecular Biology, 1994, 1, 251-258.	8.2	167
3	Single-Molecule Fluorescence Measurements of Ribosomal Translocation Dynamics. Molecular Cell, 2011, 42, 367-377.	9.7	130
4	Dynamics of translation by single ribosomes through mRNA secondary structures. Nature Structural and Molecular Biology, 2013, 20, 582-588.	8.2	124
5	Engine out of the chassis: Cellâ€free protein synthesis and its uses. FEBS Letters, 2014, 588, 261-268.	2.8	88
6	A Quantitative Kinetic Scheme for 70ÂS Translation Initiation Complex Formation. Journal of Molecular Biology, 2007, 373, 562-572.	4.2	81
7	An unusual route to thermostability disclosed by the comparison of<i>thermus thermophilus</i>and<i>escherichia coli</i>inorganic pyrophosphatases. Protein Science, 1996, 5, 1014-1025.	7.6	72
8	Evolutionary aspects of inorganic pyrophosphatase. FEBS Letters, 1999, 454, 75-80.	2.8	64
9	Ribosome-Templated Azideâ€“Alkyne Cycloadditions: Synthesis of Potent Macrolide Antibiotics by In Situ Click Chemistry. Journal of the American Chemical Society, 2016, 138, 3136-3144.	13.7	55
10	Synthesis and functional activity of tRNAs labeled with fluorescent hydrazides in the D-loop. Rna, 2009, 15, 346-354.	3.5	53
11	Elongation factor G initiates translocation through a power stroke. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7515-7520.	7.1	53
12	Rapid ribosomal translocation depends on the conserved 18-55 base pair in P-site transfer RNA. Nature Structural and Molecular Biology, 2006, 13, 354-359.	8.2	48
13	Catalysis byEscherichia coliInorganic Pyrophosphatase:Â pH and Mg2+Dependenceâ€. Biochemistry, 1996, 35, 4655-4661.	2.5	47
14	Electrophoretic Deformation of Individual Transfer RNA Molecules Reveals Their Identity. Nano Letters, 2016, 16, 138-144.	9.1	40
15	<i>In vivo</i>single-RNA tracking shows that most tRNA diffuses freely in live bacteria. Nucleic Acids Research, 2017, 45, 926-937.	14.5	37
16	Evolutionary Conservation of Enzymatic Catalysis:â€‰ Quantitative Comparison of the Effects of Mutation of Aligned Residues in Saccharomyces cerevisiae and Escherichia coli Inorganic Pyrophosphatases on Enzymatic Activity. Biochemistry, 1998, 37, 1754-1761.	2.5	36
17	Quantitative single cell monitoring of protein synthesis at subcellular resolution using fluorescently labeled tRNA. Nucleic Acids Research, 2011, 39, e129-e129.	14.5	36
18	Arginine substitutions in the hinge region of antichymotrypsin affect serpin Î²-sheet rearrangement. Nature Structural and Molecular Biology, 1996, 3, 888-893.	8.2	35

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19	Fluorescent labeling of tRNAs for dynamics experiments. Rna, 2007, 13, 1594-1601.	3.5	35
20	A comprehensive model for the allosteric regulation of Class Ia ribonucleotide reductases. Advances in Enzyme Regulation, 2003, 43, 167-182.	2.6	33
21	Ataluren and aminoglycosides stimulate read-through of nonsense codons by orthogonal mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	33
22	Probing the interaction between NatA and the ribosome for co-translational protein acetylation. PLoS ONE, 2017, 12, e0186278.	2.5	30
23	Fluorescent labeling of tRNA dihydrouridine residues: Mechanism and distribution. Rna, 2011, 17, 1393-1400.	3.5	29
24	New <i>in Vitro</i> Assay Measuring Direct Interaction of Nonsense Suppressors with the Eukaryotic Protein Synthesis Machinery. ACS Medicinal Chemistry Letters, 2018, 9, 1285-1291.	2.8	28
25	NMR structure of an inhibitory R2 C-terminal peptide bound to mouse ribonucleotide reductase R1 subunit. Nature Structural and Molecular Biology, 1995, 2, 951-955.	8.2	27
26	Quantifying Elongation Rhythm during Full-Length Protein Synthesis. Journal of the American Chemical Society, 2013, 135, 11322-11329.	13.7	26
27	Monitoring Translation with Modified mRNAs Strategically Labeled with Isomorphic Fluorescent Guanosine Mimetics. ACS Chemical Biology, 2013, 8, 2017-2023.	3.4	26
28	Translocation kinetics and structural dynamics of ribosomes are modulated by the conformational plasticity of downstream pseudoknots. Nucleic Acids Research, 2018, 46, 9736-9748.	14.5	26
29	Photoaffinity labeling ofEscherichia coliribosomes with an aryl azide analogue of puromycin. FEBS Letters, 1978, 90, 203-208.	2.8	25
30	Kinetics of initiating polypeptide elongation in an IRES-dependent system. ELife, 2016, 5, .	6.0	25
31	Effect of E20D Substitution in the Active Site ofEscherichia coliInorganic Pyrophosphatase on Its Quaternary Structure and Catalytic Propertiesâ€. Biochemistry, 1996, 35, 4662-4669.	2.5	24
32	Photoincorporation of tetracycline intoEscherichia coliribosomes. FEBS Letters, 1980, 118, 113-118.	2.8	23
33	Perturbation of the tRNA Tertiary Core Differentially Affects Specific Steps of the Elongation Cycle. Journal of Biological Chemistry, 2008, 283, 18431-18440.	3.4	23
34	Identification of 50S Components Neighboring 23S rRNA Nucleotides A2448 and U2604 within the Peptidyl Transferase Center of Escherichia coli Ribosomes. Biochemistry, 2000, 39, 183-193.	2.5	22
35	Structure-Based Optimization of Peptide Inhibitors of Mammalian Ribonucleotide Reductase,. Biochemistry, 2000, 39, 12210-12215.	2.5	22
36	EF-Tu dynamics during pre-translocation complex formation: EF-TuÂ·GDP exits the ribosome via two different pathways. Nucleic Acids Research, 2015, 43, 9519-9528.	14.5	22

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37	A dynamic RNA loop in an IRES affects multiple steps of elongation factor-mediated translation initiation. ELife, 2015, 4, .	6.0	22
38	Sequencing cyclic peptide inhibitors of mammalian ribonucleotide reductase by electrospray ionization mass spectrometry. Journal of Mass Spectrometry, 2001, 36, 658-663.	1.6	19
39	E. coli elongation factor Tu bound to a GTP analogue displays an open conformation equivalent to the GDP-bound form. Nucleic Acids Research, 2018, 46, 8641-8650.	14.5	19
40	Ataluren binds to multiple protein synthesis apparatus sites and competitively inhibits release factor-dependent termination. Nature Communications, 2022, 13, 2413.	12.8	19
41	Limited proteolysis of Cl-inhibitor by chymotrypsin-like proteinases. FEBS Letters, 1989, 259, 165-167.	2.8	18
42	Synthesis and Biological Activity of Cyclic Peptide Inhibitors of Ribonucleotide Reductase. Organic Letters, 1999, 1, 1201-1204.	4.6	18
43	Oligopeptide inhibition of class I ribonucleotide reductases. Biopolymers, 2003, 71, 117-131.	2.4	18
44	Structural dynamics of translation elongation factor Tu during aa-tRNA delivery to the ribosome. Nucleic Acids Research, 2018, 46, 8651-8661.	14.5	17
45	Dicodon monitoring of protein synthesis (DiCoMPS) reveals levels of synthesis of a viral protein in single cells. Nucleic Acids Research, 2013, 41, e177-e177.	14.5	14
46	Dynamics of intracellular stress-induced tRNA trafficking. Nucleic Acids Research, 2019, 47, 2002-2010.	14.5	14
47	Cold lability of the mutant forms ofEscherichia coliinorganic pyrophosphatase. FEBS Letters, 1995, 359, 20-22.	2.8	13
48	Ribosomal Proteins Neighboring 23 S rRNA Nucleotides 803â˜811 within the 50 S Subunitâ€. Biochemistry, 1998, 37, 1714-1721.	2.5	13
49	Peptide inhibitors of mammalian ribonucleotide reductase. Advances in Enzyme Regulation, 2005, 45, 112-125.	2.6	13
50	tRNA Fluctuations Observed on Stalled Ribosomes Are Suppressed during Ongoing Protein Synthesis. Biophysical Journal, 2017, 113, 2326-2335.	0.5	13
51	The kinetic mechanism of bacterial ribosome recycling. Nucleic Acids Research, 2017, 45, 10168-10177.	14.5	12
52	High level expression of the large subunit of mouse ribonucleotide reductase in a baculovirus system. FEBS Letters, 1993, 323, 93-95.	2.8	11
53	FRET-Based Identification of mRNAs Undergoing Translation. PLoS ONE, 2012, 7, e38344.	2.5	11
54	Monitoring Collagen Synthesis in Fibroblasts Using Fluorescently Labeled tRNA Pairs. Journal of Cellular Physiology, 2014, 229, 1121-1129.	4.1	11

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55	Functional characterization ofEscherichiaâ€ƒcoliinorganic pyrophosphatase in zwitterionic buffers. FEBS Journal, 1999, 260, 308-317.	0.2	9
56	Models for the Interpretation of Allosteric Inhibition of Candida utilis Fructose Bisphosphatase by Adenosine Monophosphate. FEBS Journal, 1972, 27, 503-512.	0.2	6
57	Stringent Nucleotide Recognition by the Ribosome at the Middle Codon Position. Molecules, 2017, 22, 1427.	3.8	5
58	Site-Specific Fluorescent Labeling of RNA Interior Positions. Molecules, 2021, 26, 1341.	3.8	3
59	Applying Photolabile Derivatives of Oligonucleotides To Probe the Peptidyltransferase Center. , 0, , 271-285.		0