Jon R Lorsch

List of Publications by Year
in descending order

98 papers	6,955 citations	53794 45 h-index	64796 79 g-index
116 all docs	116 docs citations	116 times ranked	5448 citing authors

#	Article	IF	Citations
1	The Molecular Mechanics of Eukaryotic Translation. Annual Review of Biochemistry, 2004, 73, 657-704.	11.1	466
2	The Mechanism of Eukaryotic Translation Initiation: New Insights and Challenges. Cold Spring Harbor Perspectives in Biology, 2012, 4, a011544-a011544.	5.5	395
3	A mechanistic overview of translation initiation in eukaryotes. Nature Structural and Molecular Biology, 2012, 19, 568-576.	8.2	355
4	The Eukaryotic Translation Initiation Factors eIF1 and eIF1A Induce an Open Conformation of the 40S Ribosome. Molecular Cell, 2007, 26, 41-50.	9.7	289
5	Pi Release from eIF2, Not GTP Hydrolysis, Is the Step Controlled by Start-Site Selection during Eukaryotic Translation Initiation. Molecular Cell, 2005, 20, 251-262.	9.7	231
6	Conformational Differences between Open and Closed States of the Eukaryotic Translation Initiation Complex. Molecular Cell, 2015, 59, 399-412.	9.7	195
7	The DEAD Box Protein eIF4A. 1. A Minimal Kinetic and Thermodynamic Framework Reveals Coupled Binding of RNA and Nucleotideâ€. Biochemistry, 1998, 37, 2180-2193.	2.5	187
8	A Conformational Change in the Eukaryotic Translation Preinitiation Complex and Release of eIF1 Signal Recognition of the Start Codon. Molecular Cell, 2005, 17, 265-275.	9.7	175
9	Structural Changes Enable Start Codon Recognition by the Eukaryotic Translation Initiation Complex. Cell, 2014, 159, 597-607.	28.9	173
10	Fixing problems with cell lines. Science, 2014, 346, 1452-1453.	12.6	165
11	Ribozyme catalysis: not different, just worse. Nature Structural and Molecular Biology, 2005, 12, 395-402.	8.2	147
12	Dissociation of eIF1 from the 40S ribosomal subunit is a key step in start codon selection in vivo. Genes and Development, 2007, 21, 1217-1230.	5.9	146
13	The DEAD Box Protein eIF4A. 2. A Cycle of Nucleotide and RNA-Dependent Conformational Changesâ€. Biochemistry, 1998, 37, 2194-2206.	2.5	143
14	RNA Chaperones Exist and DEAD Box Proteins Get a Life. Cell, 2002, 109, 797-800.	28.9	141
15	Reconstitution of Yeast Translation Initiation. Methods in Enzymology, 2007, 430, 111-145.	1.0	141
16	Development and characterization of a reconstituted yeast translation initiation system. Rna, 2002, 8, 382-397.	3.5	134
17	The 5â€²-7-Methylguanosine Cap on Eukaryotic mRNAs Serves Both to Stimulate Canonical Translation Initiation and to Block an Alternative Pathway. Molecular Cell, 2010, 39, 950-962.	9.7	126
18	Uncoupling of Initiation Factor eIF5B/IF2 GTPase and Translational Activities by Mutations that Lower Ribosome Affinity. Cell, 2002, 111, 1015-1025.	28.9	123

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19	GTP-dependent Recognition of the Methionine Moiety on Initiator tRNA by Translation Factor eIF2. Journal of Molecular Biology, 2004, 335, 923-936.	4.2	123
20	Molecular Architecture of a Eukaryotic Translational Initiation Complex. Science, 2013, 342, 1240585.	12.6	120
21	Initiation of Protein Synthesis by Hepatitis C Virus Is Refractory to Reduced eIF2 Â· GTP Â· Met-tRNAiMetTernary Complex Availability. Molecular Biology of the Cell, 2006, 17, 4632-4644.	2.1	114
22	eIF1 Controls Multiple Steps in Start Codon Recognition during Eukaryotic Translation Initiation. Journal of Molecular Biology, 2009, 394, 268-285.	4.2	108
23	N- and C-terminal residues of eIF1A have opposing effects on the fidelity of start codon selection. EMBO Journal, 2007, 26, 1602-1614.	7.8	106
24	Perspective: Sustaining the big-data ecosystem. Nature, 2015, 527, S16-S17.	27.8	104
25	Regulatory elements in eIF1A control the fidelity of start codon selection by modulating tRNA_i^{Met} binding to the ribosome. Genes and Development, 2010, 24, 97-110.	5.9	103
26	Communication Between Eukaryotic Translation Initiation Factors 1 and 1A on the Yeast Small Ribosomal Subunit. Journal of Molecular Biology, 2003, 330, 917-924.	4.2	89
27	Multiple elements in the eIF4G1 N-terminus promote assembly of eIF4G1â€¢PABP mRNPs<i>in vivo</i>. EMBO Journal, 2011, 30, 302-316.	7.8	85
28	Interaction between Eukaryotic Initiation Factors 1A and 5B Is Required for Efficient Ribosomal Subunit Joining. Journal of Biological Chemistry, 2006, 281, 8469-8475.	3.4	83
29	Affirming NIHâ€™s commitment to addressing structural racism in the biomedical research enterprise. Cell, 2021, 184, 3075-3079.	28.9	81
30	The eIF1A C-terminal domain promotes initiation complex assembly, scanning and AUG selection in vivo. EMBO Journal, 2005, 24, 3588-3601.	7.8	80
31	Kinetic and thermodynamic analysis of the role of start codon/anticodon base pairing during eukaryotic translation initiation. Rna, 2009, 15, 138-152.	3.5	80
32	Communication between Eukaryotic Translation Initiation Factors 5 and 1A within the Ribosomal Pre-initiation Complex Plays a Role in Start Site Selection. Journal of Molecular Biology, 2006, 356, 724-737.	4.2	79
33	Molecular View of 43 S Complex Formation and Start Site Selection in Eukaryotic Translation Initiation. Journal of Biological Chemistry, 2010, 285, 21203-21207.	3.4	77
34	Translational initiation factor eIF5 replaces eIF1 on the 40S ribosomal subunit to promote start-codon recognition. ELife, 2018, 7, .	6.0	76
35	Coordinated Movements of Eukaryotic Translation Initiation Factors eIF1, eIF1A, and eIF5 Trigger Phosphate Release from eIF2 in Response to Start Codon Recognition by the Ribosomal Preinitiation Complex*. Journal of Biological Chemistry, 2013, 288, 5316-5329.	3.4	74
36	Kinetic Analysis of Late Steps of Eukaryotic Translation Initiation. Journal of Molecular Biology, 2009, 385, 491-506.	4.2	71

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37	Eukaryotic initiator tRNA: Finely tuned and ready for action. FEBS Letters, 2010, 584, 396-404.	2.8	69
38	The C-Terminal Domain of Eukaryotic Initiation Factor 5 Promotes Start Codon Recognition by Its Dynamic Interplay with eIF1 and eIF2Î². Cell Reports, 2012, 1, 689-702.	6.4	66
39	Yeast eIF4B binds to the head of the 40S ribosomal subunit and promotes mRNA recruitment through its N-terminal and internal repeat domains. Rna, 2013, 19, 191-207.	3.5	66
40	Coupled Release of Eukaryotic Translation Initiation Factors 5B and 1A from 80S Ribosomes following Subunit Joining. Molecular and Cellular Biology, 2007, 27, 2384-2397.	2.3	64
41	Yeast eIF4A enhances recruitment of mRNAs regardless of their structural complexity. ELife, 2017, 6, .	6.0	63
42	RNA Purification â€" Precipitation Methods. Methods in Enzymology, 2013, 530, 337-343.	1.0	62
43	Specific Domains in Yeast Translation Initiation Factor eIF4G Strongly Bias RNA Unwinding Activity of the eIF4F Complex toward Duplexes with 5â€²-Overhangs. Journal of Biological Chemistry, 2012, 287, 20301-20312.	3.4	54
44	Eukaryotic translation initiation factor 3 plays distinct roles at the mRNA entry and exit channels of the ribosomal preinitiation complex. ELife, 2016, 5, .	6.0	54
45	Initiation factor eIF2Î³ promotes eIF2â€"GTPâ€"Met-tRNAiMet ternary complex binding to the 40S ribosome. Nature Structural and Molecular Biology, 2011, 18, 1227-1234.	8.2	50
46	Labeling a Protein with Fluorophores Using NHS Ester Derivitization. Methods in Enzymology, 2014, 536, 87-94.	1.0	48
47	Yeast Ded1 promotes 48S translation pre-initiation complex assembly in an mRNA-specific and eIF4F-dependent manner. ELife, 2018, 7, .	6.0	48
48	Should I Stay or Should I Go? Eukaryotic Translation Initiation Factors 1 and 1A Control Start Codon Recognition. Journal of Biological Chemistry, 2008, 283, 27345-27349.	3.4	47
49	Rps3/uS3 promotes mRNA binding at the 40S ribosome entry channel and stabilizes preinitiation complexes at start codons. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2126-E2135.	7.1	47
50	Î²-Hairpin Loop of Eukaryotic Initiation Factor 1 (eIF1) Mediates 40 S Ribosome Binding to Regulate Initiator tRNAMet Recruitment and Accuracy of AUG Selection in Vivo. Journal of Biological Chemistry, 2013, 288, 27546-27562.	3.4	44
51	Ribosome recycling step in yeast cytoplasmic protein synthesis is catalyzed by eEF3 and ATP. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10854-10859.	7.1	43
52	eIF1A residues implicated in cancer stabilize translation preinitiation complexes and favor suboptimal initiation sites in yeast. ELife, 2017, 6, .	6.0	39
53	The Path to Perdition Is Paved with Protons. Cell, 2002, 110, 665-668.	28.9	36
54	Enhanced eIF1 binding to the 40S ribosome impedes conformational rearrangements of the preinitiation complex and elevates initiation accuracy. Rna, 2014, 20, 150-167.	3.5	36

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55	Genetic identification of yeast 18S rRNA residues required for efficient recruitment of initiator tRNA^{Met} and AUG selection. Genes and Development, 2008, 22, 2242-2255.	5.9	35
56	Maximizing the return on taxpayers' investments in fundamental biomedical research. Molecular Biology of the Cell, 2015, 26, 1578-1582.	2.1	34
57	Functional interplay between DEAD-box RNA helicases Ded1 and Dbp1 in preinitiation complex attachment and scanning on structured mRNAs in vivo. Nucleic Acids Research, 2019, 47, 8785-8806.	14.5	32
58	Yeast initiator tRNA identity elements cooperate to influence multiple steps of translation initiation. Rna, 2006, 12, 751-764.	3.5	31
59	Eukaryotic translation initiation factor eIF5 promotes the accuracy of start codon recognition by regulating Pi release and conformational transitions of the preinitiation complex. Nucleic Acids Research, 2014, 42, 9623-9640.	14.5	30
60	Practical Steady-State Enzyme Kinetics. Methods in Enzymology, 2014, 536, 3-15.	1.0	30
61	Where to begin? The mechanism of translation initiation codon selection in eukaryotes. Current Opinion in Chemical Biology, 2006, 10, 480-486.	6.1	28
62	Labeling of a Protein with Fluorophores Using Maleimide Derivitization. Methods in Enzymology, 2014, 536, 79-86.	1.0	27
63	Conserved residues in yeast initiator tRNA calibrate initiation accuracy by regulating preinitiation complex stability at the start codon. Genes and Development, 2014, 28, 502-520.	5.9	26
64	eIF1 discriminates against suboptimal initiation sites to prevent excessive uORF translation genome-wide. Rna, 2020, 26, 419-438.	3.5	26
65	Identification of compounds that decrease the fidelity of start codon recognition by the eukaryotic translational machinery. Rna, 2011, 17, 439-452.	3.5	24
66	Basic science: Bedrock of progress. Science, 2016, 351, 1405-1405.	12.6	24
67	Distinct interactions of eIF4A and eIF4E with RNA helicase Ded1 stimulate translation in vivo. ELife, 2020, 9, .	6.0	24
68	Yeast Eukaryotic Initiation Factor 4B (eIF4B) Enhances Complex Assembly between eIF4A and eIF4G in Vivo. Journal of Biological Chemistry, 2013, 288, 2340-2354.	3.4	23
69	Structural integrity of Î±-helix H12 in translation initiation factor eIF5B is critical for 80S complex stability. Rna, 2011, 17, 687-696.	3.5	19
70	rRNA Suppressor of a Eukaryotic Translation Initiation Factor 5B/Initiation Factor 2 Mutant Reveals a Binding Site for Translational GTPases on the Small Ribosomal Subunit. Molecular and Cellular Biology, 2009, 29, 808-821.	2.3	18
71	Protein Affinity Purification using Intein/Chitin Binding Protein Tags. Methods in Enzymology, 2015, 559, 111-125.	1.0	18
72	Mechanism of ribosomal subunit joining during eukaryotic translation initiation. Biochemical Society Transactions, 2008, 36, 653-657.	3.4	17

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73	Inhibition of protein synthesis by aminoglycoside???arginine conjugates. Rna, 2002, 8, 1267-1279.	3.5	16
74	The mercury resistance (mer) operon in a marine gliding flavobacterium,Tenacibaculum discolor9A5. FEMS Microbiology Ecology, 2013, 83, 135-148.	2.7	15
75	Analysis of suramin plasma levels by ion-pair high-performance liquid chromatography under isocratic conditions. Biomedical Applications, 1986, 378, 498-502.	1.7	14
76	Identification and Characterization of Functionally Critical, Conserved Motifs in the Internal Repeats and N-terminal Domain of Yeast Translation Initiation Factor 4B (yeIF4B). Journal of Biological Chemistry, 2014, 289, 1704-1722.	3.4	14
77	Active yeast ribosome preparation using monolithic anion exchange chromatography. RNA Biology, 2017, 14, 188-196.	3.1	14
78	ATP and GTP Hydrolysis Assays (TLC). Methods in Enzymology, 2013, 533, 325-334.	1.0	13
79	Intragenic Suppressor Mutations Restore GTPase and Translation Functions of a Eukaryotic Initiation Factor 5B Switch II Mutant. Molecular and Cellular Biology, 2007, 27, 1677-1685.	2.3	12
80	Sanger Dideoxy Sequencing of DNA. Methods in Enzymology, 2013, 529, 171-184.	1.0	12
81	Temperature-dependent regulation of upstream open reading frame translation in S. cerevisiae. BMC Biology, 2019, 17, 101.	3.8	10
82	Organizing Graduate Life Sciences Education around Nodes and Connections. Cell, 2011, 146, 506-509.	28.9	9
83	Standard In Vitro Assays for Proteinâ€"Nucleic Acid Interactions â€" Gel Shift Assays for RNA and DNA Binding. Methods in Enzymology, 2014, 541, 179-196.	1.0	8
84	Preface. Methods in Enzymology, 2013, 530, xxi.	1.0	4
85	Identification and characterization of functionally critical, conserved motifs in the internal repeats and N-terminal domain of yeast translation initiation factor 4B (yeIF4B).. Journal of Biological Chemistry, 2014, 289, 11860.	3.4	3
86	Protein Derivitization-Expressed Protein Ligation. Methods in Enzymology, 2014, 536, 95-108.	1.0	3
87	Developing a culture of safety in biomedical research training. Molecular Biology of the Cell, 2020, 31, 2409-2414.	2.1	3
88	Explanatory Chapter: Nucleic Acid Concentration Determination. Methods in Enzymology, 2013, 530, 331-336.	1.0	2
89	Reverse Transcriptase Dideoxy Sequencing of RNA. Methods in Enzymology, 2013, 530, 347-359.	1.0	2
90	Preface. Methods in Enzymology, 2014, 536, xv.	1.0	1

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91	Preface. Methods in Enzymology, 2015, 559, xi.	1.0	1
92	Preface. Methods in Enzymology, 2013, 529, xix.	1.0	0
93	Preface. Methods in Enzymology, 2013, 533, xxi.	1.0	0
94	Preface. Methods in Enzymology, 2014, 539, xv.	1.0	0
95	Protein Filter Binding. Methods in Enzymology, 2014, 541, 197-205.	1.0	0
96	The Molecular Mechanics of Start Site Recognition in Eukaryotic Translation. FASEB Journal, 2006, 20, .	0.5	0
97	A knotty problem: Dissecting the molecular mechanics of mRNA recruitment to the eukaryotic ribosome. FASEB Journal, 2012, 26, 461.1.	0.5	0
98	Specific domains in yeast eukaryotic Initiation Factor (eIF) 4G bias the RNA unwinding specificity of eIF4F towards duplexes with a 5â€²â€•overhang. FASEB Journal, 2012, 26, 940.1.	0.5	0