

# Britt-Marie SjÅ¶berg

## List of Publications by Year in descending order

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119  
papers

5,554  
citations

76326

40  
h-index

91884

69  
g-index

128  
all docs

128  
docs citations

128  
times ranked

3078  
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-dimensional structure of the free radical protein of ribonucleotide reductase. <i>Nature</i> , 1990, 345, 593-598.	27.8	863
2	Binding of allosteric effectors to ribonucleotide reductase protein R1: reduction of active-site cysteines promotes substrate binding. <i>Structure</i> , 1997, 5, 1077-1092.	3.3	247
3	DNA building blocks: keeping control of manufacture. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , 2012, 47, 50-63.	5.2	212
4	A Glycyl Radical Site in the Crystal Structure of a Class III Ribonucleotide Reductase. <i>Science</i> , 1999, 283, 1499-1504.	12.6	188
5	The Free Radical of the Anaerobic Ribonucleotide Reductase from <i>Escherichia coli</i> Is at Glycine 681. <i>Journal of Biological Chemistry</i> , 1996, 271, 6827-6831.	3.4	133
6	Two Conserved Tyrosine Residues in Protein R1 Participate in an Intermolecular Electron Transfer in Ribonucleotide Reductase. <i>Journal of Biological Chemistry</i> , 1996, 271, 20655-20659.	3.4	120
7	The Crystal Structure of an Azide Complex of the Diferrous R2 Subunit of Ribonucleotide Reductase Displays a Novel Carboxylate Shift with Important Mechanistic Implications for Diiron-Catalyzed Oxygen Activation. <i>Journal of the American Chemical Society</i> , 1999, 121, 2346-2352.	13.7	116
8	RNRdb, a curated database of the universal enzyme family ribonucleotide reductase, reveals a high level of misannotation in sequences deposited to Genbank. <i>BMC Genomics</i> , 2009, 10, 589.	2.8	109
9	Electron Magnetic Resonance of the Tyrosyl Radical in Ribonucleotide Reductase from <i>Escherichia coli</i> . <i>Journal of the American Chemical Society</i> , 1996, 118, 4672-4679.	13.7	108
10	Electronic Structure of Neutral Tryptophan Radicals in Ribonucleotide Reductase Studied by EPR and ENDOR Spectroscopy. <i>Journal of the American Chemical Society</i> , 1996, 118, 8111-8120.	13.7	101
11	[30] Ribonucleoside diphosphate reductase ( <i>Escherichia coli</i> ). <i>Methods in Enzymology</i> , 1978, 51, 227-237.	1.0	88
12	Generation of the Glycyl Radical of the Anaerobic <i>Escherichia coli</i> Ribonucleotide Reductase Requires a Specific Activating Enzyme. <i>Journal of Biological Chemistry</i> , 1995, 270, 2443-2446.	3.4	80
13	Crystal Structure of the Di-iron/Radical Protein of Ribonucleotide Reductase from <i>Corynebacterium ammoniagenes</i> . <i>Biochemistry</i> , 2002, 41, 1381-1389.	2.5	80
14	The ribonucleotide reductase jigsaw puzzle: a large piece falls into place. <i>Structure</i> , 1994, 2, 793-796.	3.3	79
15	NrdR Controls Differential Expression of the <i>Escherichia coli</i> Ribonucleotide Reductase Genes. <i>Journal of Bacteriology</i> , 2007, 189, 5012-5021.	2.2	76
16	Oligomerization Status Directs Overall Activity Regulation of the <i>Escherichia coli</i> Class Ia Ribonucleotide Reductase. <i>Journal of Biological Chemistry</i> , 2008, 283, 35310-35318.	3.4	75
17	The Origin and Evolution of Ribonucleotide Reduction. <i>Life</i> , 2015, 5, 604-636.	2.4	74
18	Activation of the iron-containing B2 protein of ribonucleotide reductase by hydrogen peroxide. <i>Biochemical and Biophysical Research Communications</i> , 1990, 167, 813-818.	2.1	73

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19	A New Mechanism-based Radical Intermediate in a Mutant R1 Protein Affecting the Catalytically Essential Glu441 in Escherichia coli Ribonucleotide Reductase. Journal of Biological Chemistry, 1997, 272, 31533-31541.	3.4	67
20	Preserved Catalytic Activity in an Engineered Ribonucleotide Reductase R2 Protein with a Nonphysiological Radical Transfer Pathway. Journal of Biological Chemistry, 1998, 273, 21003-21008.	3.4	67
21	Use of Structural Phylogenetic Networks for Classification of the Ferritin-like Superfamily. Journal of Biological Chemistry, 2012, 287, 20565-20575.	3.4	66
22	A Thioredoxin Induced by Bacteriophage T4. Journal of Biological Chemistry, 1970, 245, 6030-6035.	3.4	64
23	Metal ion interaction with cosubstrate in self-splicing of group I introns. Nucleic Acids Research, 1997, 25, 648-653.	14.5	63
24	Residues Important for Radical Stability in Ribonucleotide Reductase from Escherichia coli. Journal of Biological Chemistry, 1995, 270, 6570-6576.	3.4	62
25	NrdI Essentiality for Class Ib Ribonucleotide Reduction in <i>Streptococcus pyogenes</i> . Journal of Bacteriology, 2008, 190, 4849-4858.	2.2	62
26	Confounded cytosine! Tinkering and the evolution of DNA. Nature Reviews Molecular Cell Biology, 2001, 2, 147-151.	37.0	61
27	Ribonucleotide reduction - horizontal transfer of a required function spans all three domains. BMC Evolutionary Biology, 2010, 10, 383.	3.2	61
28	The Active Form of the R2F Protein of Class Ib Ribonucleotide Reductase from <i>Corynebacterium ammoniagenes</i> is a Diferric Protein. Journal of Biological Chemistry, 2000, 275, 25365-25371.	3.4	58
29	An ultrafiltration assay for nucleotide binding to ribonucleotide reductase. Analytical Biochemistry, 1990, 189, 138-141.	2.4	56
30	The Evolution of the Ribonucleotide Reductases: Much Ado About Oxygen. Journal of Molecular Evolution, 2002, 55, 180-196.	1.8	55
31	The Manganese-containing Ribonucleotide Reductase of <i>Corynebacterium ammoniagenes</i> Is a Class Ib Enzyme. Journal of Biological Chemistry, 1998, 273, 4329-4337.	3.4	54
32	Bacteriophage T4 Anaerobic Ribonucleotide Reductase Contains a Stable Glycyl Radical at Position 580. Journal of Biological Chemistry, 1996, 271, 20770-20775.	3.4	51
33	Structural Basis for Allosteric Substrate Specificity Regulation in Anaerobic Ribonucleotide Reductases. Structure, 2001, 9, 739-750.	3.3	51
34	Identification of the stable free radical tyrosine residue in ribonucleotide reductase. FEBS Letters, 1985, 183, 99-102.	2.8	50
35	Crystal Structures of Two Self-Hydroxylating Ribonucleotide Reductase Protein R2 Mutants: A Structural Basis for the Oxygen-Insertion Step of Hydroxylation Reactions Catalyzed by Diiron Proteins. Biochemistry, 1998, 37, 10798-10807.	2.5	50
36	Metal-free ribonucleotide reduction powered by a DOPA radical in Mycoplasma pathogens. Nature, 2018, 563, 416-420.	27.8	50

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37	A Metagenomics Transect into the Deepest Point of the Baltic Sea Reveals Clear Stratification of Microbial Functional Capacities. PLoS ONE, 2013, 8, e74983.	2.5	48
38	Studies on the Structure of T4 Thioredoxin. Journal of Biological Chemistry, 1972, 247, 8063-8068.	3.4	47
39	Transient Free Radicals in Iron/Oxygen Reconstitution of Mutant Protein R2 Y122F.. Journal of Biological Chemistry, 1995, 270, 12361-12372.	3.4	43
40	Methyl-RNA: an evolutionary bridge between RNA and DNA?. Chemistry and Biology, 2000, 7, R207-R216.	6.0	43
41	Protein thiol radicals in disordered systems: A comparative EPR study at low temperature. Physical Chemistry Chemical Physics, 2003, 5, 2442-2453.	2.8	43
42	CysteinyI and Substrate Radical Formation in Active Site Mutant E441Q of Escherichia coli Class I Ribonucleotide Reductase. Journal of Biological Chemistry, 1998, 273, 31016-31020.	3.4	42
43	Distribution, Sequence Homology, and Homing of Group I Introns among T-even-like Bacteriophages. Journal of Biological Chemistry, 2004, 279, 22218-22227.	3.4	41
44	Novel ATP-cone-driven allosteric regulation of ribonucleotide reductase via the radical-generating subunit. ELife, 2018, 7, .	6.0	40
45	Efficient growth inhibition of Bacillus anthracis by knocking out the ribonucleotide reductase tyrosyl radical. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 17946-17951.	7.1	39
46	Diversity in Overall Activity Regulation of Ribonucleotide Reductase. Journal of Biological Chemistry, 2015, 290, 17339-17348.	3.4	39
47	Protein thiol radicals directly observed by EPR spectroscopy. Archives of Biochemistry and Biophysics, 2002, 403, 141-144.	3.0	35
48	Insertion of a homing endonuclease creates a genes-in-pieces ribonucleotide reductase that retains function. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6176-6181.	7.1	35
49	Shift in Ribonucleotide Reductase Gene Expression in Pseudomonas aeruginosa during Infection. Infection and Immunity, 2011, 79, 2663-2669.	2.2	35
50	High-resolution crystal structures of the flavoprotein NrdI in oxidized and reduced states " an unusual flavodoxin. FEBS Journal, 2010, 277, 4265-4277.	4.7	33
51	Bacillus anthracis Thioredoxin Systems, Characterization and Role as Electron Donors for Ribonucleotide Reductase. Journal of Biological Chemistry, 2012, 287, 39686-39697.	3.4	33
52	NrdH-Redoxin Protein Mediates High Enzyme Activity in Manganese-reconstituted Ribonucleotide Reductase from Bacillus anthracis. Journal of Biological Chemistry, 2011, 286, 33053-33060.	3.4	31
53	Ribonucleotide Reductase Modularity. Journal of Biological Chemistry, 2006, 281, 25287-25296.	3.4	30
54	The Tyrosyl Free Radical in Ribonucleotide Reductase. Environmental Health Perspectives, 1985, 64, 139.	6.0	29

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55	New crystal forms of the small subunit of ribonucleotide reductase from <i>Escherichia coli</i> . <i>FEBS Letters</i> , 1989, 258, 251-254.	2.8	29
56	Kinetics of Transient Radicals in <i>Escherichia coli</i> Ribonucleotide Reductase. <i>Journal of Biological Chemistry</i> , 1997, 272, 10414-10421.	3.4	29
57	A metal-binding site in the catalytic subunit of anaerobic ribonucleotide reductase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 3826-3831.	7.1	29
58	Two Proteins Mediate Class II Ribonucleotide Reductase Activity in <i>Pseudomonas aeruginosa</i> . <i>Journal of Biological Chemistry</i> , 2005, 280, 16571-16578.	3.4	29
59	SegH and Hef: two novel homing endonucleases whose genes replace the <i>mobC</i> and <i>mobE</i> genes in several T4-related phages. <i>Nucleic Acids Research</i> , 2005, 33, 6203-6213.	14.5	29
60	Nucleotide sequence of the gene coding for the large subunit of ribonucleotide reductase of <i>Escherichia coli</i> . Correction. <i>Nucleic Acids Research</i> , 1988, 16, 4174-4174.	14.5	28
61	A method to find tissue-specific novel sites of selective adenosine deamination. <i>Nucleic Acids Research</i> , 2005, 33, e167-e167.	14.5	28
62	Structural Mechanism of Allosteric Activity Regulation in a Ribonucleotide Reductase with Double ATP Cones. <i>Structure</i> , 2016, 24, 906-917.	3.3	28
63	Iron ligand mutants in protein R2 of <i>Escherichia coli</i> ribonucleotide reductase. <i>Journal of Biological Inorganic Chemistry</i> , 1996, 1, 247-256.	2.6	27
64	Discovery of antimicrobial ribonucleotide reductase inhibitors by screening in microwell format. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 9798-9803.	7.1	26
65	Cysteines Involved in Radical Generation and Catalysis of Class III Anaerobic Ribonucleotide Reductase. <i>Journal of Biological Chemistry</i> , 2000, 275, 19449-19455.	3.4	25
66	Generation and Electron Paramagnetic Resonance Spin Trapping Detection of Thiyl Radicals in Model Proteins and in the R1 Subunit of <i>Escherichia coli</i> Ribonucleotide Reductase. <i>Archives of Biochemistry and Biophysics</i> , 2002, 397, 57-68.	3.0	25
67	A Synthetic Model for Triple-Helical Domains in Self-Splicing Group I Introns Studied by Ultraviolet and Circular Dichroism Spectroscopy. <i>Biochemistry</i> , 1996, 35, 4678-4688.	2.5	23
68	Restoring Proper Radical Generation by Azide Binding to the Iron Site of the E238A Mutant R2 Protein of Ribonucleotide Reductase from <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , 2001, 276, 26852-26859.	3.4	23
69	Self-Splicing of the Bacteriophage T4 Group I Introns Requires Efficient Translation of the Pre-mRNA In Vivo and Correlates with the Growth State of the Infected Bacterium. <i>Journal of Bacteriology</i> , 2007, 189, 980-990.	2.2	23
70	<i>Lactobacillus reuteri</i> and the Enteric Microbiota. , 1989, , 283-292.		23
71	Purification of thioredoxin from <i>Escherichia coli</i> and bacteriophage T4 by immunoadsorbent affinity chromatography. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1973, 315, 176-180.	2.6	22
72	The Conserved Active Site Asparagine in Class I Ribonucleotide Reductase Is Essential for Catalysis. <i>Journal of Biological Chemistry</i> , 2002, 277, 5749-5755.	3.4	22

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73	Allosteric Regulation of the Class III Anaerobic Ribonucleotide Reductase from Bacteriophage T4. <i>Journal of Biological Chemistry</i> , 2000, 275, 19443-19448.	3.4	21
74	Enzymic and Chemical Reduction of the Iron Center of the Escherichia coli Ribonucleotide Reductase Protein R2. The Role of the C-Terminus. <i>FEBS Journal</i> , 1995, 233, 357-363.	0.2	20
75	Correlation of sister chromatid exchange formation through homologous recombination with ribonucleotide reductase inhibition. <i>Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis</i> , 2004, 547, 101-107.	1.0	20
76	A Never-Ending Story. <i>Science</i> , 2010, 329, 1475-1476.	12.6	20
77	Structure-function studies of the large subunit of ribonucleotide reductase from <i>Escherichia coli</i> . <i>Biochemical Society Transactions</i> , 1988, 16, 91-94.	3.4	18
78	In Vivo Assay for Low-Activity Mutant Forms of Escherichia coli Ribonucleotide Reductase. <i>Journal of Bacteriology</i> , 2003, 185, 1167-1173.	2.2	18
79	Structural and Mutational Studies of the Carboxylate Cluster in Iron-Free Ribonucleotide Reductase R2. <i>Biochemistry</i> , 2004, 43, 7966-7972.	2.5	18
80	Translation across the 5'-splice site interferes with autocatalytic splicing. <i>Molecular Microbiology</i> , 1993, 7, 975-982.	2.5	17
81	Enhancement by Effectors and Substrate Nucleotides of R1-R2 Interactions in Escherichia coli Class Ia Ribonucleotide Reductase. <i>Journal of Biological Chemistry</i> , 2004, 279, 31050-31057.	3.4	17
82	Semiquinone-induced Maturation of Bacillus anthracis Ribonucleotide Reductase by a Superoxide Intermediate. <i>Journal of Biological Chemistry</i> , 2014, 289, 31940-31949.	3.4	16
83	Ribonucleotide reductase: A structural study of the dimeric iron site. <i>Biochemical and Biophysical Research Communications</i> , 1980, 94, 793-799.	2.1	15
84	[1] Thiols in redox mechanism of ribonucleotide reductase. <i>Methods in Enzymology</i> , 2002, 348, 1-21.	1.0	15
85	Mutant R1 Proteins from Escherichia coli Class Ia Ribonucleotide Reductase with Altered Responses to dATP Inhibition. <i>Journal of Biological Chemistry</i> , 2004, 279, 14496-14501.	3.4	15
86	A glutaredoxin domain fused to the radical-generating subunit of ribonucleotide reductase (RNR) functions as an efficient RNR reductant. <i>Journal of Biological Chemistry</i> , 2018, 293, 15889-15900.	3.4	15
87	Ribonucleotide reductase of Escherichia coli. Cross-linking agents as probes of quaternary and quinary structure. <i>FEBS Journal</i> , 1987, 166, 279-285.	0.2	14
88	A Functional Homing Endonuclease in the Bacillus anthracis nrdE Group I Intron. <i>Journal of Bacteriology</i> , 2007, 189, 5293-5301.	2.2	14
89	A unique cysteine-rich zinc finger domain present in a majority of class II ribonucleotide reductases mediates catalytic turnover. <i>Journal of Biological Chemistry</i> , 2017, 292, 19044-19054.	3.4	14
90	New Paramagnetic Species Formed at the Expense of the Transient Tyrosyl Radical in Mutant Protein R2 F208Y of Escherichia coli Ribonucleotide Reductase. <i>Biochemical and Biophysical Research Communications</i> , 1998, 246, 740-745.	2.1	13

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91	Localization and Characterization of Two Nucleotide-binding Sites on the Anaerobic Ribonucleotide Reductase from Bacteriophage T4. <i>Journal of Biological Chemistry</i> , 1998, 273, 24853-24860.	3.4	13
92	A New Tyrosyl Radical on Phe208 as Ligand to the Diiron Center in Escherichia coli Ribonucleotide Reductase, Mutant R2-Y122H. <i>Journal of Biological Chemistry</i> , 2005, 280, 11233-11246.	3.4	13
93	A Rare Combination of Ribonucleotide Reductases in the Social Amoeba Dictyostelium discoideum. <i>Journal of Biological Chemistry</i> , 2013, 288, 8198-8208.	3.4	12
94	A ribonucleotide reductase from Clostridium botulinum reveals distinct evolutionary pathways to regulation via the overall activity site. <i>Journal of Biological Chemistry</i> , 2020, 295, 15576-15587.	3.4	12
95	Two Active Site Asparagines Are Essential for the Reaction Mechanism of the Class III Anaerobic Ribonucleotide Reductase from Bacteriophage T4. <i>Journal of Biological Chemistry</i> , 2001, 276, 40457-40463.	3.4	11
96	Studies on the Structure of T4 Thioredoxin. <i>Journal of Biological Chemistry</i> , 1972, 247, 8058-8062.	3.4	11
97	Thioredoxin induced by bacteriophage T4: Crystallization and preliminary crystallographic data. <i>Journal of Molecular Biology</i> , 1976, 100, 415-419.	4.2	10
98	Nucleotide-dependent Formation of Catalytically Competent Dimers from Engineered Monomeric Ribonucleotide Reductase Protein R1. <i>Journal of Biological Chemistry</i> , 2005, 280, 14997-15003.	3.4	10
99	Antibacterial activity of radical scavengers against class Ib ribonucleotide reductase from <i>Bacillus anthracis</i> . <i>Biological Chemistry</i> , 2010, 391, 229-234.	2.5	10
100	Subunit and small-molecule interaction of ribonucleotide reductases via surface plasmon resonance biosensor analyses. <i>Protein Engineering, Design and Selection</i> , 2010, 23, 633-641.	2.1	10
101	Class Id ribonucleotide reductase utilizes a Mn <sup>2(IV,III)</sup> cofactor and undergoes large conformational changes on metal loading. <i>Journal of Biological Inorganic Chemistry</i> , 2019, 24, 863-877.	2.6	10
102	The Crystal Structure of Thermotoga maritima Class III Ribonucleotide Reductase Lacks a Radical Cysteine Pre-Positioned in the Active Site. <i>PLoS ONE</i> , 2015, 10, e0128199.	2.5	10
103	Protein B1 of ribonucleotide reductase. Direct analytical data and comparisons with data indirectly deduced from the nucleotide sequence of the Escherichia coli nrdA gene. <i>FEBS Journal</i> , 1985, 150, 423-427.	0.2	9
104	Unconventional GIY-YIG homing endonuclease encoded in group I introns in closely related strains of the Bacillus cereus group. <i>Nucleic Acids Research</i> , 2007, 36, 300-310.	14.5	9
105	Structural and Functional Characterization of Two Mutated R2 Proteins of Escherichia coli Ribonucleotide Reductase. <i>FEBS Journal</i> , 1996, 237, 58-63.	0.2	8
106	The Cys292→Ala Substitution in Protein R1 of Class I Ribonucleotide Reductase from Escherichia Coli has a Global Effect on Nucleotide Binding at the Specificity-Determining Allosteric Site. <i>FEBS Journal</i> , 1996, 241, 363-367.	0.2	7
107	Biochemical Characterization of the Split Class II Ribonucleotide Reductase from Pseudomonas aeruginosa. <i>PLoS ONE</i> , 2015, 10, e0134293.	2.5	7
108	Peroxy adduct radicals formed in the iron/oxygen reconstitution reaction of mutant ribonucleotide reductase R2 proteins from Escherichia coli. <i>Journal of Biological Inorganic Chemistry</i> , 2002, 7, 74-82.	2.6	6

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109	Assembly of a fragmented ribonucleotide reductase by protein interaction domains derived from a mobile genetic element. <i>Nucleic Acids Research</i> , 2011, 39, 1381-1389.	14.5	6
110	Structural and Biochemical Investigation of Class I Ribonucleotide Reductase from the Hyperthermophile <i>Aquifex aeolicus</i> . <i>Biochemistry</i> , 2022, 61, 92-106.	2.5	6
111	2'-Amino-2'-deoxyguanosine is a cofactor for self-splicing in group I catalytic RNA. <i>Biochemical and Biophysical Research Communications</i> , 1992, 183, 842-847.	2.1	5
112	Compounds with capacity to quench the tyrosyl radical in <i>Pseudomonas aeruginosa</i> ribonucleotide reductase. <i>Journal of Biological Inorganic Chemistry</i> , 2019, 24, 841-848.	2.6	3
113	Solution Structure of the dATP-Inactivated Class I Ribonucleotide Reductase From <i>Leeuwenhoekia blandensis</i> by SAXS and Cryo-Electron Microscopy. <i>Frontiers in Molecular Biosciences</i> , 2021, 8, 713608.	3.5	2
114	A nucleotide-sensing oligomerization mechanism that controls NrdR-dependent transcription of ribonucleotide reductases. <i>Nature Communications</i> , 2022, 13, 2700.	12.8	2
115	A Bioanalytical Method for Quantification of Thioredoxins in <i>Bacillus anthracis</i> by Digestion with Immobilized Pepsin and LC-MS/MS and On-line LC-MS/MS. <i>Chromatographia</i> , 2016, 79, 383-393.	1.3	1
116	The Free Radical in Ribonucleotide Reductase from <i>Escherichia coli</i> . <i>Biochemical Society Transactions</i> , 1977, 5, 747-748.	3.4	0
117	Computer Graphics Modelling and Molecular Dynamics Simulation of the Core of the Self Splicing Intervening Sequence of the T4 <i>nrDB</i> mRNA in the Presence of the Guanosine Cofactor. <i>Nucleosides &amp; Nucleotides</i> , 1991, 10, 207-213.	0.5	0
118	The Free Radical in Ribonucleotide Reductase from <i>E. coli</i> . <i>Novartis Foundation Symposium</i> , 1978, , 187-196.	1.1	0
119	Ribonucleotide Reductase. , 2013, , 1838-1850.		0