Wolf-Dietrich Heyer

List of Publications by Year
in descending order

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109 papers	8,242 citations	57631 44 h-index	51492 86 g-index
138 all docs	138 docs citations	138 times ranked	6709 citing authors

#	Article	IF	Citations
1	Guardians of the Genome: BRCA2 and Its Partners. Genes, 2021, 12, 1229.	1.0	17
2	Cancer testis antigens and genomic instability: More than immunology. DNA Repair, 2021, 108, 103214.	1.3	14
3	Recombination | Recombination DNA-Strand Transferases. , 2021, , 149-157.		0
4	Physical and Genetic Assays for the Study of DNA Joint Molecules Metabolism and Multi-invasion-Induced Rearrangements in S. cerevisiae. Methods in Molecular Biology, 2021, 2153, 535-554.	0.4	5
5	POLÎ¸-mediated end joining is restricted by RAD52 and BRCA2 until the onset of mitosis. Nature Cell Biology, 2021, 23, 1095-1104.	4.6	55
6	Turning end-joining upside down in mitosis. Molecular and Cellular Oncology, 2021, 8, 2007029.	0.3	1
7	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. PLoS Genetics, 2020, 16, e1008816.	1.5	2
8	DSS1 and ssDNA regulate oligomerization of BRCA2. Nucleic Acids Research, 2020, 48, 7818-7833.	6.5	21
9	Bisulfite treatment and single-molecule real-time sequencing reveal D-loop length, position, and distribution. ELife, 2020, 9, .	2.8	5
10	Rdh54/Tid1 inhibits Rad51-Rad54-mediated D-loop formation and limits D-loop length. ELife, 2020, 9, .	2.8	18
11	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. , 2020, 16, e1008816.		0
12	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. , 2020, 16, e1008816.		0
13	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. , 2020, 16, e1008816.		0
14	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. , 2020, 16, e1008816.		0
15	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. , 2020, 16, e1008816.		0
16	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. , 2020, 16, e1008816.		0
17	Saccharomyces cerevisiae Mus81-Mms4 prevents accelerated senescence in telomerase-deficient cells. , 2020, 16, e1008816.		0
18	Role of the Srs2â€“Rad51 Interaction Domain in Crossover Control in Saccharomyces cerevisiae. Genetics, 2019, 212, 1133-1145.	1.2	4

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19	In vitro role of Rad54 in Rad51-ssDNA filament-dependent homology search and synaptic complexes formation. Nature Communications, 2019, 10, 4058.	5.8	45
20	Guidelines for DNA recombination and repair studies: Mechanistic assays of DNA repair processes. Microbial Cell, 2019, 6, 65-101.	1.4	10
21	Moving forward one step back at a time: reversibility during homologous recombination. Current Genetics, 2019, 65, 1333-1340.	0.8	44
22	Dynamic Processing of Displacement Loops during Recombinational DNA Repair. Molecular Cell, 2019, 73, 1255-1266.e4.	4.5	84
23	Cooperation between non-essential DNA polymerases contributes to genome stability in Saccharomyces cerevisiae. DNA Repair, 2019, 76, 40-49.	1.3	6
24	Homologous Recombination and the Formation of Complex Genomic Rearrangements. Trends in Cell Biology, 2019, 29, 135-149.	3.6	76
25	Multiâ€Invasionâ€Induced Rearrangements as a Pathway for Physiological and Pathological Recombination. BioEssays, 2018, 40, e1700249.	1.2	28
26	Homologous recombination and the repair of DNA double-strand breaks. Journal of Biological Chemistry, 2018, 293, 10524-10535.	1.6	461
27	A Proximity Ligation-Based Method for Quantitative Measurement of D-Loop Extension in S. cerevisiae. Methods in Enzymology, 2018, 601, 27-44.	0.4	15
28	Multi-invasions Are Recombination Byproducts that Induce Chromosomal Rearrangements. Cell, 2017, 170, 760-773.e15.	13.5	101
29	Srs2 promotes synthesis-dependent strand annealing by disrupting DNA polymerase Î´-extending D-loops. ELife, 2017, 6, .	2.8	54
30	Strand displacement synthesis by yeast DNA polymerase Îµ. Nucleic Acids Research, 2016, 44, 8229-8240.	6.5	37
31	Nonsense-mediated decay regulates key components of homologous recombination. Nucleic Acids Research, 2016, 44, 5218-5230.	6.5	18
32	Eukaryotic DNA Polymerases in Homologous Recombination. Annual Review of Genetics, 2016, 50, 393-421.	3.2	121
33	Nek1 Regulates Rad54 to Orchestrate Homologous Recombination and Replication Fork Stability. Molecular Cell, 2016, 62, 903-917.	4.5	80
34	Autism and Cancer Share Risk Genes, Pathways, and Drug Targets. Trends in Genetics, 2016, 32, 139-146.	2.9	123
35	Regulation Of Homologous Recombination: Robustness Through Reversibility. FASEB Journal, 2016, 30, 239.1.	0.2	0
36	RAD54 family translocases counter genotoxic effects of RAD51 in human tumor cells. Nucleic Acids Research, 2015, 43, 3180-3196.	6.5	72

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37	DNA polymerases Î´ and Î» cooperate in repairing double-strand breaks by microhomology-mediated end-joining in Saccharomyces cerevisiae. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6907-E6916.	3.3	36
38	Top3-Rmi1 Dissolve Rad51-Mediated D Loops by a Topoisomerase-Based Mechanism. Molecular Cell, 2015, 57, 595-606.	4.5	103
39	Regulation of Recombination and Genomic Maintenance. Cold Spring Harbor Perspectives in Biology, 2015, 7, a016501.	2.3	85
40	The Mus81-Mms4 structure-selective endonuclease requires nicked DNA junctions to undergo conformational changes and bend its DNA substrates for cleavage. Nucleic Acids Research, 2014, 42, 6511-6522.	6.5	17
41	Rad54 Functions as a Heteroduplex DNA Pump Modulated by Its DNA Substrates and Rad51 during D Loop Formation. Molecular Cell, 2014, 53, 420-432.	4.5	131
42	Synthetic Lethality between Gene Defects Affecting a Single Non-essential Molecular Pathway with Reversible Steps. PLoS Computational Biology, 2013, 9, e1003016.	1.5	26
43	Reconstitution of recombination-associated DNA synthesis with human proteins. Nucleic Acids Research, 2013, 41, 4913-4925.	6.5	53
44	A Conserved Sequence Extending Motif III of the Motor Domain in the Snf2-Family DNA Translocase Rad54 Is Critical for ATPase Activity. PLoS ONE, 2013, 8, e82184.	1.1	10
45	Distinct Roles of Mus81, Yen1, Slx1-Slx4, and Rad1 Nucleases in the Repair of Replication-Born Double-Strand Breaks by Sister Chromatid Exchange. Molecular and Cellular Biology, 2012, 32, 1592-1603.	1.1	58
46	Mus81-Mms4 Functions as a Single Heterodimer To Cleave Nicked Intermediates in Recombinational DNA Repair. Molecular and Cellular Biology, 2012, 32, 3065-3080.	1.1	55
47	In Vitro Assays for DNA Pairing and Recombination-Associated DNA Synthesis. Methods in Molecular Biology, 2011, 745, 363-383.	0.4	28
48	Presynaptic filament dynamics in homologous recombination and DNA repair. Critical Reviews in Biochemistry and Molecular Biology, 2011, 46, 240-270.	2.3	42
49	Functions of the Snf2/Swi2 family Rad54 motor protein in homologous recombination. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2011, 1809, 509-523.	0.9	120
50	Processing of joint molecule intermediates by structure-selective endonucleases during homologous recombination in eukaryotes. Chromosoma, 2011, 120, 109-127.	1.0	174
51	Rad51 paralogues Rad55â€"Rad57 balance the antirecombinase Srs2 in Rad51 filament formation. Nature, 2011, 479, 245-248.	13.7	183
52	Quality Control of Purified Proteins Involved in Homologous Recombination. Methods in Molecular Biology, 2011, 745, 329-343.	0.4	5
53	Assays for Structure-Selective DNA Endonucleases. Methods in Molecular Biology, 2011, 745, 345-362.	0.4	4
54	Regulation of Homologous Recombination in Eukaryotes. Annual Review of Genetics, 2010, 44, 113-139.	3.2	899

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55	Human BRCA2 protein promotes RAD51 filament formation on RPA-covered single-stranded DNA. Nature Structural and Molecular Biology, 2010, 17, 1260-1262.	3.6	327
56	A truncated DNA-damage-signaling response is activated after DSB formation in the G1 phase of Saccharomyces cerevisiae. Nucleic Acids Research, 2010, 38, 2302-2313.	6.5	23
57	A junction branch point adjacent to a DNA backbone nick directs substrate cleavage by Saccharomyces cerevisiae Mus81-Mms4. Nucleic Acids Research, 2009, 37, 2026-2036.	6.5	32
58	RAD54 controls access to the invading 3â€²-OH end after RAD51-mediated DNA strand invasion in homologous recombination in Saccharomyces cerevisiae. Nucleic Acids Research, 2009, 37, 638-646.	6.5	87
59	Loop 2 in Saccharomyces cerevisiae Rad51 protein regulates filament formation and ATPase activity. Nucleic Acids Research, 2009, 37, 158-171.	6.5	11
60	PCNA Is Required for Initiation of Recombination-Associated DNA Synthesis by DNA Polymerase Î´. Molecular Cell, 2009, 36, 704-713.	4.5	120
61	Homologous recombination in DNA repair and DNA damage tolerance. Cell Research, 2008, 18, 99-113.	5.7	845
62	Saccharomyces cerevisiae Mus81-Mms4 is a catalytic, DNA structure-selective endonuclease. Nucleic Acids Research, 2008, 36, 2182-2195.	6.5	81
63	Biochemistry of Meiotic Recombination: Formation, Processing, and Resolution of Recombination Intermediates. Genome Dynamics and Stability, 2008, 3, 91-164.	1.1	34
64	Mechanism of recombination in eukaryotes: Some remodeling required. FASEB Journal, 2008, 22, 405.3.	0.2	0
65	Rad51 and Rad54 ATPase activities are both required to modulate Rad51-dsDNA filament dynamics. Nucleic Acids Research, 2007, 35, 4124-4140.	6.5	69
66	Two Alternatively Spliced Transcripts Generated from OsMUS81, a Rice Homolog of Yeast MUS81, Are Up-Regulated by DNA-Damaging Treatments. Plant and Cell Physiology, 2007, 48, 648-654.	1.5	18
67	Molecular Genetics of Recombination. Topics in Current Genetics, 2007, 17, 95-133.	0.7	25
68	Biochemistry of eukaryotic homologous recombination. Topics in Current Genetics, 2007, , 95-133.	0.7	18
69	DNA Damageâ€Induced Phosphorylation of Rad55 Protein as a Sentinel for DNA Damage Checkpoint Activation in S. cerevisiae. Methods in Enzymology, 2006, 409, 166-182.	0.4	9
70	Esc4/Rtt107 and the control of recombination during replication. DNA Repair, 2006, 5, 618-628.	1.3	41
71	Rad54: the Swiss Army knife of homologous recombination?. Nucleic Acids Research, 2006, 34, 4115-4125.	6.5	222
72	Some disassembly required: role of DNA translocases in the disruption of recombination intermediates and dead-end complexes. Genes and Development, 2006, 20, 2479-2486.	2.7	54

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73	Phosphorylation of Rad55 on Serines 2, 8, and 14 Is Required for Efficient Homologous Recombination in the Recovery of Stalled Replication Forks. Molecular and Cellular Biology, 2006, 26, 8396-8409.	1.1	79
74	Terminal association of Rad54 protein with the Rad51-dsDNA filament. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9767-9772.	3.3	58
75	Biochemistry of Eukaryotic Homologous Recombination. , 2006, , 95-133.		10
76	The role of the ATPase activities of the Rad51 and Rad54 proteins in the postsynaptic stage of homologous recombination. FASEB Journal, 2006, 20, A942.	0.2	0
77	Biochemical analysis of Saccharomyces cerevisiae Mus81â€Mms4, an endonuclease that supports eukaryotic DNA replication. FASEB Journal, 2006, 20, A76.	0.2	0
78	Gly-103 in the N-terminal Domain of Saccharomyces cerevisiae Rad51 Protein Is Critical for DNA Binding. Journal of Biological Chemistry, 2005, 280, 26303-26311.	1.6	19
79	The DNA damage checkpoint pathways exert multiple controls on the efficiency and outcome of the repair of a double-stranded DNA gap. Nucleic Acids Research, 2004, 32, 4257-4268.	6.5	19
80	A new deal for Holliday junctions. Nature Structural and Molecular Biology, 2004, 11, 117-119.	3.6	4
81	Recombination: Holliday Junction Resolution and Crossover Formation. Current Biology, 2004, 14, R56-R58.	1.8	50
82	Damage Signaling: RecQ Sends an SOS to You. Current Biology, 2004, 14, R895-R897.	1.8	9
83	Holliday junctions in the eukaryotic nucleus: resolution in sight?. Trends in Biochemical Sciences, 2003, 28, 548-557.	3.7	96
84	NADH-coupled microplate photometric assay for kinetic studies of ATP-hydrolyzing enzymes with low and high specific activities. Analytical Biochemistry, 2003, 321, 266-271.	1.1	150
85	Genome instability in rad54 mutants of Saccharomyces cerevisiae. Nucleic Acids Research, 2003, 31, 1013-1023.	6.5	24
86	Direct Kinase-to-Kinase Signaling Mediated by the FHA Phosphoprotein Recognition Domain of the Dun1 DNA Damage Checkpoint Kinase. Molecular and Cellular Biology, 2003, 23, 1441-1452.	1.1	99
87	Alternate pathways involving Sgs1/Top3, Mus81/ Mms4, and Srs2 prevent formation of toxic recombination intermediates from single-stranded gaps created by DNA replication. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 16887-16892.	3.3	294
88	Rad54 Protein Exerts Diverse Modes of ATPase Activity on Duplex DNA Partially and Fully Covered with Rad51 Protein. Journal of Biological Chemistry, 2002, 277, 46205-46215.	1.6	43
89	Spontaneous and double-strand break-induced recombination, and gene conversion tract lengths, are differentially affected by overexpression of wild-type or ATPase-defective yeast Rad54. Nucleic Acids Research, 2002, 30, 2727-2735.	6.5	31
90	Rad54, a Swi2/Snf2-like Recombinational Repair Protein, Disassembles Rad51:dsDNA Filaments. Molecular Cell, 2002, 10, 1175-1188.	4.5	238

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91	Rad54 protein stimulates heteroduplex DNA formation in the synaptic phase of DNA strand exchange via specific interactions with the presynaptic Rad51 nucleoprotein filament11Edited by M. Belfort. Journal of Molecular Biology, 2001, 307, 1207-1221.	2.0	115
92	The Fuss about Mus81. Cell, 2001, 107, 551-554.	13.5	89
93	No mutagenic or recombinogenic effects of mobile phone fields at 900 MHz detected in the yeastSaccharomyces cerevisiae. Bioelectromagnetics, 2000, 21, 515-523.	0.9	30
94	Meiotic recombination in RAD54 mutants of Saccharomyces cerevisiae. Chromosoma, 2000, 109, 86-93.	1.0	27
95	Damage Tolerance Protein Mus81 Associates with the FHA1 Domain of Checkpoint Kinase Cds1. Molecular and Cellular Biology, 2000, 20, 8758-8766.	1.1	265
96	DNA Repair Protein Rad55 Is a Terminal Substrate of the DNA Damage Checkpoints. Molecular and Cellular Biology, 2000, 20, 4393-4404.	1.1	150
97	Rad54 Protein Is Targeted to Pairing Loci by the Rad51 Nucleoprotein Filament. Molecular Cell, 2000, 6, 583-592.	4.5	182
98	Specific negative effects resulting from elevated levels of the recombinational repair protein Rad54p inSaccharomyces cerevisiae. , 1999, 15, 721-740.		37
99	A New Recombinational DNA Repair Gene From Schizosaccharomyces pombe With Homology to Escherichia coli RecA. Genetics, 1999, 152, 1557-1572.	1.2	66
100	Recombinational repair in yeast: functional interactions between Rad51 and Rad54 proteins. EMBO Journal, 1997, 16, 2535-2544.	3.5	177
101	Extremely high frequency electromagnetic fields at low power density do not affect the division of exponential phase Saccharomyces cerevisiae cells. Bioelectromagnetics, 1997, 18, 142-155.	0.9	47
102	Human and mouse homologs of the Saccharomyces cerevisiaeRAD54 DNA repair gene: evidence for functional conservation. Current Biology, 1996, 6, 828-838.	1.8	147
103	The Yeast <i>HRS1</i> Gene Encodes a Polyglutamine-Rich Nuclear Protein Required for Spontaneous and <i>hpr1</i>-Induced Deletions Between Direct Repeats. Genetics, 1996, 142, 705-716.	1.2	37
104	Identification of functional domains in the Sep1 protein (= Kem1, Xrn1), which is required for transition through meiotic prophase in Saccharomyces cerevisiae. Chromosoma, 1995, 104, 215-222.	1.0	19
105	Use of Monoclonal Antibodies in the Functional Characterization of the <i>Saccharomyces Cerevisiae</i> Sepl Protein. FEBS Journal, 1995, 231, 329-336.	0.2	5
106	Use of Monoclonal Antibodies in the Functional Characterization of the Saccharomyces Cerevisiae Sepl Protein. FEBS Journal, 1995, 231, 329-336.	0.2	8
107	Identification of functional domains in the Sep1 protein (= Kem1, Xrn1), which is required for transition through meiotic prophase in Saccharomyces cerevisiae. Chromosoma, 1995, 104, 215-222.	1.0	0
108	Saccharomyces cerevisiae cells lacking the homologous pairing protein p175 SEP1 arrest at pachytene during meiotic prophase. Chromosoma, 1994, 103, 129-141.	1.0	39

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109	Saccharomyces cerevisiae cells lacking the homologous pairing protein p175 SEP1 arrest at pachytene during meiotic prophase. Chromosoma, 1994, 103, 129-141.	1.0	6