

Scott Keeney

List of Publications by Year in descending order

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113
papers

14,349
citations

31976

53
h-index

25787

108
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150
all docs

150
docs citations

150
times ranked

7132
citing authors

#	ARTICLE	IF	CITATIONS
1	Meiosis-Specific DNA Double-Strand Breaks Are Catalyzed by Spo11, a Member of a Widely Conserved Protein Family. <i>Cell</i> , 1997, 88, 375-384.	28.9	1,640
2	Recombinational DNA double-strand breaks in mice precede synapsis. <i>Nature Genetics</i> , 2001, 27, 271-276.	21.4	818
3	Chromosome Synapsis Defects and Sexually Dimorphic Meiotic Progression in Mice Lacking Spo11. <i>Molecular Cell</i> , 2000, 6, 989-998.	9.7	639
4	Mechanism and control of meiotic recombination initiation. <i>Current Topics in Developmental Biology</i> , 2001, 52, 1-53.	2.2	573
5	Endonucleolytic processing of covalent protein-linked DNA double-strand breaks. <i>Nature</i> , 2005, 436, 1053-1057.	27.8	536
6	A Hierarchical Combination of Factors Shapes the Genome-wide Topography of Yeast Meiotic Recombination Initiation. <i>Cell</i> , 2011, 144, 719-731.	28.9	520
7	Clarifying the mechanics of DNA strand exchange in meiotic recombination. <i>Nature</i> , 2006, 442, 153-158.	27.8	383
8	Mouse HORMAD1 and HORMAD2, Two Conserved Meiotic Chromosomal Proteins, Are Depleted from Synapsed Chromosome Axes with the Help of TRIP13 AAA-ATPase. <i>PLoS Genetics</i> , 2009, 5, e1000702.	3.5	361
9	Mechanism and Regulation of Meiotic Recombination Initiation. <i>Cold Spring Harbor Perspectives in Biology</i> , 2015, 7, a016634.	5.5	357
10	Crossover Homeostasis in Yeast Meiosis. <i>Cell</i> , 2006, 126, 285-295.	28.9	320
11	Computed structures of core eukaryotic protein complexes. <i>Science</i> , 2021, 374, eabm4805.	12.6	316
12	Where the crossovers are: recombination distributions in mammals. <i>Nature Reviews Genetics</i> , 2004, 5, 413-424.	16.3	295
13	Spo11 and the Formation of DNA Double-Strand Breaks in Meiosis. , 2008, 2, 81-123.		271
14	ATM controls meiotic double-strand-break formation. <i>Nature</i> , 2011, 479, 237-240.	27.8	248
15	The Landscape of Mouse Meiotic Double-Strand Break Formation, Processing, and Repair. <i>Cell</i> , 2016, 167, 695-708.e16.	28.9	240
16	Distinct Properties of the XY Pseudoautosomal Region Crucial for Male Meiosis. <i>Science</i> , 2011, 331, 916-920.	12.6	236
17	Self-Organization of Meiotic Recombination Initiation: General Principles and Molecular Pathways. <i>Annual Review of Genetics</i> , 2014, 48, 187-214.	7.6	220
18	Homeostatic control of recombination is implemented progressively in mouse meiosis. <i>Nature Cell Biology</i> , 2012, 14, 424-430.	10.3	213

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19	Surveillance of Different Recombination Defects in Mouse Spermatocytes Yields Distinct Responses despite Elimination at an Identical Developmental Stage. <i>Molecular and Cellular Biology</i> , 2005, 25, 7203-7215.	2.3	212
20	Genome destabilization by homologous recombination in the germ line. <i>Nature Reviews Molecular Cell Biology</i> , 2010, 11, 182-195.	37.0	211
21	Progression of meiotic DNA replication is modulated by interchromosomal interaction proteins, negatively by Spo11p and positively by Rec8p. <i>Genes and Development</i> , 2000, 14, 493-503.	5.9	209
22	Distinct DNA-damage-dependent and -independent responses drive the loss of oocytes in recombination-defective mouse mutants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 737-742.	7.1	207
23	Meiotic homologue alignment and its quality surveillance are controlled by mouse HORMAD1. <i>Nature Cell Biology</i> , 2011, 13, 599-610.	10.3	207
24	Homologue engagement controls meiotic DNA break number and distribution. <i>Nature</i> , 2014, 510, 241-246.	27.8	186
25	Numerical constraints and feedback control of double-strand breaks in mouse meiosis. <i>Genes and Development</i> , 2013, 27, 873-886.	5.9	174
26	Mouse TRIP13/PCH2 Is Required for Recombination and Normal Higher-Order Chromosome Structure during Meiosis. <i>PLoS Genetics</i> , 2010, 6, e1001062.	3.5	170
27	Antiviral Protein Ski8 Is a Direct Partner of Spo11 in Meiotic DNA Break Formation, Independent of Its Cytoplasmic Role in RNA Metabolism. <i>Molecular Cell</i> , 2004, 13, 549-559.	9.7	158
28	A global view of meiotic double-strand break end resection. <i>Science</i> , 2017, 355, 40-45.	12.6	155
29	Meiotic DNA break formation requires the unsynapsed chromosome axis-binding protein IHO1 (CCDC36) in <i>Amice</i> . <i>Nature Cell Biology</i> , 2016, 18, 1208-1220.	10.3	145
30	Cyclin-Dependent Kinase Directly Regulates Initiation of Meiotic Recombination. <i>Cell</i> , 2006, 125, 1321-1332.	28.9	138
31	Tying synaptonemal complex initiation to the formation and programmed repair of DNA double-strand breaks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 4519-4524.	7.1	133
32	ketu mutant mice uncover an essential meiotic function for the ancient RNA helicase YTHDC2. <i>ELife</i> , 2018, 7, .	6.0	129
33	Interactions between Mei4, Rec114, and other proteins required for meiotic DNA double-strand break formation in <i>Saccharomyces cerevisiae</i> . <i>Chromosoma</i> , 2007, 116, 471-486.	2.2	126
34	Temporospatial Coordination of Meiotic DNA Replication and Recombination via DDK Recruitment to Replisomes. <i>Cell</i> , 2014, 158, 861-873.	28.9	125
35	ATM Promotes the Obligate XY Crossover and both Crossover Control and Chromosome Axis Integrity on Autosomes. <i>PLoS Genetics</i> , 2008, 4, e1000076.	3.5	116
36	Mouse tetrad analysis provides insights into recombination mechanisms and hotspot evolutionary dynamics. <i>Nature Genetics</i> , 2014, 46, 1072-1080.	21.4	110

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37	Nonparadoxical evolutionary stability of the recombination initiation landscape in yeast. <i>Science</i> , 2015, 350, 932-937.	12.6	109
38	The kinetochore prevents centromere-proximal crossover recombination during meiosis. <i>ELife</i> , 2015, 4, .	6.0	108
39	A Mouse Homolog of the <i>Saccharomyces cerevisiae</i> Meiotic Recombination DNA Transesterase Spo11p. <i>Genomics</i> , 1999, 61, 170-182.	2.9	106
40	Comprehensive, Fine-Scale Dissection of Homologous Recombination Outcomes at a Hot Spot in Mouse Meiosis. <i>Molecular Cell</i> , 2010, 39, 700-710.	9.7	100
41	Identification of Residues in Yeast Spo11p Critical for Meiotic DNA Double-Strand Break Formation. <i>Molecular and Cellular Biology</i> , 2002, 22, 1106-1115.	2.3	97
42	Evolutionarily diverse determinants of meiotic DNA break and recombination landscapes across the genome. <i>Genome Research</i> , 2014, 24, 1650-1664.	5.5	92
43	REC114 Partner ANKRD31 Controls Number, Timing, and Location of Meiotic DNA Breaks. <i>Molecular Cell</i> , 2019, 74, 1053-1068.e8.	9.7	89
44	The Configuration of RPA, RAD51, and DMC1 Binding in Meiosis Reveals the Nature of Critical Recombination Intermediates. <i>Molecular Cell</i> , 2020, 79, 689-701.e10.	9.7	87
45	The ATM Signaling Cascade Promotes Recombination-Dependent Pachytene Arrest in Mouse Spermatocytes. <i>PLoS Genetics</i> , 2015, 11, e1005017.	3.5	82
46	Numerical and spatial patterning of yeast meiotic DNA breaks by Tel1. <i>Genome Research</i> , 2017, 27, 278-288.	5.5	78
47	Spatial organization and dynamics of the association of Rec102 and Rec104 with meiotic chromosomes. <i>EMBO Journal</i> , 2004, 23, 1815-1824.	7.8	77
48	Communication between homologous chromosomes: genetic alterations at a nucleosome hypersensitive site can alter mitotic chromatin structure at that site both in <i>cis</i> and in <i>trans</i> . <i>Genes To Cells</i> , 1996, 1, 475-489.	1.2	74
49	Evolutionary conservation of meiotic DSB proteins: more than just Spo11. <i>Genes and Development</i> , 2010, 24, 1201-1207.	5.9	74
50	Ensuring meiotic DNA break formation in the mouse pseudoautosomal region. <i>Nature</i> , 2020, 582, 426-431.	27.8	73
51	DNA-driven condensation assembles the meiotic DNA break machinery. <i>Nature</i> , 2021, 592, 144-149.	27.8	71
52	Synaptonemal complex formation: where does it start?. <i>BioEssays</i> , 2005, 27, 995-998.	2.5	68
53	ATR is a multifunctional regulator of male mouse meiosis. <i>Nature Communications</i> , 2018, 9, 2621.	12.8	66
54	Regulating the formation of DNA double-strand breaks in meiosis. <i>Genes and Development</i> , 2008, 22, 286-292.	5.9	63

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55	The tricky path to recombining X and Y chromosomes in meiosis. <i>Annals of the New York Academy of Sciences</i> , 2012, 1267, 18-23.	3.8	63
56	Functional Interactions Between <i>SPO11</i> and <i>REC102</i> During Initiation of Meiotic Recombination in <i>Saccharomyces cerevisiae</i> . <i>Genetics</i> , 2002, 160, 111-122.	2.9	62
57	Genomic and chromatin features shaping meiotic double-strand break formation and repair in mice. <i>Cell Cycle</i> , 2017, 16, 1870-1884.	2.6	56
58	rahu is a mutant allele of Dnmt3c, encoding a DNA methyltransferase homolog required for meiosis and transposon repression in the mouse male germline. <i>PLoS Genetics</i> , 2017, 13, e1006964.	3.5	56
59	Scale matters. <i>Cell Cycle</i> , 2012, 11, 1496-1503.	2.6	54
60	Mechanisms of germ line genome instability. <i>Seminars in Cell and Developmental Biology</i> , 2016, 54, 177-187.	5.0	53
61	Exploiting Spore-Autonomous Fluorescent Protein Expression to Quantify Meiotic Chromosome Behaviors in <i>Saccharomyces cerevisiae</i> . <i>Genetics</i> , 2011, 189, 423-439.	2.9	52
62	p53 and TAp63 participate in the recombination-dependent pachytene arrest in mouse spermatocytes. <i>PLoS Genetics</i> , 2017, 13, e1006845.	3.5	50
63	Multilayered mechanisms ensure that short chromosomes recombine in meiosis. <i>Nature</i> , 2020, 582, 124-128.	27.8	50
64	Shu complex SWS1-SWSAP1 promotes early steps in mouse meiotic recombination. <i>Nature Communications</i> , 2018, 9, 3961.	12.8	49
65	Gel Electrophoresis Assays for Analyzing DNA Double-Strand Breaks in <i>Saccharomyces cerevisiae</i> at Various Spatial Resolutions. <i>Methods in Molecular Biology</i> , 2009, 557, 117-142.	0.9	49
66	Dynamics of DOT1L localization and H3K79 methylation during meiotic prophase I in mouse spermatocytes. <i>Chromosoma</i> , 2014, 123, 147-164.	2.2	48
67	High-Resolution Global Analysis of the Influences of Bas1 and Ino4 Transcription Factors on Meiotic DNA Break Distributions in <i>Saccharomyces cerevisiae</i> . <i>Genetics</i> , 2015, 201, 525-542.	2.9	47
68	Cyclin B3 promotes anaphase I onset in oocyte meiosis. <i>Journal of Cell Biology</i> , 2019, 218, 1265-1281.	5.2	47
69	Persistent DNA-break potential near telomeres increases initiation of meiotic recombination on short chromosomes. <i>Nature Communications</i> , 2019, 10, 970.	12.8	47
70	Molecular structures and mechanisms of DNA break processing in mouse meiosis. <i>Genes and Development</i> , 2020, 34, 806-818.	5.9	46
71	Preaching about the converted: how meiotic gene conversion influences genomic diversity. <i>Annals of the New York Academy of Sciences</i> , 2012, 1267, 95-102.	3.8	42
72	ATR is required to complete meiotic recombination in mice. <i>Nature Communications</i> , 2018, 9, 2622.	12.8	41

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73	Structural and functional characterization of the Spo11 core complex. <i>Nature Structural and Molecular Biology</i> , 2021, 28, 92-102.	8.2	41
74	Local and sex-specific biases in crossover vs. noncrossover outcomes at meiotic recombination hot spots in mice. <i>Genes and Development</i> , 2015, 29, 1721-1733.	5.9	39
75	Chromosome-autonomous feedback down-regulates meiotic DNA break competence upon synaptonemal complex formation. <i>Genes and Development</i> , 2020, 34, 1605-1618.	5.9	35
76	Histone H3 Threonine 11 Phosphorylation Is Catalyzed Directly by the Meiosis-Specific Kinase Mek1 and Provides a Molecular Readout of Mek1 Activity <i>in Vivo</i> . <i>Genetics</i> , 2017, 207, 1313-1333.	2.9	34
77	Distinct DNA-binding surfaces in the ATPase and linker domains of MutL ³ determine its substrate specificities and exert separable functions in meiotic recombination and mismatch repair. <i>PLoS Genetics</i> , 2017, 13, e1006722.	3.5	34
78	Concerted cutting by Spo11 illuminates meiotic DNA break mechanics. <i>Nature</i> , 2021, 594, 572-576.	27.8	34
79	Mouse BAZ1A (ACF1) Is Dispensable for Double-Strand Break Repair but Is Essential for Averting Improper Gene Expression during Spermatogenesis. <i>PLoS Genetics</i> , 2013, 9, e1003945.	3.5	32
80	Meiotic Recombination Initiation in and around Retrotransposable Elements in <i>Saccharomyces cerevisiae</i> . <i>PLoS Genetics</i> , 2013, 9, e1003732.	3.5	32
81	End-Labeling and Analysis of Spo11-Oligonucleotide Complexes in <i>Saccharomyces cerevisiae</i> . <i>Methods in Molecular Biology</i> , 2009, 557, 183-195.	0.9	29
82	Exo1 recruits Cdc5 polo kinase to MutL ³ to ensure efficient meiotic crossover formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30577-30588.	7.1	28
83	Expression of Arf Tumor Suppressor in Spermatogonia Facilitates Meiotic Progression in Male Germ Cells. <i>PLoS Genetics</i> , 2011, 7, e1002157.	3.5	27
84	Mechanistic Insight into Crossing over during Mouse Meiosis. <i>Molecular Cell</i> , 2020, 78, 1252-1263.e3.	9.7	27
85	Control of meiotic double-strand-break formation by ATM: local and global views. <i>Cell Cycle</i> , 2018, 17, 1155-1172.	2.6	26
86	Meiotic recombination: Making and breaking go hand in hand. <i>Current Biology</i> , 2001, 11, R45-R48.	3.9	25
87	De novo deletions and duplications at recombination hotspots in mouse germlines. <i>Cell</i> , 2021, 184, 5970-5984.e18.	28.9	25
88	YTHDC2 control of gametogenesis requires helicase activity but not m ⁶ A binding. <i>Genes and Development</i> , 2022, 36, 180-194.	5.9	25
89	YTHDC2 is essential for pachytene progression and prevents aberrant microtubule-driven telomere clustering in male meiosis. <i>Cell Reports</i> , 2021, 37, 110110.	6.4	24
90	Meiotic crossover hotspots contained in haplotype block boundaries of the mouse genome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 13396-13401.	7.1	22

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91	S1-seq Assay for Mapping Processed DNA Ends. <i>Methods in Enzymology</i> , 2018, 601, 309-330.	1.0	19
92	Histone methylation sets the stage for meiotic DNA breaks. <i>EMBO Journal</i> , 2009, 28, 81-83.	7.8	18
93	Mice deficient for the type II topoisomerase-like DNA transesterase Spo11 show normal immunoglobulin somatic hypermutation and class switching. <i>European Journal of Immunology</i> , 2002, 32, 316-321.	2.9	16
94	How much is enough? Control of DNA double-strand break numbers in mouse meiosis. <i>Cell Cycle</i> , 2013, 12, 2719-2720.	2.6	16
95	Molecular Cartography: Mapping the Landscape of Meiotic Recombination. <i>PLoS Biology</i> , 2007, 5, e333.	5.6	15
96	Sequencing Spo11 Oligonucleotides for Mapping Meiotic DNA Double-Strand Breaks in Yeast. <i>Methods in Molecular Biology</i> , 2017, 1471, 51-98.	0.9	13
97	Probing Meiotic Recombination Decisions. <i>Developmental Cell</i> , 2008, 15, 331-332.	7.0	11
98	DDK links replication and recombination in meiosis. <i>Cell Cycle</i> , 2014, 13, 3621-3622.	2.6	11
99	Breaking DNA. <i>Science</i> , 2016, 351, 916-917.	12.6	11
100	Cyclin B3 is dispensable for mouse spermatogenesis. <i>Chromosoma</i> , 2019, 128, 473-487.	2.2	10
101	Homologous Recombination During Meiosis. , 2016, , 131-151.		8
102	yama, a mutant allele of Mov10l1, disrupts retrotransposon silencing and piRNA biogenesis. <i>PLoS Genetics</i> , 2021, 17, e1009265.	3.5	8
103	How do small chromosomes know they are small? Maximizing meiotic break formation on the shortest yeast chromosomes. <i>Current Genetics</i> , 2021, 67, 431-437.	1.7	8
104	Triple-helix potential of the mouse genome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2203967119.	7.1	8
105	Detection of SPO11-Oligonucleotide Complexes from Mouse Testes. <i>Methods in Molecular Biology</i> , 2009, 557, 197-207.	0.9	7
106	Meiosis. <i>Methods in Molecular Biology</i> , 2009, 557, v-vi.	0.9	7
107	Meiosis. <i>Methods in Molecular Biology</i> , 2009, 558, v-vi.	0.9	6
108	shani mutation in mouse affects splicing of Spata22 and leads to impaired meiotic recombination. <i>Chromosoma</i> , 2020, 129, 161-179.	2.2	5

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109	Zip it up to shut it down. <i>Cell Cycle</i> , 2014, 13, 2157-2158.	2.6	4
110	Special issue on “recent advances in meiotic chromosome structure, recombination and segregation”, <i>Chromosoma</i> , 2016, 125, 173-175.	2.2	3
111	PCH'ing Together an Understanding of Crossover Control. <i>PLoS Genetics</i> , 2009, 5, e1000576.	3.5	1
112	Editorial: Meiosis: From Molecular Basis to Medicine. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 812292.	3.7	1
113	Meiosis: Disentangling polyploid chromosomes with supercharged crossover interference. <i>Current Biology</i> , 2021, 31, R1442-R1444.	3.9	0