Nancy Kleckner

List of Publications by Year
in descending order

56	6,472	172386 29	155592 55
papers	citations	h-index	g-index

57	57	57	4181
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Meiosis-Specific DNA Double-Strand Breaks Are Catalyzed by Spo11, a Member of a Widely Conserved Protein Family. Cell, 1997, 88, 375-384.	13.5	1,640
2	Recombination, Pairing, and Synapsis of Homologs during Meiosis. Cold Spring Harbor Perspectives in Biology, 2015, 7, a016626.	2.3	658
3	Crossover/Noncrossover Differentiation, Synaptonemal Complex Formation, and Regulatory Surveillance at the Leptotene/Zygotene Transition of Meiosis. Cell, 2004, 117, 29-45.	13.5	638
4	Physical and Functional Interactions among Basic Chromosome Organizational Features Govern Early Steps of Meiotic Chiasma Formation. Cell, 2002, 111, 791-802.	13.5	333
5	A mechanical basis for chromosome function. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 12592-12597.	3.3	284
6	Chiasma formation: chromatin/axis interplay and the role(s) of the synaptonemal complex. Chromosoma, 2006, 115, 175-194.	1.0	277
7	Saccharomyces cerevisiae recA homologues RAD51 and DMC1â€ƒhave both distinct and overlapping roles in meiotic recombination. Genes To Cells, 2003, 2, 615-629.	0.5	183
8	Topoisomerase II mediates meiotic crossover interference. Nature, 2014, 511, 551-556.	13.7	154
9	Recombination Proteins Mediate Meiotic Spatial Chromosome Organization and Pairing. Cell, 2010, 141, 94-106.	13.5	139
10	Coordinate variation in meiotic pachytene SC length and total crossover/chiasma frequency under conditions of constant DNA length. Trends in Genetics, 2003, 19, 623-628.	2.9	128
11	Crossover Patterning by the Beam-Film Model: Analysis and Implications. PLoS Genetics, 2014, 10, e1004042.	1.5	127
12	Inefficient Crossover Maturation Underlies Elevated Aneuploidy in Human Female Meiosis. Cell, 2017, 168, 977-989.e17.	13.5	123
13	Meiotic crossover patterns: Obligatory crossover, interference and homeostasis in a single process. Cell Cycle, 2015, 14, 305-314.	1.3	120
14	A few of our favorite things: Pairing, the bouquet, crossover interference and evolution of meiosis. Seminars in Cell and Developmental Biology, 2016, 54, 135-148.	2.3	117
15	The challenge of evolving stable polyploidy: could an increase in â€œcrossover interference distanceâ€• play a central role?. Chromosoma, 2016, 125, 287-300.	1.0	109
16	Chromosomes Progress to Metaphase in Multiple Discrete Steps via Global Compaction/Expansion Cycles. Cell, 2015, 161, 1124-1137.	13.5	102
17	Î³-H2AX illuminates meiosis. Nature Genetics, 2001, 27, 236-238.	9.4	100
18	The bacterial nucleoid: nature, dynamics and sister segregation. Current Opinion in Microbiology, 2014, 22, 127-137.	2.3	85

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19	E3 ligase Hei10: a multifaceted structure-based signaling molecule with roles within and beyond meiosis. Genes and Development, 2014, 28, 1111-1123.	2.7	78
20	Direct recognition of homology between double helices of DNA in Neurospora crassa. Nature Communications, 2014, 5, 3509.	5.8	76
21	Communication between homologous chromosomes: genetic alterations at a nucleaseâ€hypersensitive site can alter mitotic chromatin structure at that site both in cis and in trans. Genes To Cells, 1996, 1, 475-489.	0.5	74
22	General quantitative relations linking cell growth and the cell cycle in Escherichia coli. Nature Microbiology, 2020, 5, 995-1001.	5.9	68
23	Per-Nucleus Crossover Covariation and Implications for Evolution. Cell, 2019, 177, 326-338.e16.	13.5	64
24	Asy2/Mer2: an evolutionarily conserved mediator of meiotic recombination, pairing, and global chromosome compaction. Genes and Development, 2017, 31, 1880-1893.	2.7	62
25	Coupling meiotic chromosome axis integrity to recombination. Genes and Development, 2008, 22, 796-809.	2.7	60
26	A rigorous measure of genome-wide genetic shuffling that takes into account crossover positions and Mendelâ€™s second law. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1659-1668.	3.3	58
27	Meiotic recombination-related DNA synthesis and its implications for cross-over and non-cross-over recombinant formation. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5965-5970.	3.3	52
28	Meiotic prophase roles of Rec8 in crossover recombination and chromosome structure. Nucleic Acids Research, 2016, 44, gkw682.	6.5	46
29	Protein-Mediated Chromosome Pairing of Repetitive Arrays. Journal of Molecular Biology, 2014, 426, 550-557.	2.0	40
30	Building bridges to move recombination complexes. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12400-12409.	3.3	39
31	Evolution of crossover interference enables stable autopolyploidy by ensuring pairwise partner connections in Arabidopsis arenosa. Current Biology, 2021, 31, 4713-4726.e4.	1.8	37
32	DNA sequence homology induces cytosine-to-thymine mutation by a heterochromatin-related pathway in Neurospora. Nature Genetics, 2017, 49, 887-894.	9.4	34
33	Recombination-independent recognition of DNA homology for repeat-induced point mutation. Current Genetics, 2017, 63, 389-400.	0.8	32
34	Recruitment of Rec8, Pds5 and Rad61/Wapl to meiotic homolog pairing, recombination, axis formation and S-phase. Nucleic Acids Research, 2019, 47, 11691-11708.	6.5	32
35	Quantitative Modeling and Automated Analysis of Meiotic Recombination. Methods in Molecular Biology, 2017, 1471, 305-323.	0.4	30
36	The 3D Topography of Mitotic Chromosomes. Molecular Cell, 2020, 79, 902-916.e6.	4.5	30

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37	Recombination-Independent Recognition of DNA Homology for Repeat-Induced Point Mutation (RIP) Is Modulated by the Underlying Nucleotide Sequence. PLoS Genetics, 2016, 12, e1006015.	1.5	29
38	MEIOK21: a new component of meiotic recombination bridges required for spermatogenesis. Nucleic Acids Research, 2020, 48, 6624-6639.	6.5	27
39	Crossover Interference, Crossover Maturation, and Human Aneuploidy. BioEssays, 2019, 41, e1800221.	1.2	25
40	Single-Particle Studies Reveal a Nanoscale Mechanism for Elastic, Bright, and Repeatable ZnS:Mn Mechanoluminescence in a Low-Pressure Regime. ACS Nano, 2021, 15, 4115-4133.	7.3	25
41	Crossover patterns under meiotic chromosome program. Asian Journal of Andrology, 2021, 23, 562.	0.8	22
42	Interplay between Pds5 and Rec8 in regulating chromosome axis length and crossover frequency. Science Advances, 2021, 7, .	4.7	21
43	ESA1 regulates meiotic chromosome axis and crossover frequency via acetylating histone H4. Nucleic Acids Research, 2021, 49, 9353-9373.	6.5	19
44	RNA-DNA hybrids regulate meiotic recombination. Cell Reports, 2021, 37, 110097.	2.9	11
45	The ubiquitinâ€“proteasome system regulates meiotic chromosome organization. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2106902119.	3.3	11
46	Crossover maturation inefficiency and aneuploidy in human female meiosis. Cell Cycle, 2017, 16, 1017-1019.	1.3	10
47	Meiotic chromosome organization and crossover patterns. Biology of Reproduction, 2022, 107, 275-288.	1.2	7
48	Sister chromatids separate during anaphase in a three-stage program as directed by interaxis bridges. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2123363119.	3.3	7
49	High Temporal Resolution 3D Live-Cell Imaging of Budding Yeast Meiosis Defines Discontinuous Actin/Telomere-Mediated Chromosome Motion, Correlated Nuclear Envelope Deformation and Actin Filament Dynamics. Frontiers in Cell and Developmental Biology, 2021, 9, 687132.	1.8	5
50	Questions and Assays. Genetics, 2016, 204, 1343-1349.	1.2	4
51	Limitations of gamete sequencing for crossover analysis. Nature, 2022, 606, E1-E3.	13.7	4
52	Mesoscale spatial patterning in the <i>Escherichia coli</i> Min system: Reactionâ€“diffusion versus mechanical communication. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 8053-8054.	3.3	3
53	Single molecule identification of homology-dependent interactions between long ssRNA and dsDNA. Nucleic Acids Research, 2017, 45, 894-901.	6.5	1
54	Protect chromosomes from end-to-end fusion during meiotic bouquet. Science China Life Sciences, 2018, 61, 736-738.	2.3	1

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55	Per-nucleus crossover covariation is regulated by chromosome organization. IScience, 2022, 25, 104115.	1.9	1
56	MEIOK21 regulates oocyte quantity and quality via modulating meiotic recombination. FASEB Journal, 2022, 36, e22357.	0.2	1