Jean-Yves Masson

List of Publications by Year
in descending order

131 papers	8,660 citations	50276 46 h-index	49909 87 g-index
138 all docs	138 docs citations	138 times ranked	10916 citing authors

#	Article	IF	Citations
1	Role of BRCA2 in Control of the RAD51 Recombination and DNA Repair Protein. Molecular Cell, 2001, 7, 273-282.	9.7	617
2	PARP1-dependent Kinetics of Recruitment of MRE11 and NBS1 Proteins to Multiple DNA Damage Sites. Journal of Biological Chemistry, 2008, 283, 1197-1208.	3.4	469
3	DNA Double-Strand Break Repair Pathway Choice Is Directed by Distinct MRE11 Nuclease Activities. Molecular Cell, 2014, 53, 7-18.	9.7	466
4	Tumor suppressor and deubiquitinase BAP1 promotes DNA double-strand break repair. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 285-290.	7.1	300
5	RAD51C Is Required for Holliday Junction Processing in Mammalian Cells. Science, 2004, 303, 243-246.	12.6	289
6	Cooperation of breast cancer proteins PALB2 and piccolo BRCA2 in stimulating homologous recombination. Nature Structural and Molecular Biology, 2010, 17, 1247-1254.	8.2	268
7	Direct interaction of FANCD2 with BRCA2 in DNA damage response pathways. Human Molecular Genetics, 2004, 13, 1241-1248.	2.9	190
8	Arginine methylation of MRE11 by PRMT1 is required for DNA damage checkpoint control. Genes and Development, 2005, 19, 671-676.	5.9	181
9	Interplay between human DNA repair proteins at a unique double-strand break in vivo. EMBO Journal, 2006, 25, 222-231.	7.8	172
10	A <scp>RAD</scp> 51 assay feasible in routine tumor samples calls <scp>PARP</scp> inhibitor response beyond <scp>BRCA</scp> mutation. EMBO Molecular Medicine, 2018, 10, .	6.9	169
11	The Hop2 and Mnd1 proteins act in concert with Rad51 and Dmc1 in meiotic recombination. Nature Structural and Molecular Biology, 2005, 12, 449-453.	8.2	163
12	The Rad51 and Dmc1 recombinases: a non-identical twin relationship. Trends in Biochemical Sciences, 2001, 26, 131-136.	7.5	158
13	DYNLL1 binds to MRE11 to limit DNA end resection in BRCA1-deficient cells. Nature, 2018, 563, 522-526.	27.8	156
14	XRCC3 and Rad51 Modulate Replication Fork Progression on Damaged Vertebrate Chromosomes. Molecular Cell, 2003, 11, 1109-1117.	9.7	148
15	Mammalian Protein Arginine Methyltransferase 7 (PRMT7) Specifically Targets RXR Sites in Lysine- and Arginine-rich Regions. Journal of Biological Chemistry, 2013, 288, 37010-37025.	3.4	143
16	Reprogramming cellular events by poly(ADP-ribose)-binding proteins. Molecular Aspects of Medicine, 2013, 34, 1066-1087.	6.4	141
17	PARP activation regulates the RNA-binding protein NONO in the DNA damage response to DNA double-strand breaks. Nucleic Acids Research, 2012, 40, 10287-10301.	14.5	136
18	Coupling of Homologous Recombination and the Checkpoint by ATR. Molecular Cell, 2017, 65, 336-346.	9.7	133

#	Article	IF	Citations
19	The meiosis-specific recombinase hDmc1 forms ring structures and interacts with hRad51. EMBO Journal, 1999, 18, 6552-6560.	7.8	123
20	Poly(ADP-ribose) polymerase-1 antagonizes DNA resection at double-strand breaks. Nature Communications, 2019, 10, 2954.	12.8	122
21	HELB Is a Feedback Inhibitor of DNA End Resection. Molecular Cell, 2016, 61, 405-418.	9.7	119
22	CBX4-mediated SUMO modification regulates BMI1 recruitment at sites of DNA damage. Nucleic Acids Research, 2012, 40, 5497-5510.	14.5	117
23	Arginine methylation of the <scp>DDX</scp> 5 helicase <scp>RGG</scp> / <scp>RG</scp> motif by <scp>PRMT</scp> 5 regulates resolution of RNA:DNA hybrids. EMBO Journal, 2019, 38, e100986.	7.8	117
24	The RNF138 E3 ligase displaces Ku to promote DNA end resection and regulate DNA repair pathway choice. Nature Cell Biology, 2015, 17, 1446-1457.	10.3	113
25	Emerging roles of eraser enzymes in the dynamic control of protein ADP-ribosylation. Nature Communications, 2019, 10, 1182.	12.8	113
26	<scp>SHLD</scp> 2/ <scp>FAM</scp> 35A coâ€operates with <scp>REV</scp> 7 to coordinate <scp>DNA</scp> doubleâ€strand break repair pathway choice. EMBO Journal, 2018, 37, .	7.8	111
27	A slipped-CAG DNA-binding small molecule induces trinucleotide-repeat contractions in vivo. Nature Genetics, 2020, 52, 146-159.	21.4	110
28	Reconstitution of the strand invasion step of double-strand break repair using human Rad51 Rad52 and RPA proteins. Journal of Molecular Biology, 2000, 304, 151-164.	4.2	104
29	RECQ-like helicases Sgs1 and BLM regulate R-loopâ€“associated genome instability. Journal of Cell Biology, 2017, 216, 3991-4005.	5.2	90
30	Role of Mammalian RAD51L2 (RAD51C) in Recombination and Genetic Stability. Journal of Biological Chemistry, 2002, 277, 19322-19330.	3.4	88
31	DNA Damage Signalling and Repair Inhibitors: The Long-Sought-After Achillesâ€™ Heel of Cancer. Biomolecules, 2015, 5, 3204-3259.	4.0	85
32	The Tumor Suppressor PALB2: Inside Out. Trends in Biochemical Sciences, 2019, 44, 226-240.	7.5	83
33	DNA Repair Pathways in Trypanosomatids: from DNA Repair to Drug Resistance. Microbiology and Molecular Biology Reviews, 2014, 78, 40-73.	6.6	79
34	A Glycine-Arginine Domain in Control of the Human MRE11 DNA Repair Protein. Molecular and Cellular Biology, 2008, 28, 3058-3069.	2.3	76
35	Breast Cancer Proteins PALB2 and BRCA2 Stimulate Polymerase Î· in Recombination-Associated DNA Synthesis at Blocked Replication Forks. Cell Reports, 2014, 6, 553-564.	6.4	72
36	Methylation of MRE11 Regulates its Nuclear Compartmentalization. Cell Cycle, 2005, 4, 981-989.	2.6	70

#	Article	IF	Citations
37	The Transcriptional Histone Acetyltransferase Cofactor TRRAP Associates with the MRN Repair Complex and Plays a Role in DNA Double-Strand Break Repair. Molecular and Cellular Biology, 2006, 26, 402-412.	2.3	68
38	The MRE11 GAR motif regulates DNA double-strand break processing and ATR activation. Cell Research, 2012, 22, 305-320.	12.0	68
39	Functional and Structural Basis for a Bacteriophage Homolog of Human RAD52. Current Biology, 2008, 18, 1142-1146.	3.9	66
40	A PALB2-interacting domain in RNF168 couples homologous recombination to DNA break-induced chromatin ubiquitylation. ELife, 2017, 6, .	6.0	65
41	Personalized Risk Assessment for Prevention and Early Detection of Breast Cancer: Integration and Implementation (PERSPECTIVE I&I). Journal of Personalized Medicine, 2021, 11, 511.	2.5	59
42	MRE11â€“RAD50â€“NBS1 is a critical regulator of FANCD2 stability and function during DNA double-strand break repair. EMBO Journal, 2009, 28, 2400-2413.	7.8	56
43	The microRNA pathway controls germ cell proliferation and differentiation in C. elegans. Cell Research, 2012, 22, 1034-1045.	12.0	56
44	MRE11-RAD50-NBS1 promotes Fanconi Anemia R-loop suppression at transcriptionâ€“replication conflicts. Nature Communications, 2019, 10, 4265.	12.8	55
45	A Yeast Homologue of the Human Phosphotyrosyl Phosphatase Activator PTPA Is Implicated in Protection against Oxidative DNA Damage Induced by the Model Carcinogen 4-Nitroquinoline 1-Oxide. Journal of Biological Chemistry, 1998, 273, 21489-21496.	3.4	54
46	Conformational Changes Modulate the Activity of Human RAD51 Protein. Journal of Molecular Biology, 2004, 337, 817-827.	4.2	53
47	Primary sequence of the chitosanase from Streptomyces sp. strain N174 and comparison with other endoglycosidases. Gene, 1994, 140, 103-107.	2.2	51
48	Fanconi Anemia Group J Helicase and MRE11 Nuclease Interact To Facilitate the DNA Damage Response. Molecular and Cellular Biology, 2013, 33, 2212-2227.	2.3	51
49	ChAM, a novel motif that mediates PALB2 intrinsic chromatin binding and facilitates DNA repair. EMBO Reports, 2012, 13, 135-141.	4.5	49
50	The Werner syndrome protein affects the expression of genes involved in adipogenesis and inflammation in addition to cell cycle and DNA damage responses. Cell Cycle, 2009, 8, 2080-2092.	2.6	48
51	PALB2 self-interaction controls homologous recombination. Nucleic Acids Research, 2012, 40, 10312-10323.	14.5	48
52	The RAD51 paralogs ensure cellular protection against mitotic defects and aneuploidy. Journal of Cell Science, 2013, 126, 348-359.	2.0	47
53	Roles for APRIN (PDS5B) in homologous recombination and in ovarian cancer prediction. Nucleic Acids Research, 2016, 44, 10879-10897.	14.5	47
54	Irinotecan and DNA-PKcs inhibitors synergize in killing of colon cancer cells. Investigational New Drugs, 2012, 30, 1248-1256.	2.6	45

#	Article	IF	Citations
55	Replication Protein A Availability during DNA Replication Stress Is a Major Determinant of Cisplatin Resistance in Ovarian Cancer Cells. Cancer Research, 2018, 78, 5561-5573.	0.9	45
56	Functional analysis of genetic variants in the high-risk breast cancer susceptibility gene PALB2. Nature Communications, 2019, 10, 5296.	12.8	45
57	Fission Yeast Rad51 and Dmc1, Two Efficient DNA Recombinases Forming Helical Nucleoprotein Filaments. Molecular and Cellular Biology, 2005, 25, 4377-4387.	2.3	44
58	DDX5 resolves R-loops at DNA double-strand breaks to promote DNA repair and avoid chromosomal deletions. NAR Cancer, 2020, 2, zcaa028.	3.1	44
59	Genome-wide R-loop analysis defines unique roles for DDX5, XRN2, and PRMT5 in DNA/RNA hybrid resolution. Life Science Alliance, 2020, 3, e202000762.	2.8	43
60	Stimulation of fission yeast and mouse Hop2-Mnd1 of the Dmc1 and Rad51 recombinases. Nucleic Acids Research, 2007, 35, 2719-2733.	14.5	42
61	Functional characterization of 84 PALB2 variants of uncertain significance. Genetics in Medicine, 2020, 22, 622-632.	2.4	40
62	Proteome-wide Identification of WRN-Interacting Proteins in Untreated and Nuclease-Treated Samples. Journal of Proteome Research, 2011, 10, 1216-1227.	3.7	39
63	A global functional analysis of missense mutations reveals two major hotspots in the PALB2 tumor suppressor. Nucleic Acids Research, 2019, 47, 10662-10677.	14.5	39
64	Detection of the HIV-1 Minus-Strand-Encoded Antisense Protein and Its Association with Autophagy. Journal of Virology, 2013, 87, 5089-5105.	3.4	38
65	Perturbing cohesin dynamics drives MRE11 nuclease-dependent replication fork slowing. Nucleic Acids Research, 2019, 47, 1294-1310.	14.5	38
66	A Fanci knockout mouse model reveals common and distinct functions for FANCI and FANCD2. Nucleic Acids Research, 2019, 47, 7532-7547.	14.5	36
67	BRN2 suppresses apoptosis, reprograms DNA damage repair, and is associated with a high somatic mutation burden in melanoma. Genes and Development, 2019, 33, 310-332.	5.9	35
68	FAN1, a DNA Repair Nuclease, as a Modifier of Repeat Expansion Disorders. Journal of Huntington's Disease, 2021, 10, 95-122.	1.9	34
69	Exploring the roles of PALB2 at the crossroads of DNA repair and cancer. Biochemical Journal, 2014, 460, 331-342.	3.7	33
70	Variants of uncertain clinical significance in hereditary breast and ovarian cancer genes: best practices in functional analysis for clinical annotation. Journal of Medical Genetics, 2020, 57, 509-518.	3.2	33
71	Interactions between BRCA2 and RAD51 for promoting homologous recombination in Leishmania infantum. Nucleic Acids Research, 2012, 40, 6570-6584.	14.5	32
72	Recovery of deficient homologous recombination in Brca2-depleted mouse cells by wild-type Rad51 expression. DNA Repair, 2009, 8, 170-181.	2.8	31

#	Article	IF	Citations
73	PRMT7 methylates eukaryotic translation initiation factor 2Î± and regulates its role in stress granule formation. Molecular Biology of the Cell, 2019, 30, 778-793.	2.1	31
74	Normal processing of AP sites in Apn1â€deficient Saccharomyces cerevisiae is restored by Escherichia coli genes expressing either exonuclease III or endonuclease III. Molecular Microbiology, 1997, 24, 711-721.	2.5	30
75	Cancer-causing mutations in the tumor suppressor PALB2 reveal a novel cancer mechanism using a hidden nuclear export signal in the WD40 repeat motif. Nucleic Acids Research, 2017, 45, 2644-2657.	14.5	30
76	The Canadian Rare Diseases Models and Mechanisms (RDMM) Network: Connecting Understudied Genes to Model Organisms. American Journal of Human Genetics, 2020, 106, 143-152.	6.2	30
77	Starvation-induced proteasome assemblies in the nucleus link amino acid supply to apoptosis. Nature Communications, 2021, 12, 6984.	12.8	29
78	Chromosomal Translocations in the Parasite Leishmania by a MRE11/RAD50-Independent Microhomology-Mediated End Joining Mechanism. PLoS Genetics, 2016, 12, e1006117.	3.5	28
79	Synergistic effects of type I PRMT and PARP inhibitors against non-small cell lung cancer cells. Clinical Epigenetics, 2021, 13, 54.	4.1	28
80	The Caenorhabditis elegans gene CeAPN1 encodes a homolog of Escherichia coli and yeast apurinic/apyrimidinic endonuclease. Gene, 1996, 179, 291-293.	2.2	27
81	Limiting the DNA Double-Strand Break Resectosome for Genome Protection. Trends in Biochemical Sciences, 2020, 45, 779-793.	7.5	27
82	Phospho-dependent recruitment of the yeast NuA4 acetyltransferase complex by MRX at DNA breaks regulates RPA dynamics during resection. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10028-10033.	7.1	25
83	Cumulative defects in DNA repair pathways drive the PARP inhibitor response in high-grade serous epithelial ovarian cancer cell lines. Oncotarget, 2017, 8, 40152-40168.	1.8	25
84	Twists and turns in the function of DNA damage signaling and repair proteins by post-translational modifications. DNA Repair, 2007, 6, 561-577.	2.8	24
85	Lactococcal phage p2 ORF35â€Sak3 is an ATPase involved in DNA recombination and AbiK mechanism. Molecular Microbiology, 2011, 80, 102-116.	2.5	23
86	Formation of Linear Amplicons with Inverted Duplications in Leishmania Requires the MRE11 Nuclease. PLoS Genetics, 2014, 10, e1004805.	3.5	23
87	Roles of Rad51 paralogs for promoting homologous recombination in Leishmania infantum. Nucleic Acids Research, 2015, 43, 2701-2715.	14.5	23
88	Special AT-rich Sequence-binding Protein 1 (SATB1) Functions as an Accessory Factor in Base Excision Repair. Journal of Biological Chemistry, 2016, 291, 22769-22780.	3.4	22
89	The Effect of a DNA Repair Gene on Cellular Invasiveness: Xrcc3 Over-Expression in Breast Cancer Cells. PLoS ONE, 2011, 6, e16394.	2.5	20
90	The identification of FANCD2 DNA binding domains reveals nuclear localization sequences. Nucleic Acids Research, 2017, 45, 8341-8357.	14.5	20

#	Article	IF	Citations
91	Targeting Allostery with Avatars to Design Inhibitors Assessed by Cell Activity: Dissecting MRE11 Endo- and Exonuclease Activities. Methods in Enzymology, 2018, 601, 205-241.	1.0	20
92	CSB interacts with BRCA1 in late S/G2 to promote MRN- and CtIP-mediated DNA end resection. Nucleic Acids Research, 2019, 47, 10678-10692.	14.5	20
93	E4F1 Is a Master Regulator of CHK1-Mediated Functions. Cell Reports, 2015, 11, 210-219.	6.4	19
94	CRB3A Controls the Morphology and Cohesion of Cancer Cells through Ehm2/p114RhoGEF-Dependent Signaling. Molecular and Cellular Biology, 2015, 35, 3423-3435.	2.3	19
95	SAM68 interaction with U1A modulates U1 snRNP recruitment and regulates mTor pre-mRNA splicing. Nucleic Acids Research, 2019, 47, 4181-4197.	14.5	19
96	FAN1 exo- not endo-nuclease pausing on disease-associated slipped-DNA repeats: A mechanism of repeat instability. Cell Reports, 2021, 37, 110078.	6.4	19
97	Synthesis, Biological Evaluation, and Structureâ€“Activity Relationships of Novel Substituted N-Phenyl Ureidobenzenesulfonate Derivatives Blocking Cell Cycle Progression in S-Phase and Inducing DNA Double-Strand Breaks. Journal of Medicinal Chemistry, 2012, 55, 6194-6208.	6.4	18
98	Novel RNA and DNA strand exchange activity of the PALB2 DNA binding domain and its critical role for DNA repair in cells. ELife, 2019, 8, .	6.0	18
99	A Key Role for Poly(ADP-Ribose) Polymerase 3 in Ectodermal Specification and Neural Crest Development. PLoS ONE, 2011, 6, e15834.	2.5	17
100	ASaccharomyces cerevisiaephleomycin-sensitive mutant, phl40, is defective in theRAD6DNA repair gene. Canadian Journal of Microbiology, 1996, 42, 1263-1266.	1.7	16
101	Structure and function of phage p2 ORF34_{p2}, a new type of singleâ€stranded DNA binding protein. Molecular Microbiology, 2009, 73, 1156-1170.	2.5	15
102	Development of a 3D functional assay and identification of biomarkers, predictive for response of high-grade serous ovarian cancer (HGSOC) patients to poly-ADP ribose polymerase inhibitors (PARPis): targeted therapy. Journal of Translational Medicine, 2020, 18, 439.	4.4	15
103	The Transcriptional Activator Imp2p Maintains Ion Homeostasis in Saccharomyces cerevisiae. Genetics, 1998, 149, 893-901.	2.9	15
104	Functional mitochondria are essential for Saccharomyces cerevisiae cellular resistance to bleomycin. Current Genetics, 1996, 30, 279-283.	1.7	14
105	CRISPR/Cas9 Gene Editing: From Basic Mechanisms to Improved Strategies for Enhanced Genome Engineering In Vivo. Current Gene Therapy, 2018, 17, 263-274.	2.0	14
106	A Saccharomyces cerevisiae mutant defines a new locus essential for resistance to the antitumour drug bleomycin. Canadian Journal of Microbiology, 1996, 42, 835-843.	1.7	13
107	PALB2 Variants: Protein Domains and Cancer Susceptibility. Trends in Cancer, 2021, 7, 188-197.	7.4	13
108	SUMOylation mediates CtIPâ€™s functions in DNA end resection and replication fork protection. Nucleic Acids Research, 2021, 49, 928-953.	14.5	13

#	Article	IF	Citations
109	A functionally impaired missense variant identified in French Canadian families implicates FANCI as a candidate ovarian cancer-predisposing gene. Genome Medicine, 2021, 13, 186.	8.2	12
110	ZNF768 links oncogenic RAS to cellular senescence. Nature Communications, 2021, 12, 4841.	12.8	11
111	Saccharomyces cerevisiae DNA repair processes: an update. Molecular and Cellular Biochemistry, 1979, 158, 65-75.	3.1	10
112	Animal models of Fanconi anemia: A developmental and therapeutic perspective on a multifaceted disease. Seminars in Cell and Developmental Biology, 2021, 113, 113-131.	5.0	10
113	Lysine methylation of FEN1 by SET7 is essential for its cellular response to replicative stress. Oncotarget, 2017, 8, 64918-64931.	1.8	10
114	XAB2 promotes Ku eviction from single-ended DNA double-strand breaks independently of the ATM kinase. Nucleic Acids Research, 2021, 49, 9906-9925.	14.5	8
115	Synthesis and biological evaluation of novel N-phenyl ureidobenzenesulfonate derivatives as potential anticancer agents. Part 2. Modulation of the ring B. European Journal of Medicinal Chemistry, 2015, 103, 563-573.	5.5	7
116	Exploring the multiple facets of the meiotic recombinase Dmc1. BioEssays, 2004, 26, 1151-1155.	2.5	6
117	ABRAXAS (FAM175A) and Breast Cancer Susceptibility: No Evidence of Association in the Breast Cancer Family Registry. PLoS ONE, 2016, 11, e0156820.	2.5	5
118	Molecular Determinant of DIDS Analogs Targeting RAD51 Activity. Molecules, 2021, 26, 5460.	3.8	5
119	A DNA repair-independent role for alkyladenine DNA glycosylase in alkylation-induced unfolded protein response. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	5
120	Cockayne syndrome group B protein regulates fork restart, fork progressionÂand MRE11-dependent fork degradation in BRCA1/2-deficient cells. Nucleic Acids Research, 2021, 49, 12836-12854.	14.5	5
121	The Schizosaccharomyces pombe spqM gene is a new member of the Qm transcription factor family. Gene, 1996, 170, 153-154.	2.2	4
122	Addressing the dark matter of gene therapy: technical and ethical barriers to clinical application. Human Genetics, 2021, , 1.	3.8	4
123	The Genetic and Molecular Analyses of RAD51C and RAD51D Identifies Rare Variants Implicated in Hereditary Ovarian Cancer from a Genetically Unique Population. Cancers, 2022, 14, 2251.	3.7	4
124	Interactions of the Rad51 inhibitor DIDS with human and bovine serum albumins: Optical spectroscopy and isothermal calorimetry approaches. Biochimie, 2019, 167, 187-197.	2.6	3
125	Missense PALB2 germline variant disrupts nuclear localization of PALB2 in a patient with breast cancer. Familial Cancer, 2020, 19, 123-131.	1.9	3
126	Different non-synonymous polymorphisms modulate the interaction of the WRN protein to its protein partners and its enzymatic activities. Oncotarget, 2016, 7, 85680-85696.	1.8	3

#	Article	IF	Citations
127	Assessment of Global DNA Double-Strand End Resection using BrdU-DNA Labeling coupled with Cell Cycle Discrimination Imaging. Journal of Visualized Experiments, 2021, , .	0.3	2
128	FANCD2: A DNA binding protein regulated by MRE11-RAD50-NBS1. Cell Cycle, 2010, 9, 209-210.	2.6	1
129	Partners apart: Smc6-independent DNA binding activity of Smc5 on single-strand DNA. Cell Cycle, 2011, 10, 1025-1030.	2.6	1
130	Common Variant in ALDH2 Modifies the Risk of Breast Cancer Among Carriers of the p.K3326* Variant in BRCA2. JCO Precision Oncology, 2022, 6, e2100450.	3.0	1
131	Functions of the CSB Protein at Topoisomerase 2 Inhibitors-Induced DNA Lesions. Frontiers in Cell and Developmental Biology, 2021, 9, 727836.	3.7	0