Vera Gorbunova

List of Publications by Year
in descending order

141 papers	13,238 citations	25014 57 h-index	27389 106 g-index
159 all docs	159 docs citations	159 times ranked	16624 citing authors

#	Article	IF	Citations
1	Ten things you should know about transposable elements. Genome Biology, 2018, 19, 199.	3.8	817
2	SIRT6 Promotes DNA Repair Under Stress by Activating PARP1. Science, 2011, 332, 1443-1446.	6.0	717
3	L1 drives IFN in senescent cells and promotes age-associated inflammation. Nature, 2019, 566, 73-78.	13.7	701
4	High-molecular-mass hyaluronan mediates the cancer resistance of the naked mole rat. Nature, 2013, 499, 346-349.	13.7	612
5	DNA repair by nonhomologous end joining and homologous recombination during cell cycle in human cells. Cell Cycle, 2008, 7, 2902-2906.	1.3	515
6	Comparison of nonhomologous end joining and homologous recombination in human cells. DNA Repair, 2008, 7, 1765-1771.	1.3	500
7	SIRT6 represses LINE1 retrotransposons by ribosylating KAP1 but this repression fails with stress and age. Nature Communications, 2014, 5, 5011.	5.8	319
8	Changes in DNA repair during aging. Nucleic Acids Research, 2007, 35, 7466-7474.	6.5	306
9	Hypersensitivity to contact inhibition provides a clue to cancer resistance of naked mole-rat. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 19352-19357.	3.3	305
10	LINE1 Derepression in Aged Wild-Type and SIRT6-Deficient Mice Drives Inflammation. Cell Metabolism, 2019, 29, 871-885.e5.	7.2	299
11	How plants make ends meet: DNA double-strand break repair. Trends in Plant Science, 1999, 4, 263-269.	4.3	242
12	Establishing Primary Adult Fibroblast Cultures From Rodents. Journal of Visualized Experiments, 2010, , .	0.2	241
13	DNA end joining becomes less efficient and more error-prone during cellular senescence. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 7624-7629.	3.3	240
14	SIRT6 Is Responsible for More Efficient DNA Double-Strand Break Repair in Long-Lived Species. Cell, 2019, 177, 622-638.e22.	13.5	225
15	ATRX loss promotes tumor growth and impairs nonhomologous end joining DNA repair in glioma. Science Translational Medicine, 2016, 8, 328ra28.	5.8	212
16	Expression of Human Telomerase (hTERT) Does Not Prevent Stress-induced Senescence in Normal Human Fibroblasts but Protects the Cells from Stress-induced Apoptosis and Necrosis. Journal of Biological Chemistry, 2002, 277, 38540-38549.	1.6	210
17	Mechanisms of cancer resistance in long-lived mammals. Nature Reviews Cancer, 2018, 18, 433-441.	12.8	195
18	Telomerase activity coevolves with body mass not lifespan. Aging Cell, 2007, 6, 45-52.	3.0	187

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19	Comparative genetics of longevity and cancer: insights from long-lived rodents. Nature Reviews Genetics, 2014, 15, 531-540.	7.7	169
20	IDH1-R132H acts as a tumor suppressor in glioma via epigenetic up-regulation of the DNA damage response. Science Translational Medicine, 2019, 11, .	5.8	169
21	Sirtuin 6 (SIRT6) rescues the decline of homologous recombination repair during replicative senescence. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11800-11805.	3.3	162
22	The role of retrotransposable elements in ageing and age-associated diseases. Nature, 2021, 596, 43-53.	13.7	156
23	Ubiquitin Modification by the E3 Ligase/ADP-Ribosyltransferase Dtx3L/Parp9. Molecular Cell, 2017, 66, 503-516.e5.	4.5	154
24	Change of the Death Pathway in Senescent Human Fibroblasts in Response to DNA Damage Is Caused by an Inability To Stabilize p53. Molecular and Cellular Biology, 2001, 21, 1552-1564.	1.1	141
25	A conserved NAD ⁺ binding pocket that regulates protein-protein interactions during aging. Science, 2017, 355, 1312-1317.	6.0	140
26	DNA repair in species with extreme lifespan differences. Aging, 2015, 7, 1171-1182.	1.4	132
27	Naked mole-rat has increased translational fidelity compared with the mouse, as well as a unique 28S ribosomal RNA cleavage. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 17350-17355.	3.3	131
28	SIRT6 overexpression induces massive apoptosis in cancer cells but not in normal cells. Cell Cycle, 2011, 10, 3153-3158.	1.3	130
29	Cancer resistance in the blind mole rat is mediated by concerted necrotic cell death mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19392-19396.	3.3	128
30	Genome-wide adaptive complexes to underground stresses in blind mole rats Spalax. Nature Communications, 2014, 5, 3966.	5.8	124
31	SQSTM1/p62 mediates crosstalk between autophagy and the UPS in DNA repair. Autophagy, 2016, 12, 1917-1930.	4.3	120
32	Rodents for comparative aging studies: from mice to beavers. Age, 2008, 30, 111-119.	3.0	108
33	JNK Phosphorylates SIRT6 to Stimulate DNA Double-Strand Break Repair in Response to Oxidative Stress by Recruiting PARP1 to DNA Breaks. Cell Reports, 2016, 16, 2641-2650.	2.9	104
34	Distinct tumor suppressor mechanisms evolve in rodent species that differ in size and lifespan. Aging Cell, 2008, 7, 813-823.	3.0	103
35	SIRT1 as a therapeutic target in inflammaging of the pulmonary disease. Preventive Medicine, 2012, 54, S20-S28.	1.6	101
36	SIRT6 rescues the age related decline in base excision repair in a PARP1-dependent manner. Cell Cycle, 2015, 14, 269-276.	1.3	96

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37	TRF2 is required for repair of nontelomeric DNA double-strand breaks by homologous recombination. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13068-13073.	3.3	95
38	Coevolution of telomerase activity and body mass in mammals: From mice to beavers. Mechanisms of Ageing and Development, 2009, 130, 3-9.	2.2	95
39	Knock-In Reporter Mice Demonstrate that DNA Repair by Non-homologous End Joining Declines with Age. PLoS Genetics, 2014, 10, e1004511.	1.5	95
40	Replicatively senescent cells are arrested in G1 and G2 phases. Aging, 2012, 4, 431-435.	1.4	94
41	<i>INK4</i> locus of the tumor-resistant rodent, the naked mole rat, expresses a functional p15/p16 hybrid isoform. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1053-1058.	3.3	92
42	Cell Divisions Are Required for L1 Retrotransposition. Molecular and Cellular Biology, 2007, 27, 1264-1270.	1.1	91
43	DNA Repair by Homologous Recombination, But Not by Nonhomologous End Joining, Is Elevated in Breast Cancer Cells. Neoplasia, 2009, 11, 683-IN3.	2.3	90
44	The World Goes Bats: Living Longer and Tolerating Viruses. Cell Metabolism, 2020, 32, 31-43.	7.2	89
45	Analysis of DNA Double-strand Break (DSB) Repair in Mammalian Cells. Journal of Visualized Experiments, 2010, , .	0.2	88
46	Genome-wide demethylation destabilizes CTGÂ·CAG trinucleotide repeats in mammalian cells. Human Molecular Genetics, 2004, 13, 2979-2989.	1.4	81
47	Molecular Mechanisms Determining Lifespan in Short- and Long-Lived Species. Trends in Endocrinology and Metabolism, 2017, 28, 722-734.	3.1	81
48	Use of the Rad51 promoter for targeted anti-cancer therapy. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20810-20815.	3.3	79
49	DNA double strand break repair, aging and the chromatin connection. Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis, 2016, 788, 2-6.	0.4	73
50	The Naked Mole Rat Genome Resource: facilitating analyses of cancer and longevity-related adaptations. Bioinformatics, 2014, 30, 3558-3560.	1.8	71
51	Naked Mole Rat Cells Have a Stable Epigenome that Resists iPSCÂReprogramming. Stem Cell Reports, 2017, 9, 1721-1734.	2.3	71
52	Making ends meet in old age: DSB repair and aging. Mechanisms of Ageing and Development, 2005, 126, 621-628.	2.2	70
53	Cell culture-based profiling across mammals reveals DNA repair and metabolism as determinants of species longevity. ELife, 2016, 5, .	2.8	69
54	Naked mole rats can undergo developmental, oncogene-induced and DNA damage-induced cellular senescence. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1801-1806.	3.3	67

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55	Lack of consensus on an aging biology paradigm? A global survey reveals an agreement to disagree, and the need for an interdisciplinary framework. Mechanisms of Ageing and Development, 2020, 191, 111316.	2.2	67
56	Naked mole-rat very-high-molecular-mass hyaluronan exhibits superior cytoprotective properties. Nature Communications, 2020, 11, 2376.	5.8	67
57	Evolution of telomere maintenance and tumour suppressor mechanisms across mammals. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20160443.	1.8	64
58	The conundrum of human immune system â€œsenescenceâ€. Mechanisms of Ageing and Development, 2020, 192, 111357.	2.2	64
59	Gene expression and mutation-guided synthetic lethality eradicates proliferating and quiescent leukemia cells. Journal of Clinical Investigation, 2017, 127, 2392-2406.	3.9	64
60	SIRT6 promotes transcription of a subset of NRF2 targets by mono-ADP-ribosylating BAF170. Nucleic Acids Research, 2019, 47, 7914-7928.	6.5	62
61	The naked truth: a comprehensive clarification and classification of current â€˜mythsâ€™ in naked moleâ€rat biology. Biological Reviews, 2022, 97, 115-140.	4.7	62
62	Changes in the level and distribution of Ku proteins during cellular senescence. DNA Repair, 2007, 6, 1740-1748.	1.3	60
63	Lipidome determinants of maximal lifespan in mammals. Scientific Reports, 2017, 7, 5.	1.6	60
64	Comparative analysis of genome maintenance genes in naked mole rat, mouse, and human. Aging Cell, 2015, 14, 288-291.	3.0	58
65	Repairing split ends: SIRT6, mono-ADP ribosylation and DNA repair. Aging, 2011, 3, 829-835.	1.4	57
66	Organization of the Mammalian Ionome According to Organ Origin, Lineage Specialization, and Longevity. Cell Reports, 2015, 13, 1319-1326.	2.9	56
67	DNA damage and repair in age-related inflammation. Nature Reviews Immunology, 2023, 23, 75-89.	10.6	56
68	Sleeping dogs of the genome. Science, 2014, 346, 1187-1188.	6.0	54
69	Translation fidelity coevolves with longevity. Aging Cell, 2017, 16, 988-993.	3.0	53
70	Radiosensitization by Histone H3 Demethylase Inhibition in Diffuse Intrinsic Pontine Glioma. Clinical Cancer Research, 2019, 25, 5572-5583.	3.2	52
71	Compromised<scp>DNA</scp>repair is responsible for diabetesâ€associated fibrosis. EMBO Journal, 2020, 39, e103477.	3.5	49
72	Evidence That High Telomerase Activity May Induce a Senescent-like Growth Arrest in Human Fibroblasts. Journal of Biological Chemistry, 2003, 278, 7692-7698.	1.6	48

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73	DNA methylation clocks tick in naked mole rats but queens age more slowly than nonbreeders. Nature Aging, 2022, 2, 46-59.	5.3	47
74	OUP accepted manuscript. Nucleic Acids Research, 2019, 47, 8563-8580.	6.5	46
75	Sirtuin 6: linking longevity with genome and epigenome stability. Trends in Cell Biology, 2021, 31, 994-1006.	3.6	45
76	Transposon-triggered innate immune response confers cancer resistance to the blind mole rat. Nature Immunology, 2021, 22, 1219-1230.	7.0	45
77	Interspecies Differences in Proteome Turnover Kinetics Are Correlated With Life Spans and Energetic Demands. Molecular and Cellular Proteomics, 2021, 20, 100041.	2.5	44
78	Circularized <i>Ac/Ds</i> Transposons: Formation, Structure and Fate. Genetics, 1997, 145, 1161-1169.	1.2	43
79	Telomerase as a Growth-Promoting Factor. Cell Cycle, 2003, 2, 534-537.	1.3	40
80	Selectable System for Monitoring the Instability of CTG/CAG Triplet Repeats in Mammalian Cells. Molecular and Cellular Biology, 2003, 23, 4485-4493.	1.1	40
81	Cross-species Comparison of Proteome Turnover Kinetics. Molecular and Cellular Proteomics, 2018, 17, 580-591.	2.5	40
82	Naked mole rat cells display more efficient excision repair than mouse cells. Aging, 2018, 10, 1454-1473.	1.4	38
83	P21-PARP-1 Pathway Is Involved in Cigarette Smoke-Induced Lung DNA Damage and Cellular Senescence. PLoS ONE, 2013, 8, e80007.	1.1	36
84	Haploinsufficiency of Trp53 dramatically extends the lifespan of Sirt6-deficient mice. ELife, 2018, 7, .	2.8	36
85	Nonâ€canonical aging model systems and why we need them. EMBO Journal, 2017, 36, 959-963.	3.5	34
86	Rad51 Promoter-Targeted Gene Therapy Is Effective for In Vivo Visualization and Treatment of Cancer. Molecular Therapy, 2012, 20, 347-355.	3.7	33
87	Comparative transcriptomics reveals circadian and pluripotency networks as two pillars of longevity regulation. Cell Metabolism, 2022, 34, 836-856.e5.	7.2	33
88	A new hyperrecombinogenic mutant of Nicotiana tabacum. Plant Journal, 2000, 24, 601-611.	2.8	32
89	Genetics of extreme human longevity to guide drug discovery for healthy ageing. Nature Metabolism, 2020, 2, 663-672.	5.1	32
90	Analysis of Extrachromosomal Ac/Ds Transposable Elements. Genetics, 2000, 155, 349-359.	1.2	32

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91	ARDD 2020: from aging mechanisms to interventions. Aging, 2020, 12, 24484-24503.	1.4	32
92	Excess growth hormone suppresses DNA damage repair in epithelial cells. JCI Insight, 2019, 4, .	2.3	30
93	SIRT6 mono-ADP ribosylates KDM2A to locally increase H3K36me2 at DNA damage sites to inhibit transcription and promote repair. Aging, 2020, 12, 11165-11184.	1.4	29
94	Maintenance of genome sequence integrity in long- and short-lived rodent species. Science Advances, 2021, 7, eabj3284.	4.7	29
95	Sirt6 regulates lifespan in <i>Drosophila melanogaster</i>. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	29
96	Pericellular Brush and Mechanics of Guinea Pig Fibroblast Cells Studied with AFM. Biophysical Journal, 2016, 111, 236-246.	0.2	26
97	Beaver and Naked Mole Rat Genomes Reveal Common Paths to Longevity. Cell Reports, 2020, 32, 107949.	2.9	26
98	Epigenetic aging of the demographically non-aging naked mole-rat. Nature Communications, 2022, 13, 355.	5.8	26
99	Mitochondrial Inverted Repeats Strongly Correlate with Lifespan: mtDNA Inversions and Aging. PLoS ONE, 2013, 8, e73318.	1.1	25
100	Rare genetic coding variants associated with human longevity and protection against age-related diseases. Nature Aging, 2021, 1, 783-794.	5.3	22
101	Regulation of Rad51 promoter. Cell Cycle, 2014, 13, 2038-2045.	1.3	21
102	A review of the biomedical innovations for healthy longevity. Aging, 2017, 9, 7-25.	1.4	18
103	IGF1R levels in the brain negatively correlate with longevity in 16 rodent species. Aging, 2013, 5, 304-314.	1.4	17
104	CLK-1 protein has DNA binding activity specific to OLregion of mitochondrial DNA. FEBS Letters, 2002, 516, 279-284.	1.3	16
105	Genome-wide demethylation promotes triplet repeat instability independently of homologous recombination. DNA Repair, 2008, 7, 313-320.	1.3	16
106	Evolution of mammalian longevity: age-related increase in autophagy in bats compared to other mammals. Aging, 2021, 13, 7998-8025.	1.4	16
107	Adenoviral Vector Driven by a Minimal Rad51 Promoter Is Selective for p53-Deficient Tumor Cells. PLoS ONE, 2011, 6, e28714.	1.1	15
108	Brief report: A human induced pluripotent stem cell model of cernunnos deficiency reveals an important role for XLF in the survival of the primitive hematopoietic progenitors. Stem Cells, 2013, 31, 2015-2023.	1.4	15

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109	Matters of size: Roles of hyaluronan in CNS aging and disease. Ageing Research Reviews, 2021, 72, 101485.	5.0	15
110	Enhanced cellular radiosensitivity induced by cofilin-1 over-expression is associated with reduced DNA repair capacity. International Journal of Radiation Biology, 2013, 89, 433-444.	1.0	14
111	The Insulin-Like Growth Factor System in the Long-Lived Naked Mole-Rat. PLoS ONE, 2015, 10, e0145587.	1.1	14
112	Dangerous Entrapment for NRF2. Cell, 2016, 165, 1312-1313.	13.5	13
113	Short-term calorie restriction enhances DNA repair by non-homologous end joining in mice. Npj Aging and Mechanisms of Disease, 2020, 6, 9.	4.5	13
114	Novel husbandry techniques support survival of naked mole rat (Heterocephalus glaber) pups. Journal of the American Association for Laboratory Animal Science, 2014, 53, 89-91.	0.6	13
115	Naked mole rat TRF1 safeguards glycolytic capacity and telomere replication under low oxygen. Science Advances, 2021, 7, .	4.7	12
116	Revelations About Aging and Disease from Unconventional Vertebrate Model Organisms. Annual Review of Genetics, 2021, 55, 135-159.	3.2	12
117	Ectopic cervical thymi and no thymic involution until midlife in naked mole rats. Aging Cell, 2021, 20, e13477.	3.0	12
118	Local non-pituitary growth hormone is induced with aging and facilitates epithelial damage. Cell Reports, 2021, 37, 110068.	2.9	12
119	Characterization of naked moleâ€rat hematopoiesis reveals unique stem and progenitor cell patterns and neotenic traits. EMBO Journal, 2022, 41, .	3.5	12
120	SIRT6: A Promising Target for Cancer Prevention and Therapy. Advances in Experimental Medicine and Biology, 2014, 818, 181-196.	0.8	11
121	Naked moleâ€rats are extremely resistant to postâ€traumatic osteoarthritis. Aging Cell, 2020, 19, e13255.	3.0	11
122	Reply to: Transformation of naked mole-rat cells. Nature, 2020, 583, E8-E13.	13.7	11
123	Sensitivity of primary fibroblasts in culture to atmospheric oxygen does not correlate with species lifespan. Aging, 2016, 8, 841-847.	1.4	10
124	Accurate Proteomewide Measurement of Methionine Oxidation in Aging Mouse Brains. Journal of Proteome Research, 2022, 21, 1495-1509.	1.8	10
125	Hyaluronan goes to great length. Cell Stress, 2020, 4, 227-229.	1.4	9
126	Proteomics of Longâ€Lived Mammals. Proteomics, 2020, 20, 1800416.	1.3	8

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127	Genomic expansion of Aldh1a1 protects beavers against high metabolic aldehydes from lipid oxidation. Cell Reports, 2021, 37, 109965.	2.9	7
128	Beyond Making Ends Meet: DNA-PK, Metabolism, and Aging. Cell Metabolism, 2017, 25, 991-992.	7.2	6
129	ÂForever young? Exploring the link between rapamycin, longevity and cancer. Cell Cycle, 2012, 11, 4296-4297.	1.3	5
130	Accurate translation is important for longevity. Aging, 2018, 10, 297-298.	1.4	5
131	Utilization of Rad51C promoter for transcriptional targeting of cancer cells. Oncotarget, 2014, 5, 1805-1811.	0.8	5
132	Skin Aging in Long-Lived Naked Mole-Rats Is Accompanied by Increased Expression of Longevity-Associated and Tumor Suppressor Genes. Journal of Investigative Dermatology, 2022, 142, 2853-2863.e4.	0.3	5
133	Meeting Report: Aging Research and Drug Discovery. Aging, 2022, 14, 530-543.	1.4	4
134	A hairy tale: <scp>SIRT</scp> 7 safeguards skin stem cells during aging. EMBO Journal, 2020, 39, e106294.	3.5	3
135	Long-lived fish in a big pond. Science, 2021, 374, 824-825.	6.0	3
136	Comparative Biology of Aging. , 2016, , 305-324.		2
137	Molecular insights into anatomy and physiology. , 2021, , 299-307.		1
138	The 2021 FASEB science research conference on NAD metabolism and signaling. Aging, 2021, 13, 24924-24930.	1.4	1
139	DIPG-63. RADIATION DNA DAMAGE REPAIR INHIBITION BY GSK-J4 INDUCED CHROMATIN COMPACTION IN DIPG. Neuro-Oncology, 2018, 20, i61-i62.	0.6	0
140	PDTM-05. RADIATION DNA DAMAGE REPAIR INHIBITION BY GSK-J4 INDUCED CHROMATIN COMPACTION IN DIPG. Neuro-Oncology, 2018, 20, vi204-vi204.	0.6	0
141	A Comparison of Senescence in Mouse and Human Cells. , 2010, , 175-197.		0