Vera Gorbunova

List of Publications by Citations

140 papers	9,036 citations	50 h-index	93 g-index
159 ext. papers	11,424 ext. citations	11.8 avg, IF	6.13 L-index

#	Paper	IF	Citations
140	SIRT6 promotes DNA repair under stress by activating PARP1. *Science*, **2011**, 332, 1443-6	33.3	585
139	High-molecular-mass hyaluronan mediates the cancer resistance of the naked mole rat. *Nature*, **2013**, 499, 346-9	50.4	470
138	DNA repair by nonhomologous end joining and homologous recombination during cell cycle in human cells. *Cell Cycle*, **2008**, 7, 2902-6	4.7	392
137	Ten things you should know about transposable elements. *Genome Biology*, **2018**, 19, 199	18.3	372
136	Comparison of nonhomologous end joining and homologous recombination in human cells. *DNA Repair*, **2008**, 7, 1765-71	4.3	367
135	L1 drives IFN in senescent cells and promotes age-associated inflammation. *Nature*, **2019**, 566, 73-78	50.4	364
134	Changes in DNA repair during aging. *Nucleic Acids Research*, **2007**, 35, 7466-74	20.1	242
133	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, 19352-7	11.5	241
132	SIRT6 represses LINE1 retrotransposons by ribosylating KAP1 but this repression fails with stress and age. *Nature Communications*, **2014**, 5, 5011	17.4	233
131	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, 7624-9	11.5	216
130	How plants make ends meet: DNA double-strand break repair. *Trends in Plant Science*, **1999**, 4, 263-269	13.1	196
129	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, 38540-9	5.4	183
128	Establishing primary adult fibroblast cultures from rodents. *Journal of Visualized Experiments*, **2010**,	1.6	177
127	Telomerase activity coevolves with body mass not lifespan. *Aging Cell*, **2007**, 6, 45-52	9.9	157
126	ATRX loss promotes tumor growth and impairs nonhomologous end joining DNA repair in glioma. *Science Translational Medicine*, **2016**, 8, 328ra28	17.5	146
125	LINE1 Derepression in Aged Wild-Type and SIRT6-Deficient Mice Drives Inflammation. *Cell Metabolism*, **2019**, 29, 871-885.e5	24.6	138
124	Comparative genetics of longevity and cancer: insights from long-lived rodents. *Nature Reviews Genetics*, **2014**, 15, 531-40	30.1	129

123	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, 1552-64	4.8	128
122	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, 11800-5	11.5	126
121	SIRT6 Is Responsible for More Efficient DNA Double-Strand Break Repair in Long-Lived Species. *Cell* , **2019**, 177, 622-638.e22	56.2	120
120	SIRT6 overexpression induces massive apoptosis in cancer cells but not in normal cells. *Cell Cycle*, **2011**, 10, 3153-8	4.7	113
119	Mechanisms of cancer resistance in long-lived mammals. *Nature Reviews Cancer*, **2018**, 18, 433-441	31.3	104
118	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, 17350-5	11.5	103
117	A conserved NAD binding pocket that regulates protein-protein interactions during aging. *Science*, **2017**, 355, 1312-1317	33.3	102
116	DNA repair in species with extreme lifespan differences. *Aging*, **2015**, 7, 1171-84	5.6	102
115	Genome-wide adaptive complexes to underground stresses in blind mole rats Spalax. *Nature Communications*, **2014**, 5, 3966	17.4	101
114	IDH1-R132H acts as a tumor suppressor in glioma via epigenetic up-regulation of the DNA damage response. *Science Translational Medicine*, **2019**, 11,	17.5	98
113	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, 19392-6	11.5	93
112	SQSTM1/p62 mediates crosstalk between autophagy and the UPS in DNA repair. *Autophagy*, **2016**, 12, 1917-1930	10.2	93
111	Distinct tumor suppressor mechanisms evolve in rodent species that differ in size and lifespan. *Aging Cell*, **2008**, 7, 813-23	9.9	85
110	Ubiquitin Modification by the E3 Ligase/ADP-Ribosyltransferase Dtx3L/Parp9. *Molecular Cell*, **2017**, 66, 503-516.e5	17.6	84
109	Rodents for comparative aging studies: from mice to beavers. *Age*, **2008**, 30, 111-9		83
108	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, 13068-73	11.5	83
107	SIRT1 as a therapeutic target in inflammaging of the pulmonary disease. *Preventive Medicine*, **2012**, 54 Suppl, S20-8	4.3	82
106	DIPG-63. RADIATION DNA DAMAGE REPAIR INHIBITION BY GSK-J4 INDUCED CHROMATIN COMPACTION IN DIPG. *Neuro-Oncology*, **2018**, 20, i61-i62	1	78

105	PDTM-05. RADIATION DNA DAMAGE REPAIR INHIBITION BY GSK-J4 INDUCED CHROMATIN COMPACTION IN DIPG. *Neuro-Oncology*, **2018**, 20, vi204-vi204	1	78
104	Genome-wide demethylation destabilizes CTG.CAG trinucleotide repeats in mammalian cells. *Human Molecular Genetics*, **2004**, 13, 2979-89	5.6	76
103	Replicatively senescent cells are arrested in G1 and G2 phases. *Aging*, **2012**, 4, 431-5	5.6	76
102	DNA repair by homologous recombination, but not by nonhomologous end joining, is elevated in breast cancer cells. *Neoplasia*, **2009**, 11, 683-91	6.4	75
101	Cell divisions are required for L1 retrotransposition. *Molecular and Cellular Biology*, **2007**, 27, 1264-70	4.8	75
100	SIRT6 rescues the age related decline in base excision repair in a PARP1-dependent manner. *Cell Cycle*, **2015**, 14, 269-76	4.7	74
99	Coevolution of telomerase activity and body mass in mammals: from mice to beavers. *Mechanisms of Ageing and Development*, **2009**, 130, 3-9	5.6	73
98	Analysis of DNA double-strand break (DSB) repair in mammalian cells. *Journal of Visualized Experiments*, **2010**,	1.6	70
97	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	10.6	70
96	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, 20810-5	11.5	69
95	INK4 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, 1053-8	11.5	66
94	Making ends meet in old age: DSB repair and aging. *Mechanisms of Ageing and Development*, **2005**, 126, 621-8	5.6	66
93	Knock-in reporter mice demonstrate that DNA repair by non-homologous end joining declines with age. *PLoS Genetics*, **2014**, 10, e1004511	6	65
92	The Naked Mole Rat Genome Resource: facilitating analyses of cancer and longevity-related adaptations. *Bioinformatics*, **2014**, 30, 3558-60	7.2	62
91	DNA double strand break repair, aging and the chromatin connection. *Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis*, **2016**, 788, 2-6	3.3	51
90	Gene expression and mutation-guided synthetic lethality eradicates proliferating and quiescent leukemia cells. *Journal of Clinical Investigation*, **2017**, 127, 2392-2406	15.9	49
89	Repairing split ends: SIRT6, mono-ADP ribosylation and DNA repair. *Aging*, **2011**, 3, 829-35	5.6	49
88	Changes in the level and distribution of Ku proteins during cellular senescence. *DNA Repair*, **2007**, 6, 1740-8	4.3	48

87	Naked Mole Rat Cells Have a Stable Epigenome that Resists iPSC Reprogramming. *Stem Cell Reports*, **2017**, 9, 1721-1734	8	45
86	Molecular Mechanisms Determining Lifespan in Short- and Long-Lived Species. *Trends in Endocrinology and Metabolism*, **2017**, 28, 722-734	8.8	45
85	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	11.5	44
84	Organization of the Mammalian Ionome According to Organ Origin, Lineage Specialization, and Longevity. *Cell Reports*, **2015**, 13, 1319-1326	10.6	43
83	Translation fidelity coevolves with longevity. *Aging Cell*, **2017**, 16, 988-993	9.9	42
82	Comparative analysis of genome maintenance genes in naked mole rat, mouse, and human. *Aging Cell*, **2015**, 14, 288-91	9.9	42
81	Cell culture-based profiling across mammals reveals DNA repair and metabolism as determinants of species longevity. *ELife*, **2016**, 5,	8.9	42
80	Evolution of telomere maintenance and tumour suppressor mechanisms across mammals. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2018**, 373,	5.8	40
79	Telomerase as a growth-promoting factor. *Cell Cycle*, **2003**, 2, 534-7	4.7	39
78	Evidence that high telomerase activity may induce a senescent-like growth arrest in human fibroblasts. *Journal of Biological Chemistry*, **2003**, 278, 7692-8	5.4	39
77	The World Goes Bats: Living Longer and Tolerating Viruses. *Cell Metabolism*, **2020**, 32, 31-43	24.6	38
76	Lipidome determinants of maximal lifespan in mammals. *Scientific Reports*, **2017**, 7, 5	4.9	37
75	SIRT6 promotes transcription of a subset of NRF2 targets by mono-ADP-ribosylating BAF170. *Nucleic Acids Research*, **2019**, 47, 7914-7928	20.1	36
74	Human Genomics. Sleeping dogs of the genome. *Science*, **2014**, 346, 1187-8	33.3	35
73	Selectable system for monitoring the instability of CTG/CAG triplet repeats in mammalian cells. *Molecular and Cellular Biology*, **2003**, 23, 4485-93	4.8	33
72	Universal DNA methylation age across mammalian tissues		31
71	Naked mole-rat very-high-molecular-mass hyaluronan exhibits superior cytoprotective properties. *Nature Communications*, **2020**, 11, 2376	17.4	30
70	A new hyperrecombinogenic mutant of Nicotiana tabacum. *Plant Journal*, **2000**, 24, 601-11	6.9	29

69	Cross-species Comparison of Proteome Turnover Kinetics. *Molecular and Cellular Proteomics*, **2018**, 17, 580-591	7.6	28
68	Rad51 promoter-targeted gene therapy is effective for in vivo visualization and treatment of cancer. *Molecular Therapy*, **2012**, 20, 347-55	11.7	28
67	Non-canonical aging model systems and why we need them. *EMBO Journal*, **2017**, 36, 959-963	13	27
66	Circularized Ac/Ds transposons: formation, structure and fate. *Genetics*, **1997**, 145, 1161-9	4	27
65	Analysis of extrachromosomal Ac/Ds transposable elements. *Genetics*, **2000**, 155, 349-59	4	27
64	P21-PARP-1 pathway is involved in cigarette smoke-induced lung DNA damage and cellular senescence. *PLoS ONE*, **2013**, 8, e80007	3.7	26
63	Haploinsufficiency of dramatically extends the lifespan of Sirt6-deficient mice. *ELife*, **2018**, 7,	8.9	26
62	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	5.6	26
61	The role of retrotransposable elements in ageing and age-associated diseases. *Nature*, **2021**, 596, 43-53	50.4	26
60	The conundrum of human immune system "senescence". *Mechanisms of Ageing and Development*, **2020**, 192, 111357	5.6	25
59	Compromised DNA repair is responsible for diabetes-associated fibrosis. *EMBO Journal*, **2020**, 39, e103477	13	24
58	A PARP1-BRG1-SIRT1 axis promotes HR repair by reducing nucleosome density at DNA damage sites. *Nucleic Acids Research*, **2019**, 47, 8563-8580	20.1	24
57	Mitochondrial inverted repeats strongly correlate with lifespan: mtDNA inversions and aging. *PLoS ONE*, **2013**, 8, e73318	3.7	23
56	Excess growth hormone suppresses DNA damage repair in epithelial cells. *JCI Insight*, **2019**, 4,	9.9	21
55	Naked mole rat cells display more efficient excision repair than mouse cells. *Aging*, **2018**, 10, 1454-1473	5.6	21
54	Radiosensitization by Histone H3 Demethylase Inhibition in Diffuse Intrinsic Pontine Glioma. *Clinical Cancer Research*, **2019**, 25, 5572-5583	12.9	19
53	Regulation of Rad51 promoter. *Cell Cycle*, **2014**, 13, 2038-45	4.7	19
52	A review of the biomedical innovations for healthy longevity. *Aging*, **2017**, 9, 7-25	5.6	18

51	SIRT6 mono-ADP ribosylates KDM2A to locally increase H3K36me2 at DNA damage sites to inhibit transcription and promote repair. *Aging*, **2020**, 12, 11165-11184	5.6	16
50	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, 2015-23	5.8	14
49	Adenoviral vector driven by a minimal Rad51 promoter is selective for p53-deficient tumor cells. *PLoS ONE*, **2011**, 6, e28714	3.7	14
48	Genome-wide demethylation promotes triplet repeat instability independently of homologous recombination. *DNA Repair*, **2008**, 7, 313-20	4.3	14
47	Pericellular Brush and Mechanics of Guinea Pig Fibroblast Cells Studied with AFM. *Biophysical Journal*, **2016**, 111, 236-46	2.9	14
46	Interspecies Differences in Proteome Turnover Kinetics Are Correlated With Life Spans and Energetic Demands. *Molecular and Cellular Proteomics*, **2021**, 20, 100041	7.6	14
45	IGF1R levels in the brain negatively correlate with longevity in 16 rodent species. *Aging*, **2013**, 5, 304-14	5.6	12
44	The Insulin-Like Growth Factor System in the Long-Lived Naked Mole-Rat. *PLoS ONE*, **2015**, 10, e0145587	3.7	11
43	Enhanced cellular radiosensitivity induced by cofilin-1 over-expression is associated with reduced DNA repair capacity. *International Journal of Radiation Biology*, **2013**, 89, 433-44	2.9	11
42	ARDD 2020: from aging mechanisms to interventions. *Aging*, **2020**, 12, 24484-24503	5.6	11
41	The naked truth: a comprehensive clarification and classification of current ℞ythsℜin naked mole-rat biology. *Biological Reviews*, **2021**,	13.5	11
40	CLK-1 protein has DNA binding activity specific to O(L) region of mitochondrial DNA. *FEBS Letters*, **2002**, 516, 279-84	3.8	10
39	Beaver and Naked Mole Rat Genomes Reveal Common Paths to Longevity. *Cell Reports*, **2020**, 32, 107949	10.6	10
38	SIRT6: a promising target for cancer prevention and therapy. *Advances in Experimental Medicine and Biology*, **2014**, 818, 181-96	3.6	9
37	DNA methylation clocks tick in naked mole rats but queens age more slowly than nonbreeders.. *Nature Aging*, **2022**, 2, 46-59		9
36	Genetics of extreme human longevity to guide drug discovery for healthy ageing. *Nature Metabolism*, **2020**, 2, 663-672	14.6	9
35	Sensitivity of primary fibroblasts in culture to atmospheric oxygen does not correlate with species lifespan. *Aging*, **2016**, 8, 841-7	5.6	8
34	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	1.3	8

33	Short-term calorie restriction enhances DNA repair by non-homologous end joining in mice. *Npj Aging and Mechanisms of Disease*, **2020**, 6, 9	5.5	8
32	Transposon-triggered innate immune response confers cancer resistance to the blind mole rat. *Nature Immunology*, **2021**, 22, 1219-1230	19.1	8
31	Dangerous Entrapment for NRF2. *Cell*, **2016**, 165, 1312-1313	56.2	7
30	Sirt6 regulates lifespan in .. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119,	11.5	7
29	Reply to: Transformation of naked mole-rat cells. *Nature*, **2020**, 583, E8-E13	50.4	5
28	Utilization of Rad51C promoter for transcriptional targeting of cancer cells. *Oncotarget*, **2014**, 5, 1805-11	3.3	5
27	Ectopic cervical thymi and no thymic involution until midlife in naked mole rats. *Aging Cell*, **2021**, 20, e13477	9.9	5
26	Naked mole-rats are extremely resistant to post-traumatic osteoarthritis. *Aging Cell*, **2020**, 19, e13255	9.9	4
25	Evolution of mammalian longevity: age-related increase in autophagy in bats compared to other mammals. *Aging*, **2021**, 13, 7998-8025	5.6	4
24	Sirtuin 6: linking longevity with genome and epigenome stability. *Trends in Cell Biology*, **2021**, 31, 994-1006	18.3	4
23	Naked mole rat TRF1 safeguards glycolytic capacity and telomere replication under low oxygen. *Science Advances*, **2021**, 7,	14.3	4
22	Rare genetic coding variants associated with human longevity and protection against age-related diseases. *Nature Aging*, **2021**, 1, 783-794		4
21	Beyond Making Ends Meet: DNA-PK, Metabolism, and Aging. *Cell Metabolism*, **2017**, 25, 991-992	24.6	3
20	Hyaluronan goes to great length. *Cell Stress*, **2020**, 4, 227-229	5.5	3
19	Accurate translation is important for longevity. *Aging*, **2018**, 10, 297-298	5.6	3
18	Proteomics of Long-Lived Mammals. *Proteomics*, **2020**, 20, e1800416	4.8	3
17	DNA methylation clocks show slower progression of aging in naked mole-rat queens		3
16	Comparative Biology of Aging **2016**, 305-324		2

List of Publications

15	Epigenetic aging of the demographically non-aging naked mole-rat.. *Nature Communications*, **2022**, 13, 355	17.4	2
14	A hairy tale: SIRT7 safeguards skin stem cells during aging. *EMBO Journal*, **2020**, 39, e106294	13	2
13	Long-lived fish in a big pond. *Science*, **2021**, 374, 824-825	33.3	2
12	Genomic expansion of Aldh1a1 protects beavers against high metabolic aldehydes from lipid oxidation. *Cell Reports*, **2021**, 37, 109965	10.6	2
11	Maintenance of genome sequence integrity in long- and short-lived rodent species. *Science Advances*, **2021**, 7, eabj3284	14.3	2
10	Dampened PI3K/AKT signaling contributes to cancer resistance of the naked mole rat		2
9	The hematopoietic landscape at single-cell resolution reveals unexpected stem cell features in naked mole-rats		2
8	A rare human centenarian variant of SIRT6 enhances genome stability and interaction with Lamin A		2
7	Interspecies differences in proteome turnover kinetics are correlated with lifespans and energetic demands		1
6	Revelations About Aging and Disease from Unconventional Vertebrate Model Organisms. *Annual Review of Genetics*, **2021**, 55, 135-159	14.5	1
5	Molecular insights into anatomy and physiology **2021**, 299-307		1
4	Comparative transcriptomics reveals circadian and pluripotency networks as two pillars of longevity regulation.. *Cell Metabolism*, **2022**,	24.6	1
3	Local non-pituitary growth hormone is induced with aging and facilitates epithelial damage.. *Cell Reports*, **2021**, 37, 110068	10.6	0
2	Matters of size: Roles of hyaluronan in CNS aging and disease. *Ageing Research Reviews*, **2021**, 72, 101485	12	0
1	A Comparison of Senescence in Mouse and Human Cells **2010**, 175-197		