

# Gary Ruvkun

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

75  
papers

16,177  
citations

38  
h-index

92  
g-index

92  
ext. papers

18,218  
ext. citations

22.2  
avg, IF

6.31  
L-index

#	Paper	IF	Citations
75	Protein-bound molybdenum cofactor is bioavailable and rescues molybdenum cofactor-deficient. <i>Genes and Development</i> , <b>2021</b> , 35, 212-217	12.6	3
74	Two isoforms of the essential <i>C. elegans</i> Argonaute CSR-1 differentially regulate sperm and oocyte fertility. <i>Nucleic Acids Research</i> , <b>2021</b> , 49, 8836-8865	20.1	6
73	ADAR editing and the ERI-6/7/MOV10 RNAi pathway silence endogenous viral elements and LTR retrotransposons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 5987-5996	11.5	13
72	Mitochondrial dysfunction induces RNA interference in <i>C. elegans</i> through a pathway homologous to the mammalian RIG-I antiviral response. <i>PLoS Biology</i> , <b>2020</b> , 18, e3000996	9.7	3
71	Lysosomal activity regulates mitochondrial dynamics through vitamin B12 metabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 19970-19981	11.5	10
70	Nanopore sequencing at Mars, Europa, and microgravity conditions. <i>Npj Microgravity</i> , <b>2020</b> , 6, 24	5.3	6
69	Genomic and Functional Characterization of Isolates Recovered From the International Space Station and Their Potential for Pathogenicity. <i>Frontiers in Microbiology</i> , <b>2020</b> , 11, 515319	5.7	2
68	Regulation of neuronal polarity by heterochronic genes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 12327-12336	11.5	2
67	Nucleic Acid Extraction and Sequencing from Low-Biomass Synthetic Mars Analog Soils for Life Detection. <i>Astrobiology</i> , <b>2019</b> , 19, 1139-1152	3.7	6
66	Hypoxia Rescues Frataxin Loss by Restoring Iron Sulfur Cluster Biogenesis. <i>Cell</i> , <b>2019</b> , 177, 1507-1521.e15	36.2	45
65	Protein Sequence Editing of SKN-1A/Nrf1 by Peptide:N-Glycanase Controls Proteasome Gene Expression. <i>Cell</i> , <b>2019</b> , 177, 737-750.e15	56.2	46
64	Molybdenum cofactor transfer from bacteria to nematode mediates sulfite detoxification. <i>Nature Chemical Biology</i> , <b>2019</b> , 15, 480-488	11.7	12
63	Mitochondrial Dysfunction in <i>C. elegans</i> Activates Mitochondrial Relocalization and Nuclear Hormone Receptor-Dependent Detoxification Genes. <i>Cell Metabolism</i> , <b>2019</b> , 29, 1182-1191.e4	24.6	28
62	induces DNA damage in intestinal cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 3784-3792	11.5	11
61	Endoplasmic reticulum-associated SKN-1A/Nrf1 mediates a cytoplasmic unfolded protein response and promotes longevity. <i>ELife</i> , <b>2019</b> , 8,	8.9	24
60	ROS-based lethality of mitochondrial electron transport mutants grown on siderophore iron release mutants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 21651-21658	11.5	4
59	CarrierSeq: a sequence analysis workflow for low-input nanopore sequencing. <i>BMC Bioinformatics</i> , <b>2018</b> , 19, 108	3.6	11

58	The surveillance of pre-mRNA splicing is an early step in RNAi of endogenous genes. <i>Genes and Development</i> , <b>2018</b> , 32, 670-681	12.6	16
57	Acceleration profiles and processing methods for parabolic flight. <i>Npj Microgravity</i> , <b>2018</b> , 4, 14	5.3	6
56	Endoplasmic Reticulum Homeostasis Is Modulated by the Forkhead Transcription Factor FKH-9 During Infection of. <i>Genetics</i> , <b>2018</b> , 210, 1329-1337	4	12
55	DAF-16/FOXO and HLH-30/TFEB function as combinatorial transcription factors to promote stress resistance and longevity. <i>Nature Communications</i> , <b>2018</b> , 9, 4400	17.4	66
54	Sequencing nothing: Exploring failure modes of nanopore sensing and implications for life detection. <i>Life Sciences in Space Research</i> , <b>2018</b> , 18, 80-86	2.4	7
53	Towards in situ sequencing for life detection <b>2017</b> ,		7
52	Nucleic Acid Extraction from Synthetic Mars Analog Soils for in situ Life Detection. <i>Astrobiology</i> , <b>2017</b> , 17, 747-760	3.7	16
51	Microbial Diversity in a Hypersaline Sulfate Lake: A Terrestrial Analog of Ancient Mars. <i>Frontiers in Microbiology</i> , <b>2017</b> , 8, 1819	5.7	41
50	A microRNA program in the <i>C. elegans</i> hypodermis couples to intestinal mTORC2/PQM-1 signaling to modulate fat transport. <i>Genes and Development</i> , <b>2016</b> , 30, 1515-28	12.6	36
49	<i>Caenorhabditis elegans</i> responses to bacteria from its natural habitats. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E3941-9	11.5	191
48	Planetary Protection and Mars Special Regions--A Suggestion for Updating the Definition. <i>Astrobiology</i> , <b>2016</b> , 16, 119-25	3.7	23
47	Proteasome dysfunction triggers activation of SKN-1A/Nrf1 by the aspartic protease DDI-1. <i>ELife</i> , <b>2016</b> , 5,	8.9	116
46	Mitophagy confers resistance to siderophore-mediated killing by <i>Pseudomonas aeruginosa</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 1821-6	11.5	129
45	Dialogue between <i>E. coli</i> free radical pathways and the mitochondria of <i>C. elegans</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 12456-61	11.5	24
44	Lipid signalling couples translational surveillance to systemic detoxification in <i>Caenorhabditis elegans</i> . <i>Nature Cell Biology</i> , <b>2015</b> , 17, 1294-303	23.4	15
43	piRNAs and piRNA-Dependent siRNAs Protect Conserved and Essential <i>C. elegans</i> Genes from Misrouting into the RNAi Pathway. <i>Developmental Cell</i> , <b>2015</b> , 34, 457-65	10.2	65
42	PhyloGene server for identification and visualization of co-evolving proteins using normalized phylogenetic profiles. <i>Nucleic Acids Research</i> , <b>2015</b> , 43, W154-9	20.1	27
41	MUT-14 and SMUT-1 DEAD box RNA helicases have overlapping roles in germline RNAi and endogenous siRNA formation. <i>Current Biology</i> , <b>2014</b> , 24, 839-44	6.3	44

40	Gene pathways that delay <i>Caenorhabditis elegans</i> reproductive senescence. <i>PLoS Genetics</i> , <b>2014</b> , 10, e1004752	6	25
39	Identification of genes in toxicity pathways of trinucleotide-repeat RNA in <i>C. elegans</i> . <i>Nature Structural and Molecular Biology</i> , <b>2014</b> , 21, 712-20	17.6	14
38	<i>Caenorhabditis elegans</i> pathways that surveil and defend mitochondria. <i>Nature</i> , <b>2014</b> , 508, 406-10	50.4	191
37	Multiple small RNA pathways regulate the silencing of repeated and foreign genes in <i>C. elegans</i> . <i>Genes and Development</i> , <b>2013</b> , 27, 2678-95	12.6	21
36	Identification of small RNA pathway genes using patterns of phylogenetic conservation and divergence. <i>Nature</i> , <b>2013</b> , 493, 694-8	50.4	111
35	Human disease locus discovery and mapping to molecular pathways through phylogenetic profiling. <i>Molecular Systems Biology</i> , <b>2013</b> , 9, 692	12.2	37
34	MUT-16 promotes formation of perinuclear mutator foci required for RNA silencing in the <i>C. elegans</i> germline. <i>Genes and Development</i> , <b>2012</b> , 26, 1433-44	12.6	107
33	Inactivation of conserved <i>C. elegans</i> genes engages pathogen- and xenobiotic-associated defenses. <i>Cell</i> , <b>2012</b> , 149, 452-66	56.2	233
32	Repression of germline RNAi pathways in somatic cells by retinoblastoma pathway chromatin complexes. <i>PLoS Genetics</i> , <b>2012</b> , 8, e1002542	6	42
31	mut-16 and other mutator class genes modulate 22G and 26G siRNA pathways in <i>Caenorhabditis elegans</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 1201-8	11.5	96
30	The ERI-6/7 helicase acts at the first stage of an siRNA amplification pathway that targets recent gene duplications. <i>PLoS Genetics</i> , <b>2011</b> , 7, e1002369	6	54
29	Trans-splicing in <i>C. elegans</i> generates the negative RNAi regulator ERI-6/7. <i>Nature</i> , <b>2008</b> , 455, 491-6	50.4	78
28	The perfect storm of tiny RNAs. <i>Nature Medicine</i> , <b>2008</b> , 14, 1041-5	50.5	88
27	Tiny RNA: Where do we come from? What are we? Where are we going?. <i>Trends in Plant Science</i> , <b>2008</b> , 13, 313-6	13.1	3
26	Functional proteomics reveals the biochemical niche of <i>C. elegans</i> DCR-1 in multiple small-RNA-mediated pathways. <i>Cell</i> , <b>2006</b> , 124, 343-54	56.2	301
25	Functional genomic analysis of RNA interference in <i>C. elegans</i> . <i>Science</i> , <b>2005</b> , 308, 1164-7	33.3	244
24	Somatic misexpression of germline P granules and enhanced RNA interference in retinoblastoma pathway mutants. <i>Nature</i> , <b>2005</b> , 436, 593-7	50.4	208
23	A conserved siRNA-degrading RNase negatively regulates RNA interference in <i>C. elegans</i> . <i>Nature</i> , <b>2004</b> , 427, 645-9	50.4	488

22	The 20 years it took to recognize the importance of tiny RNAs. <i>Cell</i> , <b>2004</b> , 116, S93-6, 2 p following S96	56.2	74
21	A systematic RNAi screen identifies a critical role for mitochondria in <i>C. elegans</i> longevity. <i>Nature Genetics</i> , <b>2003</b> , 33, 40-8	36.3	784
20	The genetics of aging. <i>Annual Review of Genomics and Human Genetics</i> , <b>2001</b> , 2, 435-62	9.7	270
19	Isoform-specific mutations in the <i>Caenorhabditis elegans</i> heterochronic gene <i>lin-14</i> affect stage-specific patterning. <i>Genetics</i> , <b>2001</b> , 157, 199-209	4	34
18	Food and metabolic signalling defects in a <i>Caenorhabditis elegans</i> serotonin-synthesis mutant. <i>Nature</i> , <b>2000</b> , 403, 560-4	50.4	480
17	The 21-nucleotide <i>let-7</i> RNA regulates developmental timing in <i>Caenorhabditis elegans</i> . <i>Nature</i> , <b>2000</b> , 403, 901-6	50.4	3689
16	Conservation of the sequence and temporal expression of <i>let-7</i> heterochronic regulatory RNA. <i>Nature</i> , <b>2000</b> , 408, 86-9	50.4	1850
15	Graded expression of <i>ceh-14</i> reporters in the hypodermis is induced by a gonadal signal. <i>Development Genes and Evolution</i> , <b>2000</b> , 210, 564-9	1.8	4
14	Regulation of <i>C. elegans</i> life-span by insulinlike signaling in the nervous system. <i>Science</i> , <b>2000</b> , 290, 147-50	50.3	545
13	Themes from a NASA workshop on gene regulatory processes in development and evolution. <i>The Journal of Experimental Zoology</i> , <b>1999</b> , 285, 104-15		8
12	An insulin-like signaling pathway affects both longevity and reproduction in <i>Caenorhabditis elegans</i> . <i>Genetics</i> , <b>1998</b> , 148, 703-17	4	255
11	Temporal pattern formation by heterochronic genes. <i>Annual Review of Genetics</i> , <b>1997</b> , 31, 611-34	14.5	88
10	<i>daf-2</i> , an insulin receptor-like gene that regulates longevity and diapause in <i>Caenorhabditis elegans</i> . <i>Science</i> , <b>1997</b> , 277, 942-6	33.3	1757
9	The Fork head transcription factor <i>DAF-16</i> transduces insulin-like metabolic and longevity signals in <i>C. elegans</i> . <i>Nature</i> , <b>1997</b> , 389, 994-9	50.4	1585
8	A phosphatidylinositol-3-OH kinase family member regulating longevity and diapause in <i>Caenorhabditis elegans</i> . <i>Nature</i> , <b>1996</b> , 382, 536-9	50.4	722
7	<i>C. elegans unc-4</i> gene encodes a homeodomain protein that determines the pattern of synaptic input to specific motor neurons. <i>Nature</i> , <b>1992</b> , 355, 841-5	50.4	147
6	New motif in PBX genes. <i>Nature Genetics</i> , <b>1992</b> , 1, 319-20	36.3	74
5	The <i>Caenorhabditis elegans</i> heterochronic gene <i>lin-14</i> encodes a nuclear protein that forms a temporal developmental switch. <i>Nature</i> , <b>1989</b> , 338, 313-9	50.4	186

- 4 Caenorhabditis elegans has scores of homoeobox-containing genes. *Nature*, **1989**, 341, 239-43 50.4 190
- 3 MXL-3 and HLH-30 transcriptionally link lipolysis and autophagy to nutrient availability 1
- 2 Bacterial carotenoids suppress Caenorhabditis elegans surveillance and defense of translational dysfunction 2
- 1 Two isoforms of the essential C. elegans Argonaute CSR-1 differentially regulate sperm and oocyte fertility 2