

# Gary Ruvkun

## List of Publications by Citations

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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 | The 21-nucleotide let-7 RNA regulates developmental timing in <i>Caenorhabditis elegans</i> . <i>Nature</i> , <b>2000</b> , 403, 901-6   | 50.4 | 3689      |
| 74 | Conservation of the sequence and temporal expression of let-7 heterochronic regulatory RNA. <i>Nature</i> , <b>2000</b> , 408, 86-9  | 50.4 | 1850      |
| 73 | daf-2, 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      |
| 72 | The Fork head transcription factor DAF-16 transduces insulin-like metabolic and longevity signals in <i>C. elegans</i> . <i>Nature</i> , <b>1997</b> , 389, 994-9                                  | 50.4 | 1585      |
| 71 | 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       |
| 70 | 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       |
| 69 | 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       |
| 68 | 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       |
| 67 | 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       |
| 66 | 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       |
| 65 | The genetics of aging. <i>Annual Review of Genomics and Human Genetics</i> , <b>2001</b> , 2, 435-62   | 9.7  | 270       |
| 64 | 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       |
| 63 | Functional genomic analysis of RNA interference in <i>C. elegans</i> . <i>Science</i> , <b>2005</b> , 308, 1164-7  | 33.3 | 244       |
| 62 | 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       |
| 61 | 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       |
| 60 | <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       |
| 59 | <i>Caenorhabditis elegans</i> pathways that surveil and defend mitochondria. <i>Nature</i> , <b>2014</b> , 508, 406-10   | 50.4 | 191       |

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|----|--|------|-----|
| 58 | Caenorhabditis elegans has scores of homoeobox-containing genes. <i>Nature</i> , <b>1989</b> , 341, 239-43   | 50.4 | 190 |
| 57 | The Caenorhabditis elegans heterochronic gene lin-14 encodes a nuclear protein that forms a temporal developmental switch. <i>Nature</i> , <b>1989</b> , 338, 313-9  | 50.4 | 186 |
| 56 | C. elegans unc-4 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 |
| 55 | Mitophagy confers resistance to siderophore-mediated killing by Pseudomonas aeruginosa. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 1821-6             | 11.5 | 129 |
| 54 | Proteasome dysfunction triggers activation of SKN-1A/Nrf1 by the aspartic protease DDI-1. <i>ELife</i> , <b>2016</b> , 5,  | 8.9  | 116 |
| 53 | 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 |
| 52 | MUT-16 promotes formation of perinuclear mutator foci required for RNA silencing in the C. elegans germline. <i>Genes and Development</i> , <b>2012</b> , 26, 1433-44  | 12.6 | 107 |
| 51 | mut-16 and other mutator class genes modulate 22G and 26G siRNA pathways in Caenorhabditis elegans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 1201-8 | 11.5 | 96  |
| 50 | Temporal pattern formation by heterochronic genes. <i>Annual Review of Genetics</i> , <b>1997</b> , 31, 611-34   | 14.5 | 88  |
| 49 | The perfect storm of tiny RNAs. <i>Nature Medicine</i> , <b>2008</b> , 14, 1041-5  | 50.5 | 88  |
| 48 | Trans-splicing in C. elegans generates the negative RNAi regulator ERI-6/7. <i>Nature</i> , <b>2008</b> , 455, 491-6   | 50.4 | 78  |
| 47 | 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  |
| 46 | New motif in PBX genes. <i>Nature Genetics</i> , <b>1992</b> , 1, 319-20   | 36.3 | 74  |
| 45 | 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  |
| 44 | piRNAs and piRNA-Dependent siRNAs Protect Conserved and Essential C. elegans Genes from Misrouting into the RNAi Pathway. <i>Developmental Cell</i> , <b>2015</b> , 34, 457-65   | 10.2 | 65  |
| 43 | 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  |
| 42 | 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  |
| 41 | Hypoxia Rescues Frataxin Loss by Restoring Iron Sulfur Cluster Biogenesis. <i>Cell</i> , <b>2019</b> , 177, 1507-1521.e16  | 56.2 | 45  |

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| 40 | 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 |
| 39 | Repression of germline RNAi pathways in somatic cells by retinoblastoma pathway chromatin complexes. <i>PLoS Genetics</i> , <b>2012</b> , 8, e1002542   | 6    | 42 |
| 38 | 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 |
| 37 | 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 |
| 36 | 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 |
| 35 | 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 |
| 34 | 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 |
| 33 | 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 |
| 32 | Gene pathways that delay <i>Caenorhabditis elegans</i> reproductive senescence. <i>PLoS Genetics</i> , <b>2014</b> , 10, e1004752   | 6    | 25 |
| 31 | 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 |
| 30 | 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 |
| 29 | Planetary Protection and Mars Special Regions--A Suggestion for Updating the Definition. <i>Astrobiology</i> , <b>2016</b> , 16, 119-25   | 3.7  | 23 |
| 28 | 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 |
| 27 | 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 |
| 26 | 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 |
| 25 | 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 |
| 24 | 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 |
| 23 | 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 |

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| 22 | Molybdenum cofactor transfer from bacteria to nematode mediates sulfite detoxification. <i>Nature Chemical Biology</i> , <b>2019</b> , 15, 480-488   | 11.7 | 12 |
| 21 | 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 |
| 20 | 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 |
| 19 | CarrierSeq: a sequence analysis workflow for low-input nanopore sequencing. <i>BMC Bioinformatics</i> , <b>2018</b> , 19, 108  | 3.6  | 11 |
| 18 | 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 |
| 17 | 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  |
| 16 | Towards in situ sequencing for life detection <b>2017</b> ,  |      | 7  |
| 15 | 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  |
| 14 | 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  |
| 13 | Acceleration profiles and processing methods for parabolic flight. <i>Npj Microgravity</i> , <b>2018</b> , 4, 14   | 5.3  | 6  |
| 12 | Nanopore sequencing at Mars, Europa, and microgravity conditions. <i>Npj Microgravity</i> , <b>2020</b> , 6, 24  | 5.3  | 6  |
| 11 | 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  |
| 10 | 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  |
| 9  | 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  |
| 8  | 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  |
| 7  | 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  |
| 6  | 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  |
| 5  | 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  |

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| 4 | Bacterial carotenoids suppress <i>Caenorhabditis elegans</i> surveillance and defense of translational dysfunction  | 2     |
| 3 | Two isoforms of the essential <i>C. elegans</i> Argonaute CSR-1 differentially regulate sperm and oocyte fertility  | 2     |
| 2 | 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 |
| 1 | MXL-3 and HLH-30 transcriptionally link lipolysis and autophagy to nutrient availability  | 1     |