

Robert W. Williams

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.

81
papers

10,740
citations

53
h-index

84
g-index

84
ext. papers

12,359
ext. citations

10.7
avg, IF

5.64
L-index

| # | Paper | IF | Citations |
|----|---|------|-----------|
| 81 | The Collaborative Cross, a community resource for the genetic analysis of complex traits. <i>Nature Genetics</i> , 2004 , 36, 1133-7 | 36.3 | 822 |
| 80 | Mitonuclear protein imbalance as a conserved longevity mechanism. <i>Nature</i> , 2013 , 497, 451-7 | 50.4 | 656 |
| 79 | Common genetic variants influence human subcortical brain structures. <i>Nature</i> , 2015 , 520, 224-9 | 50.4 | 601 |
| 78 | Complex trait analysis of gene expression uncovers polygenic and pleiotropic networks that modulate nervous system function. <i>Nature Genetics</i> , 2005 , 37, 233-42 | 36.3 | 588 |
| 77 | Interleukin 17-producing T helper cells and interleukin 17 orchestrate autoreactive germinal center development in autoimmune BXD2 mice. <i>Nature Immunology</i> , 2008 , 9, 166-75 | 19.1 | 571 |
| 76 | The control of neuron number. <i>Annual Review of Neuroscience</i> , 1988 , 11, 423-53 | 17 | 456 |
| 75 | Three-dimensional counting: an accurate and direct method to estimate numbers of cells in sectioned material. <i>Journal of Comparative Neurology</i> , 1988 , 278, 344-52 | 3.4 | 397 |
| 74 | Multi-omics analysis identifies ATF4 as a key regulator of the mitochondrial stress response in mammals. <i>Journal of Cell Biology</i> , 2017 , 216, 2027-2045 | 7.3 | 349 |
| 73 | The nature and identification of quantitative trait loci: a community's view. <i>Nature Reviews Genetics</i> , 2003 , 4, 911-6 | 30.1 | 330 |
| 72 | Uncovering regulatory pathways that affect hematopoietic stem cell function using Tgenetical genomicsT <i>Nature Genetics</i> , 2005 , 37, 225-32 | 36.3 | 330 |
| 71 | WebQTL: web-based complex trait analysis. <i>Neuroinformatics</i> , 2003 , 1, 299-308 | 3.2 | 229 |
| 70 | A high-resolution single nucleotide polymorphism genetic map of the mouse genome. <i>PLoS Biology</i> , 2006 , 4, e395 | 9.7 | 218 |
| 69 | A novel cytoarchitectonic area induced experimentally within the primate visual cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1991 , 88, 2083-7 | 11.5 | 217 |
| 68 | The Collaborative Cross at Oak Ridge National Laboratory: developing a powerful resource for systems genetics. <i>Mammalian Genome</i> , 2008 , 19, 382-9 | 3.2 | 201 |
| 67 | Ethanol-responsive brain region expression networks: implications for behavioral responses to acute ethanol in DBA/2J versus C57BL/6J mice. <i>Journal of Neuroscience</i> , 2005 , 25, 2255-66 | 6.6 | 184 |
| 66 | Growth cones, dying axons, and developmental fluctuations in the fiber population of the cat's optic nerve. <i>Journal of Comparative Neurology</i> , 1986 , 246, 32-69 | 3.4 | 182 |
| 65 | Strain differences in stress responsivity are associated with divergent amygdala gene expression and glutamate-mediated neuronal excitability. <i>Journal of Neuroscience</i> , 2010 , 30, 5357-67 | 6.6 | 179 |

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| 64 | Natural variation and genetic covariance in adult hippocampal neurogenesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 780-5 | 11.5 | 165 |
| 63 | Genetic dissection of complex and quantitative traits: from fantasy to reality via a community effort. <i>Mammalian Genome</i> , 2002 , 13, 175-8 | 3.2 | 159 |
| 62 | WebQTL: rapid exploratory analysis of gene expression and genetic networks for brain and behavior. <i>Nature Neuroscience</i> , 2004 , 7, 485-6 | 25.5 | 156 |
| 61 | Metabolic networks of longevity. <i>Cell</i> , 2010 , 142, 9-14 | 56.2 | 153 |
| 60 | Murine gut microbiota is defined by host genetics and modulates variation of metabolic traits. <i>PLoS ONE</i> , 2012 , 7, e39191 | 3.7 | 152 |
| 59 | Systems genetics of metabolism: the use of the BXD murine reference panel for multiscalar integration of traits. <i>Cell</i> , 2012 , 150, 1287-99 | 56.2 | 150 |
| 58 | The neuroscience information framework: a data and knowledge environment for neuroscience. <i>Neuroinformatics</i> , 2008 , 6, 149-60 | 3.2 | 148 |
| 57 | Metabolic stress modulates Alzheimer's ß-secretase gene transcription via SIRT1-PPAR-PPGC-1 in neurons. <i>Cell Metabolism</i> , 2013 , 17, 685-94 | 24.6 | 136 |
| 56 | Host genetic variation affects resistance to infection with a highly pathogenic H5N1 influenza A virus in mice. <i>Journal of Virology</i> , 2009 , 83, 10417-26 | 6.6 | 133 |
| 55 | Photoreceptor mosaic: number and distribution of rods and cones in the rhesus monkey retina. <i>Journal of Comparative Neurology</i> , 1990 , 297, 499-508 | 3.4 | 131 |
| 54 | Measurement of refractive state and deprivation myopia in two strains of mice. <i>Optometry and Vision Science</i> , 2004 , 81, 99-110 | 2.1 | 119 |
| 53 | Elimination of neurons from the rhesus monkey's lateral geniculate nucleus during development. <i>Journal of Comparative Neurology</i> , 1988 , 272, 424-36 | 3.4 | 112 |
| 52 | Genetic correlates of gene expression in recombinant inbred strains: a relational model system to explore neurobehavioral phenotypes. <i>Neuroinformatics</i> , 2003 , 1, 343-57 | 3.2 | 107 |
| 51 | Variation in mouse basolateral amygdala volume is associated with differences in stress reactivity and fear learning. <i>Neuropsychopharmacology</i> , 2008 , 33, 2595-604 | 8.7 | 106 |
| 50 | Formation of retinal ganglion cell topography during prenatal development. <i>Science</i> , 1987 , 236, 848-51 | 33.3 | 96 |
| 49 | Antisense transcription: a critical look in both directions. <i>Cellular and Molecular Life Sciences</i> , 2009 , 66, 94-112 | 10.3 | 95 |
| 48 | High susceptibility to experimental myopia in a mouse model with a retinal on pathway defect. <i>Investigative Ophthalmology and Visual Science</i> , 2008 , 49, 706-12 | | 92 |
| 47 | Genetic structure of the LXS panel of recombinant inbred mouse strains: a powerful resource for complex trait analysis. <i>Mammalian Genome</i> , 2004 , 15, 637-47 | 3.2 | 88 |

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| 46 | Reproducibility and replicability of rodent phenotyping in preclinical studies. <i>Neuroscience and Biobehavioral Reviews</i> , 2018 , 87, 218-232 | 9 | 83 |
| 45 | Combined expression trait correlations and expression quantitative trait locus mapping. <i>PLoS Genetics</i> , 2006 , 2, e6 | 6 | 83 |
| 44 | Dissection of a QTL hotspot on mouse distal chromosome 1 that modulates neurobehavioral phenotypes and gene expression. <i>PLoS Genetics</i> , 2008 , 4, e1000260 | 6 | 78 |
| 43 | Target recognition and visual maps in the thalamus of achiasmatic dogs. <i>Nature</i> , 1994 , 367, 637-9 | 50.4 | 76 |
| 42 | Genetic dissection of behavioral flexibility: reversal learning in mice. <i>Biological Psychiatry</i> , 2011 , 69, 1109-16 | 7.16 | 75 |
| 41 | Increased brain size and glial cell number in CD81-null mice. <i>Journal of Comparative Neurology</i> , 2002 , 453, 22-32 | 3.4 | 74 |
| 40 | The p47 GTPases ligp2 and Irgb10 regulate innate immunity and inflammation to murine Chlamydia psittaci infection. <i>Journal of Immunology</i> , 2007 , 179, 1814-24 | 5.3 | 70 |
| 39 | Dispersion of growing axons within the optic nerve of the embryonic monkey. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1985 , 82, 3906-10 | 11.5 | 67 |
| 38 | Quantitative trait locus analysis using recombinant inbred intercrosses: theoretical and empirical considerations. <i>Genetics</i> , 2005 , 170, 1299-311 | 4 | 66 |
| 37 | Inferring gene transcriptional modulatory relations: a genetical genomics approach. <i>Human Molecular Genetics</i> , 2005 , 14, 1119-25 | 5.6 | 66 |
| 36 | QTL analysis and genomewide mutagenesis in mice: complementary genetic approaches to the dissection of complex traits. <i>Behavior Genetics</i> , 2001 , 31, 5-15 | 3.2 | 66 |
| 35 | Fine-scale maps of recombination rates and hotspots in the mouse genome. <i>Genetics</i> , 2012 , 191, 757-64 | 4 | 65 |
| 34 | A strategy for the integration of QTL, gene expression, and sequence analyses. <i>Mammalian Genome</i> , 2003 , 14, 733-47 | 3.2 | 65 |
| 33 | Towards effective and rewarding data sharing. <i>Neuroinformatics</i> , 2003 , 1, 289-95 | 3.2 | 63 |
| 32 | Genetic architecture of the mouse hippocampus: identification of gene loci with selective regional effects. <i>Genes, Brain and Behavior</i> , 2003 , 2, 238-52 | 3.6 | 63 |
| 31 | The Diasporin Pathway: a tumor progression-related transcriptional network that predicts breast cancer survival. <i>Clinical and Experimental Metastasis</i> , 2008 , 25, 357-69 | 4.7 | 60 |
| 30 | Alcohol trait and transcriptional genomic analysis of C57BL/6 substrains. <i>Genes, Brain and Behavior</i> , 2008 , 7, 677-89 | 3.6 | 57 |
| 29 | Genetic Variation in the Social Environment Contributes to Health and Disease. <i>PLoS Genetics</i> , 2017 , 13, e1006498 | 6 | 53 |

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| 28 | Functionally enigmatic genes: a case study of the brain ignorome. <i>PLoS ONE</i> , 2014 , 9, e88889 | 3.7 | 53 |
| 27 | How replicable are mRNA expression QTL?. <i>Mammalian Genome</i> , 2006 , 17, 643-56 | 3.2 | 52 |
| 26 | Genetic segregation of spontaneous erosive arthritis and generalized autoimmune disease in the BXD2 recombinant inbred strain of mice. <i>Scandinavian Journal of Immunology</i> , 2005 , 61, 128-38 | 3.4 | 52 |
| 25 | Detection, validation, and downstream analysis of allelic variation in gene expression. <i>Genetics</i> , 2010 , 184, 119-28 | 4 | 48 |
| 24 | A promoter polymorphism in the Per3 gene is associated with alcohol and stress response. <i>Translational Psychiatry</i> , 2012 , 2, e73 | 8.6 | 48 |
| 23 | Genetic control of retinal projections in inbred strains of albino mice. <i>Journal of Comparative Neurology</i> , 1995 , 354, 459-69 | 3.4 | 48 |
| 22 | Structure of clonal and polyclonal cell arrays in chimeric mouse retina. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1992 , 89, 1184-8 | 11.5 | 48 |
| 21 | Genome-level analysis of genetic regulation of liver gene expression networks. <i>Hepatology</i> , 2007 , 46, 548-57 | 11.2 | 44 |
| 20 | Lineage versus environment in embryonic retina: a revisionist perspective. <i>Trends in Neurosciences</i> , 1992 , 15, 368-73 | 13.3 | 44 |
| 19 | Exploiting regulatory variation to identify genes underlying quantitative resistance to the wheat stem rust pathogen <i>Puccinia graminis</i> f. sp. <i>tritici</i> in barley. <i>Theoretical and Applied Genetics</i> , 2008 , 117, 261-72 | 6 | 41 |
| 18 | Orbitofrontal Neuroadaptations and Cross-Species Synaptic Biomarkers in Heavy-Drinking Macaques. <i>Journal of Neuroscience</i> , 2017 , 37, 3646-3660 | 6.6 | 32 |
| 17 | Genetic variation of the cutaneous HPA axis: an analysis of UVB-induced differential responses. <i>Gene</i> , 2013 , 530, 1-7 | 3.8 | 29 |
| 16 | A platform for experimental precision medicine: The extended BXD mouse family. <i>Cell Systems</i> , 2021 , 12, 235-247.e9 | 10.6 | 29 |
| 15 | Resources for Systems Genetics. <i>Methods in Molecular Biology</i> , 2017 , 1488, 3-29 | 1.4 | 19 |
| 14 | Genetic cartography of longevity in humans and mice: Current landscape and horizons. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2018 , 1864, 2718-2732 | 6.9 | 18 |
| 13 | Genetics of gene expression in CNS. <i>International Review of Neurobiology</i> , 2014 , 116, 195-231 | 4.4 | 18 |
| 12 | Genetic and molecular network analysis of behavior. <i>International Review of Neurobiology</i> , 2012 , 104, 135-57 | 4.4 | 16 |
| 11 | GeneNetwork: framework for web-based genetics. <i>Journal of Open Source Software</i> , 2016 , 1, 25 | 5.2 | 15 |

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| 10 | The expanded BXD family of mice: A cohort for experimental systems genetics and precision medicine | | 15 |
| 9 | Variability and heritability of mouse brain structure: Microscopic MRI atlases and connectomes for diverse strains. <i>NeuroImage</i> , 2020 , 222, 117274 | 7.9 | 8 |
| 8 | Post-genomic behavioral genetics: From revolution to routine. <i>Genes, Brain and Behavior</i> , 2018 , 17, e124416 | 4.6 | 6 |
| 7 | Identifying the molecular systems that influence cognitive resilience to Alzheimer's disease in genetically diverse mice. <i>Learning and Memory</i> , 2020 , 27, 355-371 | 2.8 | 5 |
| 6 | Gene-by-environment modulation of lifespan and weight gain in the murine BXD family. <i>Nature Metabolism</i> , 2021 , 3, 1217-1227 | 14.6 | 5 |
| 5 | The genome sequence of the Norway rat, Berkenhout 1769. <i>Wellcome Open Research</i> , 2021 , 6, 118 | 4.8 | 4 |
| 4 | Correlation Trait Loci (CTL) mapping: phenotype network inference subject to genotype. <i>Journal of Open Source Software</i> , 2016 , 1, 87 | 5.2 | 3 |
| 3 | Preface to a special issue on genetic models of alcoholism and alcohol-stress interactions. <i>Alcohol</i> , 2017 , 58, 23-24 | 2.7 | 1 |
| 2 | Highlights from the Era of Open Source Web-Based Tools. <i>Journal of Neuroscience</i> , 2021 , 41, 927-936 | 6.6 | 1 |
| 1 | Systems genetics in the rat HXB/BXH family identifies Tti2 as a pleiotropic quantitative trait gene for adult hippocampal neurogenesis and serum glucose.. <i>PLoS Genetics</i> , 2022 , 18, e1009638 | 6 | 0 |