

Frank Grutzner

List of Publications by Year in descending order

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97
papers

8,947
citations

87888

38
h-index

53230

85
g-index

105
all docs

105
docs citations

105
times ranked

10925
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards complete and error-free genome assemblies of all vertebrate species. <i>Nature</i> , 2021, 592, 737-746.	27.8	1,139
2	The evolution of gene expression levels in mammalian organs. <i>Nature</i> , 2011, 478, 343-348.	27.8	1,080
3	The evolution of lncRNA repertoires and expression patterns in tetrapods. <i>Nature</i> , 2014, 505, 635-640.	27.8	898
4	Genome analysis of the platypus reveals unique signatures of evolution. <i>Nature</i> , 2008, 453, 175-183.	27.8	657
5	Origins and functional evolution of Y chromosomes across mammals. <i>Nature</i> , 2014, 508, 488-493.	27.8	448
6	300 million years of conserved synteny between chicken Z and human chromosome 9. <i>Nature Genetics</i> , 1999, 21, 258-259.	21.4	330
7	Bird-like sex chromosomes of platypus imply recent origin of mammal sex chromosomes. <i>Genome Research</i> , 2008, 18, 965-973.	5.5	268
8	In the platypus a meiotic chain of ten sex chromosomes shares genes with the bird Z and mammal X chromosomes. <i>Nature</i> , 2004, 432, 913-917.	27.8	252
9	Evidence for hormonal control of heart regenerative capacity during endothermy acquisition. <i>Science</i> , 2019, 364, 184-188.	12.6	252
10	Ancient Transposable Elements Transformed the Uterine Regulatory Landscape and Transcriptome during the Evolution of Mammalian Pregnancy. <i>Cell Reports</i> , 2015, 10, 551-561.	6.4	249
11	Mechanisms and Evolutionary Patterns of Mammalian and Avian Dosage Compensation. <i>PLoS Biology</i> , 2012, 10, e1001328.	5.6	198
12	Epigenetic conservation at gene regulatory elements revealed by non-methylated DNA profiling in seven vertebrates. <i>ELife</i> , 2013, 2, e00348.	6.0	192
13	Conserved synteny between the chicken Z sex chromosome and human chromosome 9 includes the male regulatory gene <i>DMRT1</i> ; a comparative (re)view on avian sex determination. <i>Cytogenetic and Genome Research</i> , 2000, 89, 67-78.	1.1	159
14	Resolution and evolution of the duck-billed platypus karyotype with an X ₁ Y ₁ X ₂ Y ₂ X ₃ Y ₃ X ₄ Y ₄ X ₅ Y ₅ male sex chromosome constitution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 16257-16261.	7.1	149
15	Global methylation in eutherian hybrids. <i>Nature</i> , 1999, 401, 131-132.	27.8	145
16	Transcriptome and translome co-evolution in mammals. <i>Nature</i> , 2020, 588, 642-647.	27.8	122
17	Primate Evolution of an Olfactory Receptor Cluster: Diversification by Gene Conversion and Recent Emergence of Pseudogenes. <i>Genomics</i> , 1999, 61, 24-36.	2.9	119
18	The multiple sex chromosomes of platypus and echidna are not completely identical and several share homology with the avian Z. <i>Genome Biology</i> , 2007, 8, R243.	9.6	119

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19	RNA sequencing reveals sexually dimorphic gene expression before gonadal differentiation in chicken and allows comprehensive annotation of the W-chromosome. <i>Genome Biology</i> , 2013, 14, R26.	9.6	98
20	Platypus and echidna genomes reveal mammalian biology and evolution. <i>Nature</i> , 2021, 592, 756-762.	27.8	85
21	Microchromosomes are building blocks of bird, reptile, and mammal chromosomes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	84
22	Chromosomics: Bridging the Gap between Genomes and Chromosomes. <i>Genes</i> , 2019, 10, 627.	2.4	79
23	Targeted Deletion of an Entire Chromosome Using CRISPR/Cas9. <i>Molecular Therapy</i> , 2017, 25, 1736-1738.	8.2	71
24	An XX/XY sex microchromosome system in a freshwater turtle, <i>Chelodina longicollis</i> (Testudines: Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	2.2	68
25	Sex determination in platypus and echidna: autosomal location of SOX3 confirms the absence of SRY from monotremes. <i>Chromosome Research</i> , 2007, 15, 949-959.	2.2	66
26	The emergence of the brain non-CpG methylation system in vertebrates. <i>Nature Ecology and Evolution</i> , 2021, 5, 369-378.	7.8	63
27	Retroposed SNOfall–A mammalian-wide comparison of platypus snoRNAs. <i>Genome Research</i> , 2008, 18, 1005-1010.	5.5	62
28	How did the platypus get its sex chromosome chain? A comparison of meiotic multiples and sex chromosomes in plants and animals. <i>Chromosoma</i> , 2006, 115, 75-88.	2.2	60
29	Platypus <i>Pou5f1</i> reveals the first steps in the evolution of trophoctoderm differentiation and pluripotency in mammals. <i>Evolution & Development</i> , 2008, 10, 671-682.	2.0	60
30	Cone visual pigments of monotremes: Filling the phylogenetic gap. <i>Visual Neuroscience</i> , 2008, 25, 257-264.	1.0	60
31	Simian Y Chromosomes: species-specific rearrangements of DAZ, RBM, and TSPY versus contiguity of PAR and SRY. <i>Mammalian Genome</i> , 1998, 9, 226-231.	2.2	58
32	Disruption and pseudoautosomal localization of the major histocompatibility complex in monotremes. <i>Genome Biology</i> , 2007, 8, R175.	9.6	55
33	Overexpression of piRNA Pathway Genes in Epithelial Ovarian Cancer. <i>PLoS ONE</i> , 2014, 9, e99687.	2.5	54
34	DMRT gene cluster analysis in the platypus: New insights into genomic organization and regulatory regions. <i>Genomics</i> , 2007, 89, 10-21.	2.9	52
35	Comparative Mapping of Mouse and Rat Chromosomes by Fluorescence in Situ Hybridization. <i>Genomics</i> , 1999, 55, 306-313.	2.9	46
36	RBMX gene is essential for brain development in zebrafish. <i>Developmental Dynamics</i> , 2005, 234, 682-688.	1.8	46

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37	Loss of genes implicated in gastric function during platypus evolution. <i>Genome Biology</i> , 2008, 9, R81.	9.6	44
38	Comparative and functional analyses of LYL1 loci establish marsupial sequences as a model for phylogenetic footprinting† †Sequence data from this article have been deposited with the DDBJ/EMBL/GenBank Data Libraries under Accession No. AL731834.. <i>Genomics</i> , 2003, 81, 249-259.	2.9	42
39	An Exon Splice Enhancer Primes IGF2:IGF2R Binding Site Structure and Function Evolution. <i>Science</i> , 2012, 338, 1209-1213.	12.6	40
40	The monotreme genome: a patchwork of reptile, mammal and unique features?. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2003, 136, 867-881.	1.8	39
41	Conservation of small RNA pathways in platypus. <i>Genome Research</i> , 2008, 18, 995-1004.	5.5	39
42	Characterization of the Mel1c melatoninergic receptor in platypus (<i>Ornithorhynchus anatinus</i>). <i>PLoS ONE</i> , 2018, 13, e0191904.	2.5	35
43	Classical and molecular cytogenetics of the pufferfish <i>Tetraodon nigroviridis</i> . <i>Chromosome Research</i> , 1999, 7, 655-662.	2.2	33
44	A platypusâ€™ eye view of the mammalian genome. <i>Current Opinion in Genetics and Development</i> , 2004, 14, 642-649.	3.3	30
45	Conservation and Expression of PIWI-Interacting RNA Pathway Genes in Male and Female Adult Gonad of Amniotes1. <i>Biology of Reproduction</i> , 2013, 89, 136.	2.7	28
46	Insights into Platypus Population Structure and History from Whole-Genome Sequencing. <i>Molecular Biology and Evolution</i> , 2018, 35, 1238-1252.	8.9	27
47	Plasticity of human chromosome 3 during primate evolution. <i>Genomics</i> , 2004, 83, 193-202.	2.9	26
48	Reproductive Biology in Egg-Laying Mammals. <i>Sexual Development</i> , 2008, 2, 115-127.	2.0	26
49	Chromosome Analysis in Invertebrates and Vertebrates. <i>Methods in Molecular Biology</i> , 2012, 772, 13-35.	0.9	26
50	Widespread Divergence of the CEACAM/PSG Genes in Vertebrates and Humans Suggests Sensitivity to Selection. <i>PLoS ONE</i> , 2013, 8, e61701.	2.5	25
51	Four-Hundred Million Years of Conserved Syteny of Human Xp and Xq Genes on Three Tetraodon Chromosomes. <i>Genome Research</i> , 2002, 12, 1316-1322.	5.5	24
52	Construction of a highly enriched marsupial Y chromosome-specific BAC sub-library using isolated Y chromosomes. <i>Chromosome Research</i> , 2006, 14, 657-664.	2.2	23
53	Lack of sex chromosome specific meiotic silencing in platypus reveals origin of MSCI in therian mammals. <i>BMC Biology</i> , 2015, 13, 106.	3.8	23
54	Higher-order genome organization in platypus and chicken sperm and repositioning of sex chromosomes during mammalian evolution. <i>Chromosoma</i> , 2009, 118, 53-69.	2.2	22

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55	Inverted and satellited Y chromosome in the orangutan (<i>Pongo pygmaeus</i>). <i>Chromosome Research</i> , 1993, 1, 69-75.	2.2	19
56	Comparative mapping of Xp22 genes in hominoids—evolutionary linear instability of their Y homologues. <i>Chromosome Research</i> , 1997, 5, 167-176.	2.2	19
57	Characterizing the chromosomes of the platypus (<i>Ornithorhynchus anatinus</i>). <i>Chromosome Research</i> , 2007, 15, 961-974.	2.2	18
58	Mapping platypus SOX genes; autosomal location of SOX9 excludes it from sex determining role. <i>Cytogenetic and Genome Research</i> , 2007, 116, 232-234.	1.1	17
59	Characterisation of ATRX, DMRT1, DMRT7 and WT1 in the platypus (<i>Ornithorhynchus anatinus</i>). <i>Reproduction, Fertility and Development</i> , 2009, 21, 985.	0.4	14
60	Location, Location, Location! Monotremes Provide Unique Insights into the Evolution of Sex Chromosome Silencing in Mammals. <i>DNA and Cell Biology</i> , 2009, 28, 91-100.	1.9	14
61	Molecular cloning and characterization of the <i>Fugu rubripes</i> MEST/COPG2 imprinting cluster and chromosomal localization in <i>Fugu</i> and <i>Tetraodon nigroviridis</i> . <i>Chromosome Research</i> , 2000, 8, 465-476.	2.2	13
62	Genomic structure and paralogous regions of the inversion breakpoint occurring between human chromosome 3p12.3 and orangutan chromosome 2. <i>Cytogenetic and Genome Research</i> , 2005, 108, 98-105.	1.1	13
63	Analysis of SINE and LINE repeat content of Y chromosomes in the platypus, <i>Ornithorhynchus anatinus</i> . <i>Reproduction, Fertility and Development</i> , 2009, 21, 964.	0.4	13
64	<i>Tachyglossus aculeatus</i> (Monotremata: Tachyglossidae). <i>Mammalian Species</i> , 2019, 51, 75-91.	0.7	13
65	Monotreme glucagon-like peptide-1 in venom and gut: one gene “two very different functions. <i>Scientific Reports</i> , 2016, 6, 37744.	3.3	12
66	Reduced Gonadotrophin Receptor Expression Is Associated with a More Aggressive Ovarian Cancer Phenotype. <i>International Journal of Molecular Sciences</i> , 2021, 22, 71.	4.1	12
67	Evolution and Male Fertility: Lessons from the Insulin-Like Factor 6 Gene (<i>Insl6</i>). <i>Endocrinology</i> , 2009, 150, 3986-3990.	2.8	11
68	Ancestry of the Australian Termitivorous Numbat. <i>Molecular Biology and Evolution</i> , 2013, 30, 1041-1045.	8.9	11
69	Replication asynchrony and differential condensation of X chromosomes in female platypus (<i>Ornithorhynchus anatinus</i>). <i>Reproduction, Fertility and Development</i> , 2009, 21, 952.	0.4	10
70	Platypus chain reaction: directional and ordered meiotic pairing of the multiple sex chromosome chain in <i>Ornithorhynchus anatinus</i> . <i>Reproduction, Fertility and Development</i> , 2009, 21, 976.	0.4	10
71	Insights into the evolution of mammalian telomerase: Platypus TERT shares similarities with genes of birds and other reptiles and localizes on sex chromosomes. <i>BMC Genomics</i> , 2012, 13, 216.	2.8	10
72	Evolution and meiotic organization of heteromorphic sex chromosomes. <i>Current Topics in Developmental Biology</i> , 2019, 134, 1-48.	2.2	10

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73	Changes in the ghrelin hormone pathway maybe part of an unusual gastric system in monotremes. <i>General and Comparative Endocrinology</i> , 2013, 191, 74-82.	1.8	9
74	A Comprehensive Molecular and Clinical Analysis of the piRNA Pathway Genes in Ovarian Cancer. <i>Cancers</i> , 2021, 13, 4.	3.7	9
75	EchidnaCSI: Engaging the public in research and conservation of the short-beaked echidna. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	9
76	Identification of mediator complex 26 (Crs7) gametologs on platypus X1 and Y5 sex chromosomes: a candidate testis-determining gene in monotremes?. <i>Chromosome Research</i> , 2012, 20, 127-138.	2.2	8
77	COVID restrictions impact wildlife monitoring in Australia. <i>Biological Conservation</i> , 2022, 267, 109470.	4.1	8
78	Characterising the Gut Microbiomes in Wild and Captive Short-Beaked Echidnas Reveals Diet-Associated Changes. <i>Frontiers in Microbiology</i> , 0, 13, .	3.5	8
79	Species-specific evolution of repeated DNA sequences in great apes. <i>Chromosome Research</i> , 2001, 9, 431-435.	2.2	7
80	Remodelling of the bovine placenta: Comprehensive morphological and histomorphological characterization at the late embryonic and early accelerated fetal growth stages. <i>Placenta</i> , 2017, 55, 37-46.	1.5	7
81	Differential cohesin loading marks paired and unpaired regions of platypus sex chromosomes at prophase I. <i>Scientific Reports</i> , 2017, 7, 4217.	3.3	7
82	Non-invasive genetic sexing technique for analysis of short-beaked echidna (<i>Tachyglossus aculeatus</i>) populations. <i>Reproduction, Fertility and Development</i> , 2019, 31, 1289.	0.4	6
83	Restriction of an intron size <i>en route</i> to endothermy. <i>Nucleic Acids Research</i> , 2021, 49, 2460-2487.	14.5	6
84	Segmental duplication associated with evolutionary instability of human chromosome 3p25.1. <i>Cytogenetic and Genome Research</i> , 2006, 112, 202-207.	1.1	5
85	Flavors of Non-Random Meiotic Segregation of Autosomes and Sex Chromosomes. <i>Genes</i> , 2021, 12, 1338.	2.4	5
86	Isolation of chromosomal regions controlling intersex development in a marsupial. <i>Cytogenetic and Genome Research</i> , 2003, 101, 224-228.	1.1	4
87	Assignment of <i>SOX1</i> to platypus chromosome 20q by fluorescence <i>in situ</i> hybridization. <i>Cytogenetic and Genome Research</i> , 2006, 112, 342L-342L.	1.1	4
88	Identification and characterisation of synaptonemal complex genes in monotremes. <i>Gene</i> , 2015, 567, 146-153.	2.2	3
89	Immunohistochemical analysis of pancreatic islets of platypus (<i>Ornithorhynchus anatinus</i>) and echidna (<i>Tachyglossus aculeatus</i> ssp.). <i>Journal of Anatomy</i> , 2015, 226, 373-380.	1.5	3
90	EchidnaCSI – Improving monitoring of a cryptic species at continental scale using Citizen Science. <i>Global Ecology and Conservation</i> , 2021, 28, e01626.	2.1	3

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91	The enigma of the platypus genome. Australian Journal of Zoology, 2009, 57, 157.	1.0	2
92	Functional Diversity and Evolution of Bitter Taste Receptors in Egg-Laying Mammals. Molecular Biology and Evolution, 2022, 39, .	8.9	2
93	Evolution, Expression and Meiotic Behavior of Genes Involved in Chromosome Segregation of Monotremes. Genes, 2021, 12, 1320.	2.4	1
94	The Evolution of Viviparity in Vertebrates. Advances in Anatomy, Embryology and Cell Biology, 2021, 234, 7-19.	1.6	1
95	Replication Timing: Evolution, Nuclear Organization and Relevance for Human Disease. , 0, , .		0
96	PIWI-Interacting RNAs (piRNAs) and Cancer. , 2018, , 131-150.		0
97	Reproduction in Monotremes. , 2018, , 602-608.		0