Tal Dagan

List of Publications by Citations

89 papers	4,450 citations	38 h-index	66 g-index
102 ext. papers	5,510 ext. citations	7.8 avg, IF	5.75 L-index

#	Paper	IF	Citations
89	Modular networks and cumulative impact of lateral transfer in prokaryote genome evolution. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 10039-44	11.5	285
88	The tree of one percent. *Genome Biology*, **2006**, 7, 118	18.3	255
87	Genomes of Stigonematalean cyanobacteria (subsection V) and the evolution of oxygenic photosynthesis from prokaryotes to plastids. *Genome Biology and Evolution*, **2013**, 5, 31-44	3.9	182
86	Acquisition of 1,000 eubacterial genes physiologically transformed a methanogen at the origin of Haloarchaea. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 20537-42	11.5	180
85	Genes of cyanobacterial origin in plant nuclear genomes point to a heterocyst-forming plastid ancestor. *Molecular Biology and Evolution*, **2008**, 25, 748-61	8.3	176
84	Directed networks reveal genomic barriers and DNA repair bypasses to lateral gene transfer among prokaryotes. *Genome Research*, **2011**, 21, 599-609	9.7	168
83	Ancestral genome sizes specify the minimum rate of lateral gene transfer during prokaryote evolution. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 870-5	11.5	165
82	Trends and barriers to lateral gene transfer in prokaryotes. *Current Opinion in Microbiology*, **2011**, 14, 615-23	7.9	161
81	Prokaryotic evolution and the tree of life are two different things. *Biology Direct*, **2009**, 4, 34	7.2	161
80	A proteomic survey of Chlamydomonas reinhardtii mitochondria sheds new light on the metabolic plasticity of the organelle and on the nature of the alpha-proteobacterial mitochondrial ancestor. *Molecular Biology and Evolution*, **2009**, 26, 1533-48	8.3	151
79	Minimal conditions for exonization of intronic sequences: 5Q splice site formation in alu exons. *Molecular Cell*, **2004**, 14, 221-31	17.6	137
78	Networks of gene sharing among 329 proteobacterial genomes reveal differences in lateral gene transfer frequency at different phylogenetic depths. *Molecular Biology and Evolution*, **2011**, 28, 1057-74	8.3	112
77	Plasmodium falciparum-encoded exported hsp70/hsp40 chaperone/co-chaperone complexes within the host erythrocyte. *Cellular Microbiology*, **2012**, 14, 1784-95	3.9	108
76	Transcriptomic evidence that longevity of acquired plastids in the photosynthetic slugs Elysia timida and Plakobranchus ocellatus does not entail lateral transfer of algal nuclear genes. *Molecular Biology and Evolution*, **2011**, 28, 699-706	8.3	106
75	The genome of the obligate intracellular parasite Trachipleistophora hominis: new insights into microsporidian genome dynamics and reductive evolution. *PLoS Pathogens*, **2012**, 8, e1002979	7.6	105
74	An evolutionary network of genes present in the eukaryote common ancestor polls genomes on eukaryotic and mitochondrial origin. *Genome Biology and Evolution*, **2012**, 4, 466-85	3.9	104
73	Metaorganisms in extreme environments: do microbes play a role in organismal adaptation?. *Zoology*, **2018**, 127, 1-19	1.7	94

72	Phylogenetic rooting using minimal ancestor deviation. *Nature Ecology and Evolution*, **2017**, 1, 193	12.3	81
71	The origin of mitochondria in light of a fluid prokaryotic chromosome model. *Biology Letters*, **2007**, 3, 180-4	3.6	74
70	Comparative analysis of amplicon and metagenomic sequencing methods reveals key features in the evolution of animal metaorganisms. *Microbiome*, **2019**, 7, 133	16.6	73
69	Emergence of plasmid stability under non-selective conditions maintains antibiotic resistance. *Nature Communications*, **2019**, 10, 2595	17.4	72
68	Red and problematic green phylogenetic signals among thousands of nuclear genes from the photosynthetic and apicomplexa-related Chromera velia. *Genome Biology and Evolution*, **2011**, 3, 1220-30	3.9	71
67	Genome networks root the tree of life between prokaryotic domains. *Genome Biology and Evolution* , **2010**, 2, 379-92	3.9	70
66	Ratios of radical to conservative amino acid replacement are affected by mutational and compositional factors and may not be indicative of positive Darwinian selection. *Molecular Biology and Evolution*, **2002**, 19, 1022-5	8.3	64
65	The "domino theory" of gene death: gradual and mass gene extinction events in three lineages of obligate symbiotic bacterial pathogens. *Molecular Biology and Evolution*, **2006**, 23, 310-6	8.3	63
64	Getting a better picture of microbial evolution en route to a network of genomes. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2009**, 364, 2187-96	5.8	62
63	Phylogenomic networks. *Trends in Microbiology*, **2011**, 19, 483-91	12.4	61
62	GC composition of the human genome: in search of isochores. *Molecular Biology and Evolution*, **2005**, 22, 1260-72	8.3	61
61	AluGene: a database of Alu elements incorporated within protein-coding genes. *Nucleic Acids Research*, **2004**, 32, D489-92	20.1	54
60	An evolutionary perspective on plasmid lifestyle modes. *Current Opinion in Microbiology*, **2017**, 38, 74-80	7.9	49
59	Networks uncover hidden lexical borrowing in Indo-European language evolution. *Proceedings of the Royal Society B: Biological Sciences*, **2011**, 278, 1794-803	4.4	49
58	Phylogenomic networks reveal limited phylogenetic range of lateral gene transfer by transduction. *ISME Journal*, **2017**, 11, 543-554	11.9	48
57	Cumulative impact of chaperone-mediated folding on genome evolution. *Biochemistry*, **2012**, 51, 9941-53	3.2	45
56	A Novel Eukaryotic Denitrification Pathway in Foraminifera. *Current Biology*, **2018**, 28, 2536-2543.e5	6.3	43
55	Chaperonin-dependent accelerated substitution rates in prokaryotes. *Genome Biology and Evolution* , **2010**, 2, 602-8	3.9	41

54	Genome history in the symbiotic hybrid Euglena gracilis. *Gene*, **2007**, 402, 35-9	3.8	40
53	Metabolic preference of nitrate over oxygen as an electron acceptor in foraminifera from the Peruvian oxygen minimum zone. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 2860-2865	11.5	39
52	Rates of Mutation and Recombination in Siphoviridae Phage Genome Evolution over Three Decades. *Molecular Biology and Evolution*, **2018**, 35, 1147-1159	8.3	39
51	Transformation and conjugal transfer of foreign genes into the filamentous multicellular cyanobacteria (subsection V) Fischerella and Chlorogloeopsis. *Current Microbiology*, **2012**, 65, 552-60	2.4	33
50	Cyanobacterial defense mechanisms against foreign DNA transfer and their impact on genetic engineering. *Biological Research*, **2013**, 46, 373-82	7.6	31
49	Microbiology. Seeing green and red in diatom genomes. *Science*, **2009**, 324, 1651-2	33.3	26
48	The Contribution of Genetic Recombination to CRISPR Array Evolution. *Genome Biology and Evolution*, **2015**, 7, 1925-39	3.9	24
47	The evolution of eukaryotes. *Science*, **2007**, 316, 542-3; author reply 542-3	33.3	24
46	Segregational Drift and the Interplay between Plasmid Copy Number and Evolvability. *Molecular Biology and Evolution*, **2019**, 36, 472-486	8.3	24
45	Evolutionary dynamics of introns in plastid-derived genes in plants: saturation nearly reached but slow intron gain continues. *Molecular Biology and Evolution*, **2008**, 25, 111-9	8.3	23
44	Carrying Capacity and Colonization Dynamics of in the Host Habitat. *Frontiers in Microbiology*, **2018**, 9, 443	5.7	22
43	Horizontally transmitted symbiont populations in deep-sea mussels are genetically isolated. *ISME Journal*, **2019**, 13, 2954-2968	11.9	21
42	Somatic genetic drift and multilevel selection in a clonal seagrass. *Nature Ecology and Evolution*, **2020**, 4, 952-962	12.3	21
41	Evolution of spliceosomal introns following endosymbiotic gene transfer. *BMC Evolutionary Biology*, **2010**, 10, 57	3	21
40	Expansion of the redox-sensitive proteome coincides with the plastid endosymbiosis. *Nature Plants*, **2017**, 3, 17066	11.5	20
39	A machine learning approach to identify hydrogenosomal proteins in Trichomonas vaginalis. *Eukaryotic Cell*, **2012**, 11, 217-28		20
38	Recombination Signal in Mycobacterium tuberculosis Stems from Reference-guided Assemblies and Alignment Artefacts. *Genome Biology and Evolution*, **2018**, 10, 1920-1926	3.9	18
37	Currency, Exchange, and Inheritance in the Evolution of Symbiosis. *Trends in Microbiology*, **2019**, 27, 836-849	12.4	17

36	Chaperones divide yeast proteins into classes of expression level and evolutionary rate. *Genome Biology and Evolution*, **2012**, 4, 618-25	3.9	16
35	Plasticity first: molecular signatures of a complex morphological trait in filamentous cyanobacteria. *BMC Evolutionary Biology*, **2017**, 17, 209	3	15
34	Interactions and Coadaptation in Plant Metaorganisms. *Annual Review of Phytopathology*, **2019**, 57, 483-503	10.8	15
33	Testing hypotheses without considering predictions. *BioEssays*, **2007**, 29, 500-3	4.1	15
32	DnaK-Dependent Accelerated Evolutionary Rate in Prokaryotes. *Genome Biology and Evolution*, **2016**, 8, 1590-9	3.9	15
31	Integration of two ancestral chaperone systems into one: the evolution of eukaryotic molecular chaperones in light of eukaryogenesis. *Molecular Biology and Evolution*, **2014**, 31, 410-8	8.3	14
30	The comparative method rules! Codon volatility cannot detect positive Darwinian selection using a single genome sequence. *Molecular Biology and Evolution*, **2005**, 22, 496-500	8.3	13
29	Antibiotics Interfere with the Evolution of Plasmid Stability. *Current Biology*, **2020**, 30, 3841-3847.e4	6.3	13
28	Seed-Derived Microbial Colonization of Wild Emmer and Domesticated Bread Wheat (and) Seedlings Shows Pronounced Differences in Overall Diversity and Composition. *MBio*, **2020**, 11,	7.8	12
27	A machine-learning approach reveals that alignment properties alone can accurately predict inference of lateral gene transfer from discordant phylogenies. *Molecular Biology and Evolution*, **2009**, 26, 1931-9	8.3	10
26	Identification and characterization of novel filament-forming proteins in cyanobacteria. *Scientific Reports*, **2020**, 10, 1894	4.9	10
25	A novel septal protein of multicellular heterocystous cyanobacteria is associated with the divisome. *Molecular Microbiology*, **2020**, 113, 1140-1154	4.1	9
24	The Effect of Population Bottleneck Size and Selective Regime on Genetic Diversity and Evolvability in Bacteria. *Genome Biology and Evolution*, **2019**, 11, 3283-3290	3.9	9
23	Evolthon: A community endeavor to evolve lab evolution. *PLoS Biology*, **2019**, 17, e3000182	9.7	8
22	pANT: a method for the pairwise assessment of nonfunctionalization times of processed pseudogenes. *Molecular Biology and Evolution*, **2003**, 20, 1876-80	8.3	8
21	Evolution of Chaperonin Gene Duplication in Stigonematalean Cyanobacteria (Subsection V). *Genome Biology and Evolution*, **2017**, 9, 241-252	3.9	7
20	Discovery of multi-operon colinear syntenic blocks in microbial genomes. *Bioinformatics*, **2020**, 36, i21-i29	7.2	7
19	Essential gene acquisition destabilizes plasmid inheritance. *PLoS Genetics*, **2021**, 17, e1009656	6	6

18	Insertion and deletion evolution reflects antibiotics selection pressure in a Mycobacterium tuberculosis outbreak. *PLoS Pathogens*, **2020**, 16, e1008357	7.6	5
17	The Order of Trait Emergence in the Evolution of Cyanobacterial Multicellularity. *Genome Biology and Evolution*, **2021**, 13,	3.9	5
16	Intracellular Competitions Reveal Determinants of Plasmid Evolutionary Success. *Frontiers in Microbiology*, **2020**, 11, 2062	5.7	5
15	CSBFinder: discovery of colinear syntenic blocks across thousands of prokaryotic genomes. *Bioinformatics*, **2019**, 35, 1634-1643	7.2	5
14	Colonization dynamics of Pantoea agglomerans in the wheat root habitat. *Environmental Microbiology*, **2021**, 23, 2260-2273	5.2	5
13	Rates of Molecular Evolution in a Marine Phage Lineage. *Viruses*, **2019**, 11,	6.2	4
12	Gene sharing among plasmids and chromosomes reveals barriers for antibiotic resistance gene transfer. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2022**, 377, 20200467	5.8	4
11	Quantification of Plasmid-Mediated Antibiotic Resistance in an Experimental Evolution Approach. *Journal of Visualized Experiments*, **2019**,	1.6	3
10	Two novel heteropolymer-forming proteins maintain the multicellular shape of the cyanobacterium Anabaena sp. PCC 7120. *FEBS Journal*, **2021**, 288, 3197-3216	5.7	3
9	Natural competence inChlorogloeopsis fritschiiPCC 6912 and other ramified cyanobacteria		2
8	Horizontally transmitted symbiont populations in deep-sea mussels are genetically isolated		2
7	The order of trait emergence in the evolution of cyanobacterial multicellularity		2
6	Plasmid evolution. *Current Biology*, **2020**, 30, R1158-R1163	6.3	2
5	Application and comparative performance of network modularity algorithms to ecological communities classification. *Acta Societatis Botanicorum Poloniae*, **2014**, 83, 93-102	1.5	1
4	Segregational drift and the interplay between plasmid copy number and evolvability		1
3	Darwinian individuality of extrachromosomal genetic elements calls for population genetics tinkering. *Environmental Microbiology Reports*, **2021**, 13, 22-26	3.7	1
2	Segregational Drift Constrains the Evolutionary Rate of Prokaryotic Plasmids. *Molecular Biology and Evolution*, **2021**, 38, 5610-5624	8.3	1
1	Phylogenomic Networks of Microbial Genome Evolution **2015**, 4.1.1-1-4.1.1-18		