Rafael Sanjuan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3278705/publications.pdf

Version: 2024-02-01

106	7,059	94433 37	66911 78
papers	citations	h-index	g-index

108	108	108	7648
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Viral Mutation Rates. Journal of Virology, 2010, 84, 9733-9748.	3.4	1,078
2	Mechanisms of viral mutation. Cellular and Molecular Life Sciences, 2016, 73, 4433-4448.	5.4	621
3	The distribution of fitness effects caused by single-nucleotide substitutions in an RNA virus. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8396-8401.	7.1	513
4	Extremely High Mutation Rate of HIV-1 In Vivo. PLoS Biology, 2015, 13, e1002251.	5.6	291
5	Adaptive Value of High Mutation Rates of RNA Viruses: Separating Causes from Consequences. Journal of Virology, 2005, 79, 11555-11558.	3.4	265
6	The contribution of epistasis to the architecture of fitness in an RNA virus. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15376-15379.	7.1	216
7	Extremely High Mutation Rate of a Hammerhead Viroid. Science, 2009, 323, 1308-1308.	12.6	215
8	Gibberellin Regulation of Fruit Set and Growth in Tomato. Plant Physiology, 2007, 145, 246-257.	4.8	200
9	Mutational fitness effects in RNA and single-stranded DNA viruses: common patterns revealed by site-directed mutagenesis studies. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 1975-1982.	4.0	161
10	Selection for Robustness in Mutagenized RNA Viruses. PLoS Genetics, 2007, 3, e93.	3.5	149
11	Epistasis correlates to genomic complexity. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 14402-14405.	7.1	146
12	Viroids: Survivors from the RNA World?. Annual Review of Microbiology, 2014, 68, 395-414.	7.3	142
13	Effect of Ribavirin on the Mutation Rate and Spectrum of Hepatitis C Virus In Vivo. Journal of Virology, 2009, 83, 5760-5764.	3.4	141
14	Mechanisms of genetic robustness in RNA viruses. EMBO Reports, 2006, 7, 168-173.	4.5	136
15	From Molecular Genetics to Phylodynamics: Evolutionary Relevance of Mutation Rates Across Viruses. PLoS Pathogens, 2012, 8, e1002685.	4.7	124
16	Virus Evolution: Insights from an Experimental Approach. Annual Review of Ecology, Evolution, and Systematics, 2007, 38, 27-52.	8.3	103
17	The Fitness Effects of Synonymous Mutations in DNA and RNA Viruses. Molecular Biology and Evolution, 2012, 29, 17-20.	8.9	101
18	Collective Infectious Units in Viruses. Trends in Microbiology, 2017, 25, 402-412.	7.7	101

#	Article	IF	Citations
19	The Fitness Effects of Random Mutations in Single-Stranded DNA and RNA Bacteriophages. PLoS Genetics, 2009, 5, e1000742.	3.5	100
20	Sociovirology: Conflict, Cooperation, and Communication among Viruses. Cell Host and Microbe, 2017, 22, 437-441.	11.0	98
21	The cost of replication fidelity in an RNA virus. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10233-10237.	7.1	91
22	Epistasis and the Adaptability of an RNA Virus. Genetics, 2005, 170, 1001-1008.	2.9	86
23	Natural Selection Fails to Optimize Mutation Rates for Long-Term Adaptation on Rugged Fitness Landscapes. PLoS Computational Biology, 2008, 4, e1000187.	3.2	80
24	Single-Cell Analysis of RNA Virus Infection Identifies Multiple Genetically Diverse Viral Genomes within Single Infectious Units. Cell Host and Microbe, 2015, 18, 424-432.	11.0	75
25	Distribution of Fitness Effects Caused by Single-Nucleotide Substitutions in Bacteriophage f1. Genetics, 2010, 185, 603-609.	2.9	68
26	Variation in RNA Virus Mutation Rates across Host Cells. PLoS Pathogens, 2014, 10, e1003855.	4.7	59
27	Correlation Between Mutation Rate and Genome Size in Riboviruses: Mutation Rate of Bacteriophage $Q\hat{\beta}^2$. Genetics, 2013, 195, 243-251.	2.9	55
28	Collective Infection of Cells by Viral Aggregates Promotes Early Viral Proliferation and Reveals a Cellular-Level Allee Effect. Current Biology, 2018, 28, 3212-3219.e4.	3.9	53
29	Social evolution of innate immunity evasion in a virus. Nature Microbiology, 2019, 4, 1006-1013.	13.3	52
30	Multi-virion infectious units arise from free viral particles in an enveloped virus. Nature Microbiology, 2017, 2, 17078.	13.3	50
31	EVOLUTION: Climb Every Mountain?. Science, 2003, 302, 2074-2075.	12.6	46
32	Transmission bottlenecks and the evolution of fitness in rapidly evolving RNA viruses. Infection, Genetics and Evolution, 2001, 1, 41-48.	2.3	45
33	Tracing the Origin of the Compensasome: Evolutionary History of DEAH Helicase and MYST Acetyltransferase Gene Families. Molecular Biology and Evolution, 2001, 18, 330-343.	8.9	44
34	Highly heterogeneous mutation rates in the hepatitis C virus genome. Nature Microbiology, 2016, 1, 16045.	13.3	44
35	Collective properties of viral infectivity. Current Opinion in Virology, 2018, 33, 1-6.	5.4	44
36	In Silico Predicted Robustness of Viroids RNA Secondary Structures. I. The Effect of Single Mutations. Molecular Biology and Evolution, 2006, 23, 1427-1436.	8.9	43

#	Article	IF	Citations
37	The effect of genetic robustness on evolvability in digital organisms. BMC Evolutionary Biology, 2008, 8, 284.	3.2	43
38	Genetic Diversity and Evolution of Viral Populations. , 2021, , 53-61.		43
39	Different rates of spontaneous mutation of chloroplastic and nuclear viroids as determined by high-fidelity ultra-deep sequencing. PLoS Pathogens, 2017, 13, e1006547.	4.7	41
40	Why viruses sometimes disperse in groupsâ€. Virus Evolution, 2019, 5, vez014.	4.9	40
41	The external domains of the HIV-1 envelope are a mutational cold spot. Nature Communications, 2015, 6, 8571.	12.8	39
42	The cost of replication fidelity in human immunodeficiency virus type 1. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 225-230.	2.6	38
43	Point Mutation Rate of Bacteriophage Î¦X174. Genetics, 2009, 183, 747-749.	2.9	37
44	A Network Model for the Correlation between Epistasis and Genomic Complexity. PLoS ONE, 2008, 3, e2663.	2.5	36
45	Upper-limit mutation rate estimation for a plant RNA virus. Biology Letters, 2009, 5, 394-396.	2.3	36
46	Interplay between RNA Structure and Protein Evolution in HIV-1. Molecular Biology and Evolution, 2011, 28, 1333-1338.	8.9	31
47	The evolution of collective infectious units in viruses. Virus Research, 2019, 265, 94-101.	2.2	31
48	Deep viral blood metagenomics reveals extensive anellovirus diversity in healthy humans. Scientific Reports, 2021, 11, 6921.	3.3	31
49	NATURAL SELECTION AND THE ORGAN-SPECIFIC DIFFERENTIATION OF HIV-1 V3 HYPERVARIABLE REGION. Evolution; International Journal of Organic Evolution, 2004, 58, 1185-1194.	2.3	29
50	Beneficial coinfection can promote within-host viral diversity. Virus Evolution, 2018, 4, vey028.	4.9	29
51	Potential Influence of Helminth Molecules on COVID-19 Pathology. Trends in Parasitology, 2021, 37, 11-14.	3.3	29
52	In Silico Predicted Robustness of Viroid RNA Secondary Structures. II. Interaction between Mutation Pairs. Molecular Biology and Evolution, 2006, 23, 2123-2130.	8.9	28
53	Membrane-Associated Enteroviruses Undergo Intercellular Transmission as Pools of Sibling Viral Genomes. Cell Reports, 2019, 29, 714-723.e4.	6.4	28
54	Collective Viral Spread Mediated by Virion Aggregates Promotes the Evolution of Defective Interfering Particles. MBio, 2020, 11, .	4.1	27

#	Article	IF	Citations
55	THE DISTRIBUTION OF MUTATIONAL FITNESS EFFECTS OF PHAGE Ï†X174 ON DIFFERENT HOSTS. Evolution; International Journal of Organic Evolution, 2012, 66, 3495-3507.	2.3	26
56	Human norovirus hyper-mutation revealed by ultra-deep sequencing. Infection, Genetics and Evolution, 2016, 41, 233-239.	2.3	26
57	Following the very initial growth of biological RNA viral clones. Journal of General Virology, 2005, 86, 435-443.	2.9	25
58	The Social Life of Viruses. Annual Review of Virology, 2021, 8, 183-199.	6.7	25
59	Viral mutation and substitution: units and levels. Current Opinion in Virology, 2011, 1, 430-435.	5.4	24
60	Relationship between within-Host Fitness and Virulence in the Vesicular Stomatitis Virus: Correlation with Partial Decoupling. Journal of Virology, 2012, 86, 12228-12236.	3.4	23
61	Genome-Wide Estimation of the Spontaneous Mutation Rate of Human Adenovirus 5 by High-Fidelity Deep Sequencing. PLoS Pathogens, 2016, 12, e1006013.	4.7	23
62	Weighted Least-Squares Likelihood Ratio Test for Branch Testing in Phylogenies Reconstructed from Distance Measures. Systematic Biology, 2005, 54, 218-229.	5.6	22
63	Natural selection fails to optimize mutation rates for long-term adaptation on rugged fitness landscapes. , 2013, , .		21
64	Experimental Evolution of an Oncolytic Vesicular Stomatitis Virus with Increased Selectivity for p53-Deficient Cells. PLoS ONE, 2014, 9, e102365.	2.5	21
65	Isolation and Characterization of Two Klebsiella pneumoniae Phages Encoding Divergent Depolymerases. International Journal of Molecular Sciences, 2020, 21, 3160.	4.1	21
66	RNA viruses as complex adaptive systems. BioSystems, 2005, 81, 31-41.	2.0	19
67	Cooperative nature of viral replication. Science Advances, 2020, 6, .	10.3	19
68	Isolation of Four Lytic Phages Infecting Klebsiella pneumoniae K22 Clinical Isolates from Spain. International Journal of Molecular Sciences, 2020, 21, 425.	4.1	19
69	EXPERIMENTAL EVOLUTION OF RNA VERSUS DNA VIRUSES. Evolution; International Journal of Organic Evolution, 2011, 65, 2987-2994.	2.3	18
70	Quantifying antagonistic epistasis in a multifunctional RNA secondary structure of the Rous sarcoma virus. Journal of General Virology, 2006, 87, 1595-1602.	2.9	17
71	The effect of co- and superinfection on the adaptive dynamics of vesicular stomatitis virus. Infection, Genetics and Evolution, 2007, 7, 69-73.	2.3	16
72	Immune Activation Promotes Evolutionary Conservation of T-Cell Epitopes in HIV-1. PLoS Biology, 2013, 11, e1001523.	5.6	16

#	Article	IF	Citations
73	Social Bacteriophages. Microorganisms, 2020, 8, 533.	3.6	16
74	The effect of genetic complementation on the fitness and diversity of viruses spreading as collective infectious units. Virus Research, 2019, 267, 41-48.	2.2	15
75	Evolution of oncolytic viruses. Current Opinion in Virology, 2015, 13, 1-5.	5.4	13
76	Fibrinogen Gamma Chain Promotes Aggregation of Vesicular Stomatitis Virus in Saliva. Viruses, 2020, 12, 282.	3.3	13
77	Exploring the Diversity of the Human Blood Virome. Viruses, 2021, 13, 2322.	3.3	13
78	Essential Topics for the Regulatory Consideration of Phages as Clinically Valuable Therapeutic Agents: A Perspective from Spain. Microorganisms, 2022, 10, 717.	3.6	12
79	Delayed Lysis Confers Resistance to the Nucleoside Analogue 5-Fluorouracil and Alleviates Mutation Accumulation in the Single-Stranded DNA Bacteriophage Î•X174. Journal of Virology, 2014, 88, 5042-5049.	3.4	11
80	SELECTION PROMOTES ORGAN COMPARTMENTALIZATION IN HIV-1: EVIDENCE FROMGAGANDPOLGENES. Evolution; International Journal of Organic Evolution, 2007, 61, 272-279.	2.3	10
81	Nucleoside Analogue Mutagenesis of a Single-Stranded DNA Virus: Evolution and Resistance. Journal of Virology, 2012, 86, 9640-9646.	3.4	10
82	Lethal Mutagenesis. , 2008, , 207-218.		9
83	Directed Evolution of a Mycobacteriophage. Antibiotics, 2019, 8, 46.	3.7	9
84	Constrained evolvability of interferon suppression in an RNA virus. Scientific Reports, 2016, 6, 24722.	3.3	8
85	The role of spatial structure in the evolution of viral innate immunity evasion: AÂdiffusion-reaction cellular automaton model. PLoS Computational Biology, 2020, 16, e1007656.	3.2	8
86	Topology testing of phylogenies using least squares methods. BMC Evolutionary Biology, 2006, 6, 105.	3.2	7
87	Mutation rate of bacteriophage Î¦X174 modified through changes in GATC sequence context. Infection, Genetics and Evolution, 2011, 11, 1820-1822.	2.3	6
88	Changes in Protein Domains outside the Catalytic Site of the Bacteriophage QÂ Replicase Reduce the Mutagenic Effect of 5-Azacytidine. Journal of Virology, 2014, 88, 10480-10487.	3.4	6
89	Variability in the mutation rates of RNA viruses. Future Virology, 2014, 9, 605-615.	1.8	6
90	Five Challenges in the Field of Viral Diversity and Evolution. Frontiers in Virology, 2021, 1, .	1.4	6

#	Article	IF	Citations
91	Intraclonal variation in RNA viruses: generation, maintenance and consequences. Biological Journal of the Linnean Society, 2003, 79, 17-26.	1.6	5
92	SHAPE MATTERS: EFFECT OF POINT MUTATIONS ON RNA SECONDARY STRUCTURE. International Journal of Modeling, Simulation, and Scientific Computing, 2013, 16, 1250052.	1.4	5
93	Effect of mismatch repair on the mutation rate of bacteriophage Ï•X174. Virus Evolution, 2015, 1, vev010.	4.9	5
94	One-step site-directed mutagenesis of viroid dimeric cDNA. Journal of Virological Methods, 2007, 145, 71-75.	2.1	4
95	Biomedical implications of viral mutation and evolution. Future Virology, 2012, 7, 391-402.	1.8	4
96	Genome-scale analysis of evolutionary rate and selection in a fast-expanding Spanish cluster of HIV-1 subtype F1. Infection, Genetics and Evolution, 2018, 66, 43-47.	2.3	4
97	Mode of selection and experimental evolution of antiviral drugs resistance in vesicular stomatitis virus. Infection, Genetics and Evolution, 2005, 5, 55-65.	2.3	3
98	Unequal distribution of RT-PCR artifacts along the E1â€“E2 region of Hepatitis C virus. Journal of Virological Methods, 2009, 161, 136-140.	2.1	3
99	Experimental evolution of an RNA virus in cells with innate immunity defects. Virus Evolution, 2015, 1, vev008.	4.9	3
100	Experimental Evolution Reveals a Genetic Basis for Membrane-Associated Virus Release. Molecular Biology and Evolution, 2021, 38, 358-367.	8.9	3
101	Enhanced adaptation of vesicular stomatitis virus in cells infected with vaccinia virus. Infection, Genetics and Evolution, 2008, 8, 614-620.	2.3	2
102	Role of APOBEC3H in the Viral Control of HIV Elite Controller Patients. International Journal of Medical Sciences, 2018, 15, 95-100.	2.5	2
103	Lamivudine/Adefovir Treatment Increases the Rate of Spontaneous Mutation of Hepatitis B Virus in Patients. PLoS ONE, 2016, 11, e0163363.	2.5	2
104	High Fidelity Deep Sequencing Reveals No Effect of ATM, ATR, and DNA-PK Cellular DNA Damage Response Pathways on Adenovirus Mutation Rate. Viruses, 2019, 11, 938.	3.3	1
105	Experimental virus evolution in cancer cell monolayers, spheroids, and tissue explants. Virus Evolution, 2021, 7, veab045.	4.9	0
106	Social Interactions Among Bacteriophages. , 2020, , 103-119.		0