Nathan L Clark

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Evolution of reproductive proteins from animals and plants. Reproduction, 2006, 131, 11-22.	2.6	319
2	Hundreds of Genes Experienced Convergent Shifts in Selective Pressure in Marine Mammals. Molecular Biology and Evolution, 2016, 33, 2182-2192.	8.9	171
3	Pervasive Adaptive Evolution in Primate Seminal Proteins. PLoS Genetics, 2005, 1, e35.	3.5	155
4	Subterranean mammals show convergent regression in ocular genes and enhancers, along with adaptation to tunneling. ELife, 2017, 6, .	6.0	138
5	Evolutionary Rate Covariation Identifies New Members of a Protein Network Required for Drosophila melanogaster Female Post-Mating Responses. PLoS Genetics, 2014, 10, e1004108.	3.5	137
6	Coevolution of Interacting Fertilization Proteins. PLoS Genetics, 2009, 5, e1000570.	3.5	125
7	Rapid evolution of reproductive proteins in abalone and Drosophila. Philosophical Transactions of the Royal Society B: Biological Sciences, 2006, 361, 261-268.	4.0	112
8	Proteomics and Comparative Genomic Investigations Reveal Heterogeneity in Evolutionary Rate of Male Reproductive Proteins in Mice (Mus domesticus). Molecular Biology and Evolution, 2009, 26, 1733-1743.	8.9	93
9	Evolutionary rate covariation reveals shared functionality and coexpression of genes. Genome Research, 2012, 22, 714-720.	5.5	89
10	Overlapping Patterns of Rapid Evolution in the Nucleic Acid Sensors cGAS and OAS1 Suggest a Common Mechanism of Pathogen Antagonism and Escape. PLoS Genetics, 2015, 11, e1005203.	3.5	82
11	Ancient convergent losses of <i>Paraoxonase 1</i> yield potential risks for modern marine mammals. Science, 2018, 361, 591-594.	12.6	79
12	Convergent evolution in the genomics era: new insights and directions. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20190102.	4.0	78
13	RERconverge: an R package for associating evolutionary rates with convergent traits. Bioinformatics, 2019, 35, 4815-4817.	4.1	72
14	Unprecedented reorganization of holocentric chromosomes provides insights into the enigma of lepidopteran chromosome evolution. Science Advances, 2019, 5, eaau3648.	10.3	66
15	Pan-mammalian analysis of molecular constraints underlying extended lifespan. ELife, 2020, 9, .	6.0	57
16	The molecular genetic basis of herbivory between butterflies and their host plants. Nature Ecology and Evolution, 2018, 2, 1418-1427.	7.8	56
17	Adaptive Evolution in Rodent Seminal Vesicle Secretion Proteins. Molecular Biology and Evolution, 2008, 25, 2301-2310.	8.9	52
18	Duplication and Selection on Abalone Sperm Lysin in an Allopatric Population. Molecular Biology and Evolution, 2007, 24, 2081-2090.	8.9	46

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19	High Genetic Diversity in the Chemoreceptor Superfamily of Caenorhabditis elegans. Genetics, 2005, 169, 1985-1996.	2.9	43
20	A Novel Method to Detect Proteins Evolving at Correlated Rates: Identifying New Functional Relationships between Coevolving Proteins. Molecular Biology and Evolution, 2010, 27, 1152-1161.	8.9	42
21	Structural complexity and molecular heterogeneity of a butterfly ejaculate reflect a complex history of selection. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5406-E5413.	7.1	37
22	Evolutionary Rate Covariation in Meiotic Proteins Results from Fluctuating Evolutionary Pressure in Yeasts and Mammals. Genetics, 2013, 193, 529-538.	2.9	34
23	Evolutionary and Functional Analysis of the Invariant SWIM Domain in the Conserved Shu2/SWS1 Protein Family from <i>Saccharomyces cerevisiae</i> to <i>Homo sapiens</i> . Genetics, 2015, 199, 1023-1033.	2.9	33
24	Robust Method for Detecting Convergent Shifts in Evolutionary Rates. Molecular Biology and Evolution, 2019, 36, 1817-1830.	8.9	32
25	Evolutionary rate covariation analysis of E-cadherin identifies Raskol as a regulator of cell adhesion and actin dynamics in Drosophila. PLoS Genetics, 2019, 15, e1007720.	3.5	30
26	MCM8IP activates the MCM8-9 helicase to promote DNA synthesis and homologous recombination upon DNA damage. Nature Communications, 2020, 11, 2948.	12.8	28
27	A Drosophila screen identifies NKCC1 as a modifier of NGLY1 deficiency. ELife, 2020, 9, .	6.0	28
28	Digestive Organ in the Female Reproductive Tract Borrows Genes from Multiple Organ Systems to Adopt Critical Functions. Molecular Biology and Evolution, 2015, 32, 1567-1580.	8.9	27
29	Genetic and phenotypic influences on copulatory plug survival in mice. Heredity, 2015, 115, 496-502.	2.6	27
30	Evolutionary Signatures amongst Disease Genes Permit Novel Methods for Gene Prioritization and Construction of Informative Gene-Based Networks. PLoS Genetics, 2015, 11, e1004967.	3.5	23
31	ERC analysis: web-based inference of gene function via evolutionary rate covariation. Bioinformatics, 2015, 31, 3835-3837.	4.1	22
32	Evolution-based screening enables genome-wide prioritization and discovery of DNA repair genes. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19593-19599.	7.1	22
33	Dynamic digestive physiology of a female reproductive organ in a polyandrous butterfly. Journal of Experimental Biology, 2015, 218, 1548-1555.	1.7	20
34	The Amino Acid Transporter JhI-21 Coevolves with Glutamate Receptors, Impacts NMJ Physiology and Influences Locomotor Activity in Drosophila Larvae. Scientific Reports, 2016, 6, 19692.	3.3	20
35	Evolutionary rate covariation identifies SLC30A9 (ZnT9) as a mitochondrial zinc transporter. Biochemical Journal, 2021, 478, 3205-3220.	3.7	17
36	Phylogenetic Permulations: A Statistically Rigorous Approach to Measure Confidence in Associations in a Phylogenetic Context. Molecular Biology and Evolution, 2021, 38, 3004-3021.	8.9	16

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37	Diversity-Enhancing Selection Acts on a Female Reproductive Protease Family in Four Subspecies of Drosophila mojavensis. Genetics, 2011, 187, 865-876.	2.9	14
38	The Budding Yeast Ubiquitin Protease Ubp7 Is a Novel Component Involved in S Phase Progression. Journal of Biological Chemistry, 2016, 291, 4442-4452.	3.4	11
39	Characterization of Female Reproductive Proteases in a Butterfly from Functional and Evolutionary Perspectives. Physiological and Biochemical Zoology, 2019, 92, 579-590.	1.5	11
40	Evolutionary, proteomic, and experimental investigations suggest the extracellular matrix of cumulus cells mediates fertilization outcomesâ€. Biology of Reproduction, 2021, 105, 1043-1055.	2.7	7
41	Multiple 9-1-1 complexes promote homolog synapsis, DSB repair, and ATR signaling during mammalian meiosis. ELife, 2022, 11, .	6.0	7
42	Activation by cleavage of the epithelial Na+ channel $\hat{I}\pm$ and \hat{I}^3 subunits independently coevolved with the vertebrate terrestrial migration. ELife, 2022, 11, .	6.0	5
43	Experimental exchange of paralogous domains in the MLH family provides evidence of sub-functionalization after gene duplication. G3: Genes, Genomes, Genetics, 2021, 11, .	1.8	2
44	Cleavage of ENaC \hat{I}_{\pm} and \hat{I}_{3} Subunits Evolved with the Terrestrial Migration. FASEB Journal, 2018, 32, 624.16.	0.5	2
45	Candida albicans Transcriptional Profiling Within Biliary Fluid From a Patient With Cholangitis, Before and After Antifungal Treatment and Surgical Drainage. Open Forum Infectious Diseases, 2016, 3, ofw120.	0.9	0
46	αâ€Arrestin regulation of protein trafficking: Using evolutionary rate covariation to define protein trafficking regulatory networks. FASEB Journal, 2021, 35, .	0.5	0