

Katherine A Borkovich

List of Publications by Year in descending order

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103
papers

8,656
citations

117625

34
h-index

161849

54
g-index

108
all docs

108
docs citations

108
times ranked

6551
citing authors

#	ARTICLE	IF	CITATIONS
1	The genome sequence of the filamentous fungus <i>Neurospora crassa</i> . <i>Nature</i> , 2003, 422, 859-868.	27.8	1,528
2	Comparative genomics reveals mobile pathogenicity chromosomes in <i>Fusarium</i> . <i>Nature</i> , 2010, 464, 367-373.	27.8	1,442
3	A high-throughput gene knockout procedure for <i>Neurospora</i> reveals functions for multiple transcription factors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 10352-10357.	7.1	1,060
4	Lessons from the Genome Sequence of <i>Neurospora crassa</i> : Tracing the Path from Genomic Blueprint to Multicellular Organism. <i>Microbiology and Molecular Biology Reviews</i> , 2004, 68, 1-108.	6.6	572
5	Signal Transduction Pathways Involving Protein Phosphorylation in Prokaryotes. <i>Annual Review of Biochemistry</i> , 1991, 60, 401-441.	11.1	540
6	Heterotrimeric G Protein Signaling in Filamentous Fungi. <i>Annual Review of Microbiology</i> , 2007, 61, 423-452.	7.3	317
7	Enabling a Community to Dissect an Organism: Overview of the <i>Neurospora</i> Functional Genomics Project. <i>Advances in Genetics</i> , 2007, 57, 49-96.	1.8	191
8	MicroRNAs Suppress NB Domain Genes in Tomato That Confer Resistance to <i>Fusarium oxysporum</i> . <i>PLoS Pathogens</i> , 2014, 10, e1004464.	4.7	187
9	The dynamics of protein phosphorylation in bacterial chemotaxis. <i>Cell</i> , 1990, 63, 1339-1348.	28.9	183
10	A Eukaryotic Protein, NOP-1, Binds Retinal To Form an Archaeal Rhodopsin-like Photochemically Reactive Pigment. <i>Biochemistry</i> , 1999, 38, 14138-14145.	2.5	164
11	A pheromone receptor gene, <i>pre-1</i> , is essential for mating type-specific directional growth and fusion of trichogynes and female fertility in <i>Neurospora crassa</i> . <i>Molecular Microbiology</i> , 2004, 52, 1781-1798.	2.5	134
12	Regulation of Conidiation and Adenylyl Cyclase Levels by the G β Protein GNA-3 in <i>Neurospora crassa</i> . <i>Molecular and Cellular Biology</i> , 2000, 20, 7693-7705.	2.3	132
13	Pheromones Are Essential for Male Fertility and Sufficient To Direct Chemotropic Polarized Growth of Trichogynes during Mating in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2006, 5, 544-554.	3.4	103
14	The Response Regulator RRG-1 Functions Upstream of a Mitogen-activated Protein Kinase Pathway Impacting Asexual Development, Female Fertility, Osmotic Stress, and Fungicide Resistance in <i>Neurospora crassa</i> . <i>Molecular Biology of the Cell</i> , 2007, 18, 2123-2136.	2.1	103
15	Mating Systems and Sexual Morphogenesis in Ascomycetes. , 0, , 499-535.		99
16	Mitogen-Activated Protein Kinase Cascade Required for Regulation of Development and Secondary Metabolism in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2008, 7, 2113-2122.	3.4	92
17	A G-Protein β Subunit Required for Sexual and Vegetative Development and Maintenance of Normal G β Protein Levels in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2002, 1, 378-390.	3.4	89
18	Global Analysis of Serine-Threonine Protein Kinase Genes in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2011, 10, 1553-1564.	3.4	89

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19	GPR-4 Is a Predicted G-Protein-Coupled Receptor Required for Carbon Source-Dependent Asexual Growth and Development in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2006, 5, 1287-1300.	3.4	81
20	Circadian rhythmicity mediated by temporal regulation of the activity of p38 MAPK. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18223-18228.	7.1	80
21	The Heterotrimeric G-Protein Subunits GNG-1 and GNB-1 Form a G α $\beta\gamma$ Dimer Required for Normal Female Fertility, Asexual Development, and G α Protein Levels in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2005, 4, 365-378.	3.4	78
22	Mutational Activation of a G α Causes Uncontrolled Proliferation of Aerial Hyphae and Increased Sensitivity to Heat and Oxidative Stress in <i>Neurospora crassa</i> . <i>Genetics</i> , 1999, 151, 107-117.	2.9	77
23	Positive Regulation of Adenylyl Cyclase Activity by a G α Homolog in <i>Neurospora crassa</i> . <i>Fungal Genetics and Biology</i> , 1999, 26, 48-61.	2.1	69
24	Shared and Independent Roles for a G α Protein and Adenylyl Cyclase in Regulating Development and Stress Responses in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2002, 1, 634-642.	3.4	68
25	Functional Profiling of Transcription Factor Genes in <i>Neurospora crassa</i> . <i>G3: Genes, Genomes, Genetics</i> , 2017, 7, 2945-2956.	1.8	60
26	Roles for Receptors, Pheromones, G Proteins, and Mating Type Genes During Sexual Reproduction in <i>Neurospora crassa</i> . <i>Genetics</i> , 2012, 190, 1389-1404.	2.9	59
27	The fungal opsin gene <i>nop-1</i> is negatively-regulated by a component of the blue light sensing pathway and influences conidiation-specific gene expression in <i>Neurospora crassa</i> . <i>Current Genetics</i> , 2007, 52, 149-157.	1.7	57
28	Overlapping Functions for Two G Protein α Subunits in <i>Neurospora crassa</i> . <i>Genetics</i> , 1997, 147, 137-145.	2.9	56
29	High-Throughput Production of Gene Replacement Mutants in <i>Neurospora crassa</i> . <i>Methods in Molecular Biology</i> , 2011, 722, 179-189.	0.9	55
30	High-Throughput Construction of Gene Deletion Cassettes for Generation of <i>Neurospora crassa</i> Knockout Strains. <i>Methods in Molecular Biology</i> , 2010, 638, 33-40.	0.9	51
31	<i>FolR1</i> , a pathogenicity factor of <i>Fusarium oxysporum</i> , confers tomato wilt disease resistance by impairing host immune responses. <i>New Phytologist</i> , 2021, 232, 705-718.	7.3	51
32	Severe Impairment of Growth and Differentiation in a <i>Neurospora crassa</i> Mutant Lacking All Heterotrimeric G α Proteins. <i>Genetics</i> , 2004, 166, 1229-1240.	2.9	48
33	Global Analysis of Predicted G Protein-Coupled Receptor Genes in the Filamentous Fungus, <i>Neurospora crassa</i> . <i>G3: Genes, Genomes, Genetics</i> , 2015, 5, 2729-2743.	1.8	44
34	Hyphal Fusion. , 0, , 260-273.		42
35	Global Analysis of Serine/Threonine and Tyrosine Protein Phosphatase Catalytic Subunit Genes in <i>Neurospora crassa</i> Reveals Interplay Between Phosphatases and the p38 Mitogen-Activated Protein Kinase. <i>G3: Genes, Genomes, Genetics</i> , 2014, 4, 349-365.	1.8	39
36	Mycoparasitism. , 0, , 676-693.		38

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37	The Predicted G-Protein-Coupled Receptor GPR-1 Is Required for Female Sexual Development in the Multicellular Fungus <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2006, 5, 1503-1516.	3.4	37
38	[16] Coupling of receptor function to phosphate-transfer reactions in bacterial chemotaxis. <i>Methods in Enzymology</i> , 1991, 200, 205-214.	1.0	35
39	RIC8 Is a Guanine-Nucleotide Exchange Factor for G α Subunits That Regulates Growth and Development in <i>Neurospora crassa</i> . <i>Genetics</i> , 2011, 189, 165-176.	2.9	34
40	Use of ¹ H Nuclear Magnetic Resonance To Measure Intracellular Metabolite Levels during Growth and Asexual Sporulation in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2011, 10, 820-831.	3.4	25
41	Broad Substrate-Specific Phosphorylation Events Are Associated With the Initial Stage of Plant Cell Wall Recognition in <i>Neurospora crassa</i> . <i>Frontiers in Microbiology</i> , 2019, 10, 2317.	3.5	25
42	Biology and Genetics of Vegetative Incompatibility in Fungi. , 2014, , 274-288.		24
43	miR482e-3p mediates tomato wilt disease by modulating ethylene response pathway. <i>Plant Biotechnology Journal</i> , 2021, 19, 17-19.	8.3	24
44	Regulation of <i>Aspergillus</i> Conidiation. , 0, , 557-576.		23
45	Metabolic Impacts of Using Nitrogen and Copper-Regulated Promoters to Regulate Gene Expression in <i>Neurospora crassa</i> . <i>G3: Genes, Genomes, Genetics</i> , 2015, 5, 1899-1908.	1.8	21
46	FRG3, a Target of slmiR482e-3p, Provides Resistance against the Fungal Pathogen <i>Fusarium oxysporum</i> in Tomato. <i>Frontiers in Plant Science</i> , 2018, 9, 26.	3.6	20
47	The Guanine Nucleotide Exchange Factor RIC8 Regulates Conidial Germination through G α Proteins in <i>Neurospora crassa</i> . <i>PLoS ONE</i> , 2012, 7, e48026.	2.5	20
48	Calcineurin Subunits A and B Interact to Regulate Growth and Asexual and Sexual Development in <i>Neurospora crassa</i> . <i>PLoS ONE</i> , 2016, 11, e0151867.	2.5	20
49	The Conidium. , 2014, , 577-590.		19
50	The Cell Wall of Filamentous Fungi. , 0, , 224-237.		16
51	Genetic and Physical Interactions between G α Subunits and Components of the G α ² Dimer of Heterotrimeric G Proteins in <i>Neurospora crassa</i> . <i>Eukaryotic Cell</i> , 2012, 11, 1239-1248.	3.4	14
52	Mycoviruses. , 0, , 145-152.		14
53	<i>Magnaporthe oryzae</i> and Rice Blast Disease. , 2014, , 591-606.		14
54	The SNARE protein FolVam7 mediates intracellular trafficking to regulate conidiogenesis and pathogenicity in <i>Fusarium oxysporum</i> f. sp. <i>lycopersici</i> . <i>Environmental Microbiology</i> , 2019, 21, 2696-2706.	3.8	14

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55	Protein phosphorylation in the bacterial chemotaxis system. <i>Biochimie</i> , 1989, 71, 1013-1019.	2.6	13
56	Heterotrimeric G-Protein Signaling Is Required for Cellulose Degradation in <i>Neurospora crassa</i> . <i>MBio</i> , 2020, 11, .	4.1	13
57	Hyphal Structure. , 0, , 8-24.		12
58	Signal Transduction Pathways. , 2014, , 50-59.		11
59	Mating and Sexual Morphogenesis in Basidiomycete Fungi. , 2014, , 536-555.		10
60	Light Sensing. , 0, , 415-441.		9
61	Small RNA Isolation and Library Construction for Expression Profiling of Small RNAs from <i>Neurospora</i> and <i>Fusarium</i> Using Illumina High-Throughput Deep Sequencing. <i>Methods in Molecular Biology</i> , 2012, 883, 155-164.	0.9	9
62	Secondary Metabolism. , 0, , 376-395.		7
63	Nitrogen Metabolism in Filamentous Fungi. , 2014, , 325-338.		7
64	Hyphal Growth and Polarity. , 0, , 238-259.		6
65	Plant Cell Wall and Chitin Degradation. , 0, , 396-413.		6
66	Clustering analysis of large-scale phenotypic data in the model filamentous fungus <i>Neurospora crassa</i> . <i>BMC Genomics</i> , 2020, 21, 755.	2.8	6
67	Vacuoles in Filamentous Fungi. , 2014, , 179-190.		5
68	Peroxisomes in Filamentous Fungi. , 2014, , 191-206.		5
69	Genetic relationships between the RACK1 homolog <i>cpc-2</i> and heterotrimeric G protein subunit genes in <i>Neurospora crassa</i> . <i>PLoS ONE</i> , 2019, 14, e0223334.	2.5	5
70	G Protein Signaling Components in Filamentous Fungal Genomes. , 2012, , 21-38.		5
71	Analysis of Mitogen-Activated Protein Kinase Phosphorylation in Response to Stimulation of Histidine Kinase Signaling Pathways in <i>Neurospora</i> . <i>Methods in Enzymology</i> , 2010, 471, 319-334.	1.0	4
72	Meiotic trans-Sensing and Silencing in <i>Neurospora</i> . , 2014, , 132-144.		4

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73	<i>Aspergillus fumigatus</i> . , 2014, , 695-716.		4
74	Mitochondria and Respiration. , 2014, , 153-178.		4
75	Sulfur, Phosphorus, and Iron Metabolism. , 0, , 359-375.		4
76	Phylogenetics and Phylogenomics of the Fungal Tree of Life. , 0, , 36-49.		3
77	Mitotic Cell Cycle Control. , 0, , 61-80.		2
78	Regulation of Gene Expression by Ambient pH. , 2014, , 480-487.		2
79	The Cytoskeleton in Filamentous Fungi. , 0, , 207-223.		2
80	Gluconeogenesis. , 0, , 312-324.		2
81	Amino Acids and Polyamines: Polyfunctional Proteins, Metabolic Cycles, and Compartmentation. , 2014, , 339-358.		2
82	<i>Ustilago maydis</i> and Maize: a Delightful Interaction. , 2014, , 622-644.		2
83	7 Heterotrimeric G Proteins. , 2016, , 119-144.		2
84	A Top-Down Systems Biology Approach for the Identification of Targets for Fungal Strain and Process Development. , 2014, , 25-35.		1
85	Meiosis. , 0, , 81-95.		1
86	<i>Fusarium</i> Genetics and Pathogenicity. , 0, , 607-621.		1
87	Heat Shock Response. , 2014, , 488-497.		1
88	Circadian Rhythms. , 2014, , 442-466.		1
89	<i>Epichloa</i> Endophytes: Models of an Ecological Strategy. , 2014, , 660-675.		1
90	High-Throughput Construction of Genetically Modified Fungi. <i>Fungal Biology</i> , 2016, , 241-252.	0.6	1

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91	Small RNA Isolation and Library Construction for Expression Profiling of Small RNAs from <i>Neurospora crassa</i> and <i>Fusarium oxysporum</i> and Analysis of Small RNAs in <i>Fusarium oxysporum</i> -Infected Plant Root Tissue. <i>Methods in Molecular Biology</i> , 2021, 2170, 199-212.	0.9	1
92	The 2009 George W. Beadle Award. <i>Genetics</i> , 2009, 181, 831-833.	2.9	1
93	History and Importance to Human Affairs. , 0, , 1-7.		0
94	DNA Repair and Recombination. , 2014, , 96-112.		0
95	Chromatin Structure and Modification. , 2014, , 113-123.		0
96	How Fungi Sense Sugars, Alcohols, and Amino Acids. , 2014, , 467-479.		0
97	Transposable Elements and Repeat-Induced Point Mutation. , 0, , 124-131.		0
98	Necrotrophic Fungi: Live and Let Die. , 0, , 645-659.		0
99	<i>Cryptococcus neoformans</i> : Budding Yeast and Dimorphic Filamentous Fungus. , 2014, , 717-735.		0
100	<i>Histoplasma capsulatum</i> . , 2014, , 736-750.		0
101	The Fungal Pathogen <i>Candida albicans</i> . , 2014, , 751-768.		0
102	Quantitative Analyses Using Video Bioinformatics and Image Analysis Tools During Growth and Development in the Multicellular Fungus <i>Neurospora crassa</i> . <i>Computational Biology</i> , 2015, , 237-250.	0.2	0
103	Targeted Metabolomics Using LC-MS in <i>Neurospora crassa</i> . <i>Current Protocols</i> , 2022, 2, .	2.9	0