Leah E Cowen

List of Publications by Year
in descending order

135 papers	10,335 citations	41258 49 h-index	37111 96 g-index
198 all docs	198 docs citations	198 times ranked	7899 citing authors

#	Article	IF	Citations
1	Bacterialâ€ƒfungal interactions and their impact on microbial pathogenesis. Molecular Ecology, 2023, 32, 2565-2581.	2.0	13
2	Rieske head domain dynamics and indazole-derivative inhibition of Candida albicans complex III. Structure, 2022, 30, 129-138.e4.	1.6	15
3	Genetic analysis of Hsp90 function in <i>Cryptococcus neoformans</i> highlights key roles in stress tolerance and virulence. Genetics, 2022, 220, .	1.2	12
4	Adaptive laboratory evolution in S. cerevisiae highlights role of transcription factors in fungal xenobiotic resistance. Communications Biology, 2022, 5, 128.	2.0	8
5	Interactions Between Intracellular Fungal Pathogens and Host Phagocytes. , 2022, , .		0
6	Exploring Space via Astromycology: A Report on the CIFAR Programs <i>Earth 4D</i> and <i>Fungal Kingdom</i> Inaugural Joint Meeting. Astrobiology, 2022, , .	1.5	0
7	The role of Candida albicans stress response pathways in antifungal tolerance and resistance. IScience, 2022, 25, 103953.	1.9	29
8	Editorial: Antifungal Pipeline: Build It Strong; Build It Better!. Frontiers in Cellular and Infection Microbiology, 2022, 12, 881272.	1.8	6
9	Molecular analysis and essentiality of Aro1 shikimate biosynthesis multi-enzyme in <i>Candida albicans</i>. Life Science Alliance, 2022, 5, e202101358.	1.3	1
10	High-Throughput Chemical Screen Identifies a 2,5-Disubstituted Pyridine as an Inhibitor of Candida albicans Erg11. MSphere, 2022, 7, e0007522.	1.3	3
11	Inhibiting C-4 Methyl Sterol Oxidase with Novel Diazaborines to Target Fungal Plant Pathogens. ACS Chemical Biology, 2022, 17, 1343-1350.	1.6	1
12	Genomic Approaches to Antifungal Drug Target Identification and Validation. Annual Review of Microbiology, 2022, 76, .	2.9	1
13	Functional analysis of the Candida albicans kinome reveals Hrr25 as a regulator of antifungal susceptibility. IScience, 2022, 25, 104432.	1.9	4
14	Targeting fungal membrane homeostasis with imidazopyrazoindoles impairs azole resistance and biofilm formation. Nature Communications, 2022, 13, .	5.8	21
15	Advances in fungal chemical genomics for the discovery of new antifungal agents. Annals of the New York Academy of Sciences, 2021, 1496, 5-22.	1.8	21
16	The Canadian Fungal Research Network: current challenges and future opportunities. Canadian Journal of Microbiology, 2021, 67, 13-22.	0.8	4
17	Fungal-Selective Resorcylate Aminopyrazole Hsp90 Inhibitors: Optimization of Whole-Cell Anticryptococcal Activity and Insights into the Structural Origins of Cryptococcal Selectivity. Journal of Medicinal Chemistry, 2021, 64, 1139-1169.	2.9	23
18	Showcasing Fungal Genetics & Genomics with the Genetics Society of America. Genetics, 2021, 217, .	1.2	0

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19	Functional connections between cell cycle and proteostasis in the regulation of Candida albicans morphogenesis. Cell Reports, 2021, 34, 108781.	2.9	19
20	Treatment strategies for cryptococcal infection: challenges, advances and future outlook. Nature Reviews Microbiology, 2021, 19, 454-466.	13.6	142
21	Showcasing Fungal Genetics & Genomics with the Genetics Society of America. G3: Genes, Genomes, Genetics, 2021, 11, .	0.8	0
22	Glycosylated Polyene Macrolides Kill Fungi via a Conserved Sterol Sponge Mechanism of Action. ACS Central Science, 2021, 7, 706-708.	5.3	3
23	Mitochondrial perturbation reduces susceptibility to xenobiotics through altered efflux in<i>Candida albicans</i>. Genetics, 2021, 219, .	1.2	11
24	Exploring boron applications in modern agriculture: A structure-activity relationship study of a novel series of multi-substitution benzoxaboroles for identification of potential fungicides. Bioorganic and Medicinal Chemistry Letters, 2021, 43, 128089.	1.0	2
25	The macrophage-derived protein PTMA induces filamentation of the human fungal pathogen Candida albicans. Cell Reports, 2021, 36, 109584.	2.9	12
26	A functionally divergent intrinsically disordered region underlying the conservation of stochastic signaling. PLoS Genetics, 2021, 17, e1009629.	1.5	6
27	Fluorescence Polarizationâ€Based Measurement of Proteinâ€Ligand Interaction in Fungal Cell Lysates. Current Protocols, 2021, 1, e17.	1.3	0
28	Antifungal Drug Resistance: Molecular Mechanisms in <i>Candida albicans</i> and Beyond. Chemical Reviews, 2021, 121, 3390-3411.	23.0	338
29	A small molecule produced by Lactobacillus species blocks Candida albicans filamentation by inhibiting a DYRK1-family kinase. Nature Communications, 2021, 12, 6151.	5.8	50
30	Leveraging machine learning essentiality predictions and chemogenomic interactions to identify antifungal targets. Nature Communications, 2021, 12, 6497.	5.8	33
31	Antifungal drug resistance: Deciphering the mechanisms governing multidrug resistance in the fungal pathogen Candida glabrata. Current Biology, 2021, 31, R1520-R1523.	1.8	11
32	Design and Synthesis of Fungal-Selective Resorcylate Aminopyrazole Hsp90 Inhibitors. Journal of Medicinal Chemistry, 2020, 63, 2139-2180.	2.9	46
33	Overcoming Fungal Echinocandin Resistance through Inhibition of the Non-essential Stress Kinase Yck2. Cell Chemical Biology, 2020, 27, 269-282.e5.	2.5	49
34	Antifungal Activity of Gepinacin Scaffold Glycosylphosphatidylinositol Anchor Biosynthesis Inhibitors with Improved Metabolic Stability. Antimicrobial Agents and Chemotherapy, 2020, 64, .	1.4	6
35	Drugs from bugs in creatures of the sea. Science, 2020, 370, 906-907.	6.0	0
36	Structure-guided approaches to targeting stress responses in human fungal pathogens. Journal of Biological Chemistry, 2020, 295, 14458-14472.	1.6	16

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37	Flow Cytometric Measurement of Efflux in <i>Candida</i> Species. Current Protocols in Microbiology, 2020, 59, e121.	6.5	2
38	An oxindole efflux inhibitor potentiates azoles and impairs virulence in the fungal pathogen Candida auris. Nature Communications, 2020, 11, 6429.	5.8	49
39	Threats Posed by the Fungal Kingdom to Humans, Wildlife, and Agriculture. MBio, 2020, 11, .	1.8	275
40	Inhibiting Protein Prenylation with Benzoxaboroles to Target Fungal Plant Pathogens. ACS Chemical Biology, 2020, 15, 1930-1941.	1.6	6
41	The Rise of Fungi: A Report on the CIFAR Program <i>Fungal Kingdom: Threats & Opportunities</i> Inaugural Meeting. G3: Genes, Genomes, Genetics, 2020, 10, 1837-1842.	0.8	4
42	Enhanced Efflux Pump Expression in <i>Candida</i> Mutants Results in Decreased Manogepix Susceptibility. Antimicrobial Agents and Chemotherapy, 2020, 64, .	1.4	26
43	Translation Inhibition by Rocaglates Activates a Species-Specific Cell Death Program in the Emerging Fungal Pathogen Candida auris. MBio, 2020, 11, .	1.8	27
44	The Proteasome Governs Fungal Morphogenesis via Functional Connections with Hsp90 and cAMP-Protein Kinase A Signaling. MBio, 2020, 11, .	1.8	21
45	Oxadiazole-Containing Macrocyclic Peptides Potentiate Azole Activity against Pathogenic <i>Candida</i> Species. MSphere, 2020, 5, .	1.3	12
46	Global proteomic analyses define an environmentally contingent Hsp90 interactome and reveal chaperone-dependent regulation of stress granule proteins and the R2TP complex in a fungal pathogen. PLoS Biology, 2019, 17, e3000358.	2.6	34
47	Electron cryomicroscopy observation of acyl carrier protein translocation in type I fungal fatty acid synthase. Scientific Reports, 2019, 9, 12987.	1.6	22
48	Structural basis for species-selective targeting of Hsp90 in a pathogenic fungus. Nature Communications, 2019, 10, 402.	5.8	85
49	Genetic Analysis of <i>Candida auris</i> Implicates Hsp90 in Morphogenesis and Azole Tolerance and Cdr1 in Azole Resistance. MBio, 2019, 10, .	1.8	77
50	Environment-induced same-sex mating in the yeast Candida albicans through the Hsf1â€"Hsp90 pathway. PLoS Biology, 2019, 17, e2006966.	2.6	19
51	Functional divergence of a global regulatory complex governing fungal filamentation. PLoS Genetics, 2019, 15, e1007901.	1.5	17
52	Proteinâ€"Protein Interaction Profiling in Candida albicans Revealed by Biochemical Purificationâ€"Mass Spectrometry (BP/MS). Methods in Molecular Biology, 2019, 2049, 203-211.	0.4	0
53	Antifungal drug resistance: evolution, mechanisms and impact. Current Opinion in Microbiology, 2018, 45, 70-76.	2.3	323
54	Regulation of the heat shock transcription factor Hsf1 in fungi: implications for temperature-dependent virulence traits. FEMS Yeast Research, 2018, 18, .	1.1	19

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55	Functional Genomic Screening Reveals Core Modulators of Echinocandin Stress Responses in Candida albicans. Cell Reports, 2018, 23, 2292-2298.	2.9	42
56	Integrin-based diffusion barrier separates membrane domains enabling the formation of microbiostatic frustrated phagosomes. ELife, 2018, 7, .	2.8	41
57	Methodologies for in vitro and in vivo evaluation of efficacy of antifungal and antibiofilm agents and surface coatings against fungal biofilms. Microbial Cell, 2018, 5, 300-326.	1.4	81
58	High-Throughput Screening Identifies Genes Required for <i>Candida albicans</i> Induction of Macrophage Pyroptosis. MBio, 2018, 9, .	1.8	58
59	Global analysis of genetic circuitry and adaptive mechanisms enabling resistance to the azole antifungal drugs. PLoS Genetics, 2018, 14, e1007319.	1.5	37
60	Tuning Hsf1 levels drives distinct fungal morphogenetic programs with depletion impairing Hsp90 function and overexpression expanding the target space. PLoS Genetics, 2018, 14, e1007270.	1.5	42
61	Insights into the host-pathogen interaction: C. albicans manipulation of macrophage pyroptosis. Microbial Cell, 2018, 5, 566-568.	1.4	11
62	Staurosporine Induces Filamentation in the Human Fungal Pathogen Candida albicans via Signaling through Cyr1 and Protein Kinase A. MSphere, 2017, 2, .	1.3	17
63	Microevolution of Antifungal Drug Resistance. , 2017, , 345-368.		0
64	Candida albicans Is Resistant to Polyglutamine Aggregation and Toxicity. G3: Genes, Genomes, Genetics, 2017, 7, 95-108.	0.8	6
65	The Hsp90 Chaperone Network Modulates Candida Virulence Traits. Trends in Microbiology, 2017, 25, 809-819.	3.5	63
66	Molecular Evolution of Antifungal Drug Resistance. Annual Review of Microbiology, 2017, 71, 753-775.	2.9	303
67	The Candida albicans transcription factor Cas5 couples stress responses, drug resistance and cell cycle regulation. Nature Communications, 2017, 8, 499.	5.8	49
68	Stress Adaptation. Microbiology Spectrum, 2017, 5, .	1.2	46
69	Extensive functional redundancy in the regulation of <scp><i>C</i></scp><i>andida albicans</i> drug resistance and morphogenesis by lysine deacetylases <scp>H</scp>os2, <scp>H</scp>da1, <scp>R</scp>pd3 and <scp>R</scp>pd31. Molecular Microbiology, 2017, 103, 635-656.	1.2	31
70	Ydj1 governs fungal morphogenesis and stress response, and facilitates mitochondrial protein import via Mas1 and Mas2. Microbial Cell, 2017, 4, 342-361.	1.4	33
71	Mapping the Hsp90 Genetic Network Reveals Ergosterol Biosynthesis and Phosphatidylinositol-4-Kinase Signaling as Core Circuitry Governing Cellular Stress. PLoS Genetics, 2016, 12, e1006142.	1.5	36
72	Signaling through Lrg1, Rho1 and Pkc1 Governs Candida albicans Morphogenesis in Response to Diverse Cues. PLoS Genetics, 2016, 12, e1006405.	1.5	35

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73	Dual action antifungal small molecule modulates multidrug efflux and TOR signaling. Nature Chemical Biology, 2016, 12, 867-875.	3.9	79
74	Antifungal Drugs: The Current Armamentarium and Development of New Agents. Microbiology Spectrum, 2016, 4, .	1.2	159
75	Hsf1 and Hsp90 orchestrate temperature-dependent global transcriptional remodelling and chromatin architecture in Candida albicans. Nature Communications, 2016, 7, 11704.	5.8	77
76	Beauvericin Potentiates Azole Activity via Inhibition of Multidrug Efflux, Blocks Candida albicans Morphogenesis, and Is Effluxed via Yor1 and Circuitry Controlled by Zcf29. Antimicrobial Agents and Chemotherapy, 2016, 60, 7468-7480.	1.4	48
77	Metal Chelation as a Powerful Strategy to Probe Cellular Circuitry Governing Fungal Drug Resistance and Morphogenesis. PLoS Genetics, 2016, 12, e1006350.	1.5	39
78	Functional Genomic Analysis of Candida albicans Adherence Reveals a Key Role for the Arp2/3 Complex in Cell Wall Remodelling and Biofilm Formation. PLoS Genetics, 2016, 12, e1006452.	1.5	32
79	Functional Divergence of Hsp90 Genetic Interactions in Biofilm and Planktonic Cellular States. PLoS ONE, 2015, 10, e0137947.	1.1	13
80	Fitness Trade-Offs Associated with the Evolution of Resistance to Antifungal Drug Combinations. Cell Reports, 2015, 10, 809-819.	2.9	58
81	Global analysis of fungal morphology exposes mechanisms of host cell escape. Nature Communications, 2015, 6, 6741.	5.8	191
82	Opportunistic yeast pathogens: reservoirs, virulence mechanisms, and therapeutic strategies. Cellular and Molecular Life Sciences, 2015, 72, 2261-2287.	2.4	63
83	Using combination therapy to thwart drug resistance. Future Microbiology, 2015, 10, 1719-1726.	1.0	48
84	Mechanisms of Antifungal Drug Resistance. Cold Spring Harbor Perspectives in Medicine, 2015, 5, a019752.	2.9	419
85	Global Analysis of the Fungal Microbiome in Cystic Fibrosis Patients Reveals Loss of Function of the Transcriptional Repressor Nrg1 as a Mechanism of Pathogen Adaptation. PLoS Pathogens, 2015, 11, e1005308.	2.1	74
86	Drug Combinations as a Strategy to Potentiate Existing Antifungal Agents. , 2015, , 91-114.		0
87	Membrane Fluidity and Temperature Sensing Are Coupled via Circuitry Comprised of Ole1, Rsp5, and Hsf1 in Candida albicans. Eukaryotic Cell, 2014, 13, 1077-1084.	3.4	46
88	Hsp90-dependent regulatory circuitry controlling temperature-dependent fungal development and virulence. Cellular Microbiology, 2014, 16, 473-481.	1.1	40
89	To Sense or Die: Mechanisms of Temperature Sensing in Fungal Pathogens. Current Fungal Infection Reports, 2014, 8, 185-191.	0.9	20
90	Elucidating drug resistance in human fungal pathogens. Future Microbiology, 2014, 9, 523-542.	1.0	66

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91	Progress and prospects for targeting Hsp90 to treat fungal infections. Parasitology, 2014, 141, 1127-1137.	0.7	36
92	The fungal Achillesâ€™ heel: targeting Hsp90 to cripple fungal pathogens. Current Opinion in Microbiology, 2013, 16, 377-384.	2.3	92
93	Genetic and Genomic Architecture of the Evolution of Resistance to Antifungal Drug Combinations. PLoS Genetics, 2013, 9, e1003390.	1.5	90
94	Surviving the Heat of the Moment: A Fungal Pathogens Perspective. PLoS Pathogens, 2013, 9, e1003163.	2.1	36
95	Mapping the Hsp90 Genetic Interaction Network in Candida albicans Reveals Environmental Contingency and Rewired Circuitry. PLoS Genetics, 2012, 8, e1002562.	1.5	98
96	Global Analysis of the Evolution and Mechanism of Echinocandin Resistance in Candida glabrata. PLoS Pathogens, 2012, 8, e1002718.	2.1	158
97	Hsp90 Orchestrates Transcriptional Regulation by Hsf1 and Cell Wall Remodelling by MAPK Signalling during Thermal Adaptation in a Pathogenic Yeast. PLoS Pathogens, 2012, 8, e1003069.	2.1	102
98	Regulatory circuitry governing morphogenesis in<i>Saccharomyces cerevisiae</i>and<i>Candida albicans</i>. Cell Cycle, 2012, 11, 4294-4295.	1.3	23
99	Cdc28 provides a molecular link between Hsp90, morphogenesis, and cell cycle progression in<i>Candida albicans</i>. Molecular Biology of the Cell, 2012, 23, 268-283.	0.9	61
100	Lysine Deacetylases Hda1 and Rpd3 Regulate Hsp90 Function thereby Governing Fungal Drug Resistance. Cell Reports, 2012, 2, 878-888.	2.9	96
101	A novel calcineurin-independent activity of cyclosporin A in Saccharomyces cerevisiae. Molecular BioSystems, 2012, 8, 2575.	2.9	6
102	Thermal Control of Microbial Development and Virulence: Molecular Mechanisms of Microbial Temperature Sensing. MBio, 2012, 3, .	1.8	106
103	Global Gene Deletion Analysis Exploring Yeast Filamentous Growth. Science, 2012, 337, 1353-1356.	6.0	186
104	Fungal Hsp90: a biological transistor that tunes cellular outputs to thermal inputs. Nature Reviews Microbiology, 2012, 10, 693-704.	13.6	84
105	Uncovering cellular circuitry controlling temperature-dependent fungal morphogenesis. Virulence, 2012, 3, 400-404.	1.8	20
106	Pho85, Pcl1, and Hms1 Signaling Governs Candida albicans Morphogenesis Induced by High Temperature or Hsp90 Compromise. Current Biology, 2012, 22, 461-470.	1.8	77
107	The Hsp90 Co-Chaperone Sgt1 Governs Candida albicans Morphogenesis and Drug Resistance. PLoS ONE, 2012, 7, e44734.	1.1	74
108	Minimum Inhibitory Concentration (MIC) Assay for Antifungal Drugs. Bio-protocol, 2012, 2, .	0.2	27

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109	Regulatory Circuitry Governing Fungal Development, Drug Resistance, and Disease. Microbiology and Molecular Biology Reviews, 2011, 75, 213-267.	2.9	448
110	Hsp90 Governs Dispersion and Drug Resistance of Fungal Biofilms. PLoS Pathogens, 2011, 7, e1002257.	2.1	231
111	A Systems Biology Approach Reveals the Role of a Novel Methyltransferase in Response to Chemical Stress and Lipid Homeostasis. PLoS Genetics, 2011, 7, e1002332.	1.5	21
112	PKC Signaling Regulates Drug Resistance of the Fungal Pathogen Candida albicans via Circuitry Comprised of Mkc1, Calcineurin, and Hsp90. PLoS Pathogens, 2010, 6, e1001069.	2.1	263
113	Coupling temperature sensing and development. Virulence, 2010, 1, 45-48.	1.8	48
114	Metabolic control of antifungal drug resistance. Fungal Genetics and Biology, 2010, 47, 81-93.	0.9	34
115	Harnessing Hsp90 function as a powerful, broadly effective therapeutic strategy for fungal infectious disease. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2818-2823.	3.3	353
116	Acquisition of Aneuploidy Provides Increased Fitness during the Evolution of Antifungal Drug Resistance. PLoS Genetics, 2009, 5, e1000705.	1.5	293
117	Hsp90 Orchestrates Stress Response Signaling Governing Fungal Drug Resistance. PLoS Pathogens, 2009, 5, e1000471.	2.1	114
118	Hsp90 Governs Echinocandin Resistance in the Pathogenic Yeast Candida albicans via Calcineurin. PLoS Pathogens, 2009, 5, e1000532.	2.1	296
119	Hsp90 Orchestrates Temperature-Dependent Candida albicans Morphogenesis via Ras1-PKA Signaling. Current Biology, 2009, 19, 621-629.	1.8	266
120	The evolution of fungal drug resistance: modulating the trajectory from genotype to phenotype. Nature Reviews Microbiology, 2008, 6, 187-198.	13.6	265
121	The <i>Candida albicans pescadillo</i> homolog is required for normal hypha-to-yeast morphogenesis and yeast proliferation. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20918-20923.	3.3	62
122	Stress, Drugs, and Evolution: the Role of Cellular Signaling in Fungal Drug Resistance. Eukaryotic Cell, 2008, 7, 747-764.	3.4	238
123	Genetic Architecture of Hsp90-Dependent Drug Resistance. Eukaryotic Cell, 2006, 5, 2184-2188.	3.4	149
124	Hsp90 Potentiates the Rapid Evolution of New Traits: Drug Resistance in Diverse Fungi. Science, 2005, 309, 2185-2189.	6.0	602
125	Mode of Selection and Experimental Evolution of Antifungal Drug Resistance in <i>Saccharomyces cerevisiae</i>. Genetics, 2003, 163, 1287-1298.	1.2	134
126	Population genomics of drug resistance in Candida albicans. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9284-9289.	3.3	133

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127	Evolution of Drug Resistance inCandida Albicans. Annual Review of Microbiology, 2002, 56, 139-165.	2.9	134
128	Predicting the emergence of resistance to antifungal drugs. FEMS Microbiology Letters, 2001, 204, 1-7.	0.7	28
129	Multilocus Genotyping Indicates that the Ability To Invade the Bloodstream Is Widespread among Candida albicans Isolates. Journal of Clinical Microbiology, 2001, 39, 1657-1660.	1.8	32
130	Divergence in Fitness and Evolution of Drug Resistance in Experimental Populations of Candida albicans. Journal of Bacteriology, 2001, 183, 2971-2978.	1.0	102
131	Infrequent Genetic Exchange and Recombination in the Mitochondrial Genome of Candida albicans. Journal of Bacteriology, 2001, 183, 865-872.	1.0	91
132	Evolution of Drug Resistance in Experimental Populations of Candida albicans. Journal of Bacteriology, 2000, 182, 1515-1522.	1.0	191
133	Multilocus Genotypes and DNA Fingerprints Do Not Predict Variation in Azole Resistance among Clinical Isolates of Candida albicans. Antimicrobial Agents and Chemotherapy, 1999, 43, 2930-2938.	1.4	35
134	Antifungal Drugs: The Current Armamentarium and Development of New Agents. , 0, , 903-922.		13
135	Stress Adaptation. , 0, , 463-485.		9