

Francesc Posas

List of Publications by Year in descending order

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118
papers

10,768
citations

36203

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32761

100
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123
all docs

123
docs citations

123
times ranked

9006
citing authors

#	ARTICLE	IF	CITATIONS
1	Yeast HOG1 MAP Kinase Cascade Is Regulated by a Multistep Phosphorelay Mechanism in the SLN1-YPD1-SSK1 Two-Component Osmosensor. <i>Cell</i> , 1996, 86, 865-875.	13.5	839
2	Controlling gene expression in response to stress. <i>Nature Reviews Genetics</i> , 2011, 12, 833-845.	7.7	563
3	Osmotic Activation of the HOG MAPK Pathway via Ste11p MAPKKK: Scaffold Role of Pbs2p MAPKK. <i>Science</i> , 1997, 276, 1702-1705.	6.0	545
4	Response to Hyperosmotic Stress. <i>Genetics</i> , 2012, 192, 289-318.	1.2	427
5	Regulated nucleo/cytoplasmic exchange of HOG1 MAPK requires the importin beta homologs NMD5 and XPO1. <i>EMBO Journal</i> , 1998, 17, 5606-5614.	3.5	381
6	The Transcriptional Response of Yeast to Saline Stress. <i>Journal of Biological Chemistry</i> , 2000, 275, 17249-17255.	1.6	353
7	Distributed biological computation with multicellular engineered networks. <i>Nature</i> , 2011, 469, 207-211.	13.7	303
8	The MAPK Hog1 recruits Rpd3 histone deacetylase to activate osmoresponsive genes. <i>Nature</i> , 2004, 427, 370-374.	13.7	295
9	Activation of the yeast SSK2 MAP kinase kinase kinase by the SSK1 two-component response regulator. <i>EMBO Journal</i> , 1998, 17, 1385-1394.	3.5	265
10	Yeast Cdc42 GTPase and Ste20 PAK-like kinase regulate Sho1-dependent activation of the Hog1 MAPK pathway. <i>EMBO Journal</i> , 2000, 19, 4623-4631.	3.5	244
11	3D-printing of transparent bio-microfluidic devices in PEG-DA. <i>Lab on A Chip</i> , 2016, 16, 2287-2294.	3.1	216
12	Hog1 mediates cell-cycle arrest in G1 phase by the dual targeting of Sic1. <i>Nature Cell Biology</i> , 2004, 6, 997-1002.	4.6	212
13	The p38 Pathway: From Biology to Cancer Therapy. <i>International Journal of Molecular Sciences</i> , 2020, 21, 1913.	1.8	206
14	Dealing with osmstress through MAP kinase activation. <i>EMBO Reports</i> , 2002, 3, 735-740.	2.0	198
15	Regulation of the Sko1 transcriptional repressor by the Hog1 MAP kinase in response to osmotic stress. <i>EMBO Journal</i> , 2001, 20, 1123-1133.	3.5	188
16	The Sequential Activation of the Yeast HOG and SLT2 Pathways Is Required for Cell Survival to Cell Wall Stress. <i>Molecular Biology of the Cell</i> , 2008, 19, 1113-1124.	0.9	183
17	The MAPK Hog1p Modulates Fps1p-dependent Arsenite Uptake and Tolerance in Yeast. <i>Molecular Biology of the Cell</i> , 2006, 17, 4400-4410.	0.9	177
18	A human homolog of the yeast Ssk2/Ssk22 MAP kinase kinase kinases, MTK1, mediates stress-induced activation of the p38 and JNK pathways. <i>EMBO Journal</i> , 1997, 16, 4973-4982.	3.5	172

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19	Osmostress-induced transcription by Hot1 depends on a Hog1-mediated recruitment of the RNA Pol II. <i>EMBO Journal</i> , 2003, 22, 2433-2442.	3.5	166
20	Signal transduction by MAP kinase cascades in budding yeast. <i>Current Opinion in Microbiology</i> , 1998, 1, 175-182.	2.3	154
21	Targeting the MEF2-Like Transcription Factor Smp1 by the Stress-Activated Hog1 Mitogen-Activated Protein Kinase. <i>Molecular and Cellular Biology</i> , 2003, 23, 229-237.	1.1	148
22	The Stress-Activated Hog1 Kinase Is a Selective Transcriptional Elongation Factor for Genes Responding to Osmotic Stress. <i>Molecular Cell</i> , 2006, 23, 241-250.	4.5	140
23	The PPZ Protein Phosphatases Are Important Determinants of Salt Tolerance in Yeast Cells. <i>Journal of Biological Chemistry</i> , 1995, 270, 13036-13041.	1.6	138
24	Transient Activation of the HOG MAPK Pathway Regulates Bimodal Gene Expression. <i>Science</i> , 2011, 332, 732-735.	6.0	134
25	Rck2 Kinase Is a Substrate for the Osmotic Stress-Activated Mitogen-Activated Protein Kinase Hog1. <i>Molecular and Cellular Biology</i> , 2000, 20, 3887-3895.	1.1	132
26	Multilayered control of gene expression by stress-activated protein kinases. <i>EMBO Journal</i> , 2010, 29, 4-13.	3.5	132
27	Requirement of STE50 for Osmostress-Induced Activation of the STE11 Mitogen-Activated Protein Kinase Kinase Kinase in the High-Osmolarity Glycerol Response Pathway. <i>Molecular and Cellular Biology</i> , 1998, 18, 5788-5796.	1.1	129
28	Phosphorylation of Hsl1 by Hog1 leads to a G2 arrest essential for cell survival at high osmolarity. <i>EMBO Journal</i> , 2006, 25, 2338-2346.	3.5	127
29	Cell Cycle Control and HIV-1 Susceptibility Are Linked by CDK6-Dependent CDK2 Phosphorylation of SAMHD1 in Myeloid and Lymphoid Cells. <i>Journal of Immunology</i> , 2014, 193, 1988-1997.	0.4	118
30	Osteoblast-Secreted Factors Mediate Dormancy of Metastatic Prostate Cancer in the Bone via Activation of the TGF β 2/RIII β -p38MAPK β -pS249/T252RB Pathway. <i>Cancer Research</i> , 2018, 78, 2911-2924.	0.4	117
31	The mRNA Export Factor Sus1 Is Involved in Spt/Ada/Gcn5 Acetyltransferase-mediated H2B Deubiquitinylation through Its Interaction with Ubp8 and Sgf11. <i>Molecular Biology of the Cell</i> , 2006, 17, 4228-4236.	0.9	115
32	Dynamic Signaling in the Hog1 MAPK Pathway Relies on High Basal Signal Transduction. <i>Science Signaling</i> , 2009, 2, ra13.	1.6	112
33	The yeast halotolerance determinant Hal3p is an inhibitory subunit of the Ppz1p Ser/Thr protein phosphatase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 7357-7362.	3.3	106
34	Recruitment of a chromatin remodelling complex by the Hog1 MAP kinase to stress genes. <i>EMBO Journal</i> , 2009, 28, 326-336.	3.5	104
35	Evolution of protein phosphorylation across 18 fungal species. <i>Science</i> , 2016, 354, 229-232.	6.0	93
36	Biophysical properties of <i>Saccharomyces cerevisiae</i> and their relationship with HOG pathway activation. <i>European Biophysics Journal</i> , 2010, 39, 1547-1556.	1.2	90

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37	The PPZ protein phosphatases are involved in the maintenance of osmotic stability of yeast cells. FEBS Letters, 1993, 318, 282-286.	1.3	87
38	Osmostress-induced gene expression – a model to understand how stress-activated protein kinases (<sc>SAPK</sc>s) regulate transcription. FEBS Journal, 2015, 282, 3275-3285.	2.2	87
39	Control of Cdc28 CDK1 by a Stress-Induced lncRNA. Molecular Cell, 2014, 53, 549-561.	4.5	85
40	Distributed computation: the new wave of synthetic biology devices. Trends in Biotechnology, 2012, 30, 342-349.	4.9	84
41	Selective Requirement for SAGA in Hog1-Mediated Gene Expression Depending on the Severity of the External Osmostress Conditions. Molecular and Cellular Biology, 2007, 27, 3900-3910.	1.1	82
42	The N-Terminal Phosphorylation of RB by p38 Bypasses Its Inactivation by CDKs and Prevents Proliferation in Cancer Cells. Molecular Cell, 2016, 64, 25-36.	4.5	82
43	Coordinated control of replication and transcription by a SAPK protects genomic integrity. Nature, 2013, 493, 116-119.	13.7	76
44	Protein phosphatases in higher plants: multiplicity of type 2A phosphatases in Arabidopsis thaliana. Plant Molecular Biology, 1993, 21, 475-485.	2.0	75
45	The Rpd3L HDAC complex is essential for the heat stress response in yeast. Molecular Microbiology, 2010, 76, 1049-1062.	1.2	70
46	The HOG Pathway Dictates the Short-Term Translational Response after Hyperosmotic Shock. Molecular Biology of the Cell, 2010, 21, 3080-3092.	0.9	67
47	Multiple Levels of Control Regulate the Yeast cAMP-response Element-binding Protein Repressor Sko1p in Response to Stress. Journal of Biological Chemistry, 2001, 276, 37373-37378.	1.6	61
48	Sensitive high-throughput single-cell RNA-seq reveals within-clonal transcript correlations in yeast populations. Nature Microbiology, 2019, 4, 683-692.	5.9	61
49	The NH2-terminal Extension of Protein Phosphatase PPZ1 Has an Essential Functional Role. Journal of Biological Chemistry, 1996, 271, 26349-26355.	1.6	59
50	Implementation of Complex Biological Logic Circuits Using Spatially Distributed Multicellular Consortia. PLoS Computational Biology, 2016, 12, e1004685.	1.5	59
51	The Stress-activated Protein Kinase Hog1 Mediates S Phase Delay in Response to Osmostress. Molecular Biology of the Cell, 2009, 20, 3572-3582.	0.9	57
52	Control of Cell Cycle in Response to Osmostress: Lessons from Yeast. Methods in Enzymology, 2007, 428, 63-76.	0.4	55
53	Whole genome analysis of p38 SAPK-mediated gene expression upon stress. BMC Genomics, 2010, 11, 144.	1.2	55
54	Cooperation between the INO80 Complex and Histone Chaperones Determines Adaptation of Stress Gene Transcription in the Yeast <i>Saccharomyces cerevisiae</i>. Molecular and Cellular Biology, 2009, 29, 4994-5007.	1.1	53

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55	The Serine/Threonine Kinase Cmk2 Is Required for Oxidative Stress Response in Fission Yeast. <i>Journal of Biological Chemistry</i> , 2002, 277, 17722-17727.	1.6	52
56	The p38 and Hog1 SAPKs control cell cycle progression in response to environmental stresses. <i>FEBS Letters</i> , 2012, 586, 2925-2931.	1.3	52
57	The Hog1 SAPK controls the Rtg1/Rtg3 transcriptional complex activity by multiple regulatory mechanisms. <i>Molecular Biology of the Cell</i> , 2012, 23, 4286-4296.	0.9	51
58	Hog1 bypasses stress-mediated down-regulation of transcription by RNA polymerase II redistribution and chromatin remodeling. <i>Genome Biology</i> , 2012, 13, R106.	13.9	50
59	The p57 CDKi integrates stress signals into cell-cycle progression to promote cell survival upon stress. <i>EMBO Journal</i> , 2012, 31, 2952-2964.	3.5	49
60	Time-Dependent Quantitative Multicomponent Control of the G ₁ -S Network by the Stress-Activated Protein Kinase Hog1 upon Osmostress. <i>Science Signaling</i> , 2011, 4, ra63.	1.6	48
61	A Synthetic Multicellular Memory Device. <i>ACS Synthetic Biology</i> , 2016, 5, 862-873.	1.9	48
62	The gene DIS2S1 is essential in <i>Saccharomyces cerevisiae</i> and is involved in glycogen phosphorylase activation. <i>Current Genetics</i> , 1991, 19, 339-342.	0.8	47
63	Sir2 histone deacetylase prevents programmed cell death caused by sustained activation of the Hog1 stress-activated protein kinase. <i>EMBO Reports</i> , 2011, 12, 1062-1068.	2.0	45
64	Okadaic acid-sensitive activation of Maxi Cl ⁻ channels by triphenylethylene antioestrogens in C1300 mouse neuroblastoma cells. <i>Journal of Physiology</i> , 2001, 536, 79-88.	1.3	44
65	Expression of the HXT1 Low Affinity Glucose Transporter Requires the Coordinated Activities of the HOG and Glucose Signalling Pathways. <i>Journal of Biological Chemistry</i> , 2004, 279, 22010-22019.	1.6	44
66	Hog1 Targets Whi5 and Msa1 Transcription Factors To Downregulate Cyclin Expression upon Stress. <i>Molecular and Cellular Biology</i> , 2015, 35, 1606-1618.	1.1	44
67	A novel role for lncRNAs in cell cycle control during stress adaptation. <i>Current Genetics</i> , 2015, 61, 299-308.	0.8	42
68	Control of Ubp3 ubiquitin protease activity by the Hog1 SAPK modulates transcription upon osmstress. <i>EMBO Journal</i> , 2011, 30, 3274-3284.	3.5	41
69	Rapid reversible changes in compartments and local chromatin organization revealed by hyperosmotic shock. <i>Genome Research</i> , 2019, 29, 18-28.	2.4	40
70	The p38 SAPK Is Recruited to Chromatin via Its Interaction with Transcription Factors. <i>Journal of Biological Chemistry</i> , 2010, 285, 31819-31828.	1.6	39
71	<i>Saccharomyces cerevisiae</i> gene SIT4 is involved in the control of glycogen metabolism. <i>FEBS Letters</i> , 1991, 279, 341-345.	1.3	36
72	The Hog1 Stress-activated Protein Kinase Targets Nucleoporins to Control mRNA Export upon Stress. <i>Journal of Biological Chemistry</i> , 2013, 288, 17384-17398.	1.6	35

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73	H3K4 monomethylation dictates nucleosome dynamics and chromatin remodeling at stress-responsive genes. <i>Nucleic Acids Research</i> , 2015, 43, 4937-4949.	6.5	34
74	A Clb/Cdk1-mediated regulation of Fkh2 synchronizes CLB expression in the budding yeast cell cycle. <i>Npj Systems Biology and Applications</i> , 2017, 3, 7.	1.4	32
75	Multiple signaling kinases target Mrc1 to prevent genomic instability triggered by transcription-replication conflicts. <i>Nature Communications</i> , 2018, 9, 379.	5.8	32
76	Timing of gene expression in a cell fate decision system. <i>Molecular Systems Biology</i> , 2018, 14, e8024.	3.2	31
77	Control of Cell Cycle Progression by the Stress-Activated Hog1 MAPK. <i>Cell Cycle</i> , 2005, 4, 6-7.	1.3	30
78	Validation of regulated protein phosphorylation events in yeast by quantitative mass spectrometry analysis of purified proteins. <i>Proteomics</i> , 2012, 12, 3030-3043.	1.3	30
79	Yeast Cip1 is activated by environmental stress to inhibit Cdk1 G1 cyclins via Mcm1 and Msn2/4. <i>Nature Communications</i> , 2017, 8, 56.	5.8	30
80	Sic1 plays a role in timing and oscillatory behaviour of B-type cyclins. <i>Biotechnology Advances</i> , 2012, 30, 108-130.	6.0	29
81	Parallel feedback loops control the basal activity of the HOG MAPK signaling cascade. <i>Integrative Biology (United Kingdom)</i> , 2015, 7, 412-422.	0.6	29
82	Role of Protein Phosphatase 2A in the Control of Glycogen Metabolism in Yeast. <i>FEBS Journal</i> , 1995, 229, 207-214.	0.2	28
83	Biochemical characterization of recombinant yeast PPZ1, a protein phosphatase involved in salt tolerance. <i>FEBS Letters</i> , 1995, 368, 39-44.	1.3	28
84	Mucins, osmosensors in eukaryotic cells?. <i>Trends in Cell Biology</i> , 2007, 17, 571-574.	3.6	28
85	LRRC8A-containing chloride channel is crucial for cell volume recovery and survival under hypertonic conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	23
86	The HOG pathway and the regulation of osmoadaptive responses in yeast. <i>FEMS Yeast Research</i> , 2022, 22, .	1.1	23
87	Synthetic biology: insights into biological computation. <i>Integrative Biology (United Kingdom)</i> , 2016, 8, 518-532.	0.6	21
88	Regulation of transcription elongation in response to osmostress. <i>PLoS Genetics</i> , 2017, 13, e1007090.	1.5	19
89	Plug-and-Play Multicellular Circuits with Time-Dependent Dynamic Responses. <i>ACS Synthetic Biology</i> , 2018, 7, 1095-1104.	1.9	17
90	The Hog1p kinase regulates Aft1p transcription factor to control iron accumulation. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2018, 1863, 61-70.	1.2	16

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91	Untargeted metabolomics unravels functionalities of phosphorylation sites in <i>Saccharomyces cerevisiae</i> . <i>BMC Systems Biology</i> , 2016, 10, 104.	3.0	15
92	Interaction Dynamics Determine Signaling and Output Pathway Responses. <i>Cell Reports</i> , 2017, 19, 136-149.	2.9	15
93	Functional Network Analysis Reveals the Relevance of SKIIP in the Regulation of Alternative Splicing by p38 SAPK. <i>Cell Reports</i> , 2019, 27, 847-859.e6.	2.9	15
94	A novel G ₁ checkpoint mediated by the p57 CDK inhibitor and p38 SAPK promotes cell survival upon stress. <i>Cell Cycle</i> , 2012, 11, 3339-3340.	1.3	14
95	Dealing with Transcriptional Outbursts during S Phase to Protect Genomic Integrity. <i>Journal of Molecular Biology</i> , 2013, 425, 4745-4755.	2.0	14
96	A genetic analysis reveals novel histone residues required for transcriptional reprogramming upon stress. <i>Nucleic Acids Research</i> , 2020, 48, 3455-3475.	6.5	14
97	The stress-activated protein kinase Hog1 develops a critical role after resting state. <i>Molecular Microbiology</i> , 2011, 80, 423-435.	1.2	13
98	Role of the Sln1-Phosphorelay pathway in the response to hyperosmotic stress in the yeast <i>Kluyveromyces lactis</i> . <i>Molecular Microbiology</i> , 2017, 104, 822-836.	1.2	12
99	Hog1 activation delays mitotic exit via phosphorylation of Net1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 8924-8933.	3.3	11
100	Initiation of the transcriptional response to hyperosmotic shock correlates with the potential for volume recovery. <i>FEBS Journal</i> , 2013, 280, 3854-3867.	2.2	9
101	Activation of the Hog1 MAPK by the Ssk2/Ssk22 MAP3Ks, in the absence of the osmosensors, is not sufficient to trigger osmotic stress adaptation in <i>Saccharomyces cerevisiae</i> . <i>FEBS Journal</i> , 2018, 285, 1079-1096.	2.2	9
102	Design, Synthesis and Characterization of a Highly Effective Inhibitor for Analog-Sensitive (as) Kinases. <i>PLoS ONE</i> , 2011, 6, e20789.	1.1	7
103	Understanding Retinoblastoma Post-Translational Regulation for the Design of Targeted Cancer Therapies. <i>Cancers</i> , 2022, 14, 1265.	1.7	7
104	Gene expression profiling of yeasts overexpressing wild type or misfolded Pma1 variants reveals activation of the Hog1 MAPK pathway. <i>Molecular Microbiology</i> , 2011, 79, 1339-1352.	1.2	6
105	The regulation of Net1/Cdc14 by the Hog1 MAPK upon osmotic stress unravels a new mechanism regulating mitosis. <i>Cell Cycle</i> , 2020, 19, 2105-2118.	1.3	6
106	Elongating under Stress. <i>Genetics Research International</i> , 2011, 2011, 1-7.	2.0	5
107	An RB insensitive to CDK regulation. <i>Molecular and Cellular Oncology</i> , 2017, 4, e1268242.	0.3	5
108	Nucleotide sequence of a rat heart cDNA encoding the isotype β^2 of the catalytic subunit of protein phosphatase 2A. <i>Nucleic Acids Research</i> , 1989, 17, 8370-8370.	6.5	4

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109	Regulation of gene expression in response to osmostress by the yeast stress-activated protein kinase Hog1. Topics in Current Genetics, 2007, , 81-97.	0.7	4
110	Sir2 plays a key role in cell fate determination upon SAPK activation. Aging, 2011, 3, 1163-1168.	1.4	4
111	Yeast Single-cell RNA-seq, Cell by Cell and Step by Step. Bio-protocol, 2019, 9, e3359.	0.2	4
112	Nucleotide sequence of a rat heart cDNA encoding the isotype $\hat{\pm}$ of the catalytic subunit of protein phosphatase 2A. Nucleic Acids Research, 1989, 17, 8369-8369.	6.5	3
113	The Search for the Biological Function of Novel Yeast Ser/Thr Phosphatases. , 1998, 93, 305-313.		2
114	A novel mechanism for the prevention of transcription replication conflicts. Molecular and Cellular Oncology, 2018, 5, e1451233.	0.3	2
115	Shaping the Transcriptional Landscape through MAPK Signaling. , 2019, , .		2
116	Recruitment of a chromatin remodelling complex by the Hog1 MAP kinase to stress genes. EMBO Journal, 2009, 28, 1191-1191.	3.5	1
117	Data-driven identification of inherent features of eukaryotic stress-responsive genes. NAR Genomics and Bioinformatics, 2022, 4, lqac018.	1.5	1
118	The Hog1 stress-activated protein kinase targets nucleoporins to control mRNA export upon stress.. Journal of Biological Chemistry, 2015, 290, 2301.	1.6	0