ANALÝZA GÉNOVEJ EXPRESIE KVASINKY CANDIDA PARAPSILOSIS PRI RASTE NA RÔZNYCH MÉDIACH

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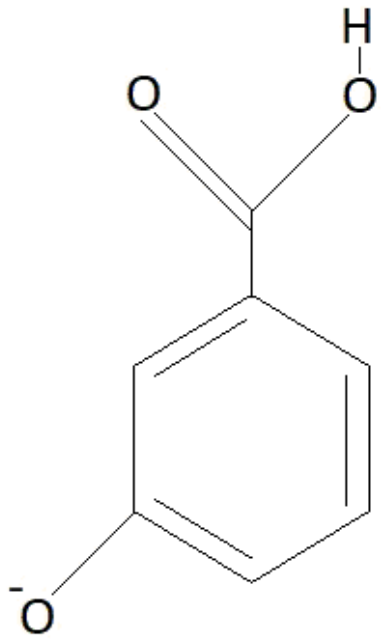
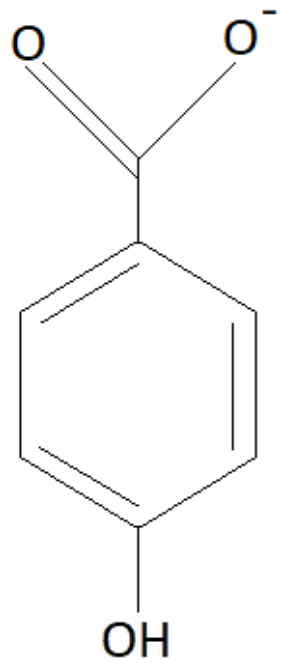
CIELE PRÁCE

Zistiť, ktoré GO kategórie boli exprimované, keď kvasinka rástla na 3-hydroxybenzoáte (3OH) a 4-hydroxybenzoáte (4OH) pomocou štatistických testov.

3-OH, 4-OH

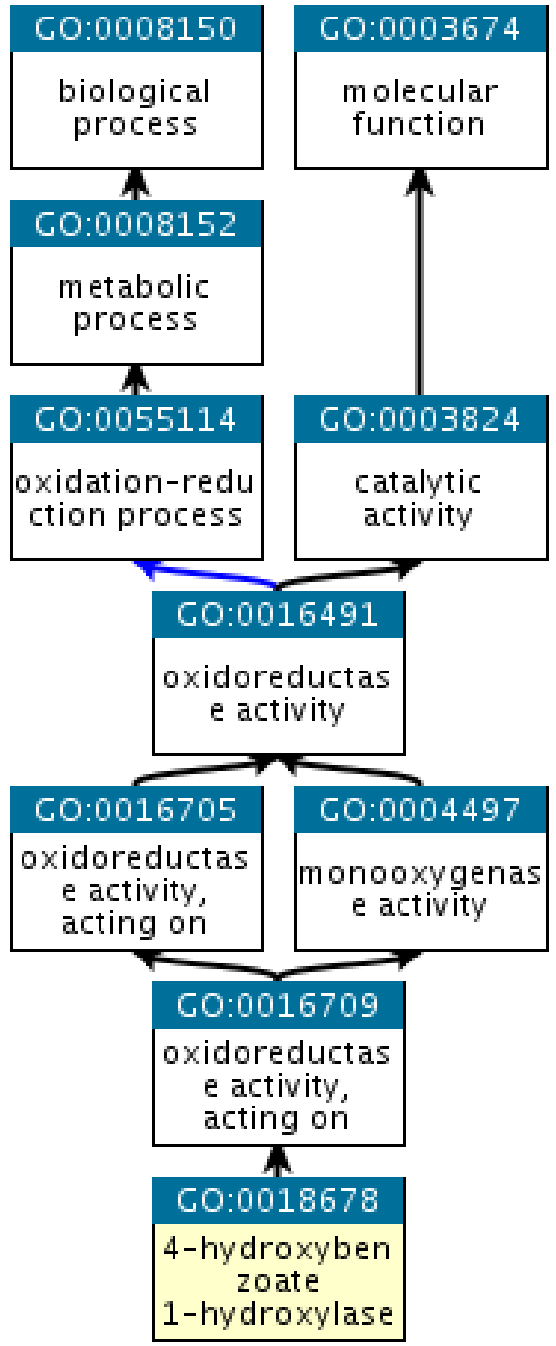


3-hydroxybenzoát



4-hydroxybenzoát

GO-KATEGÓRIE



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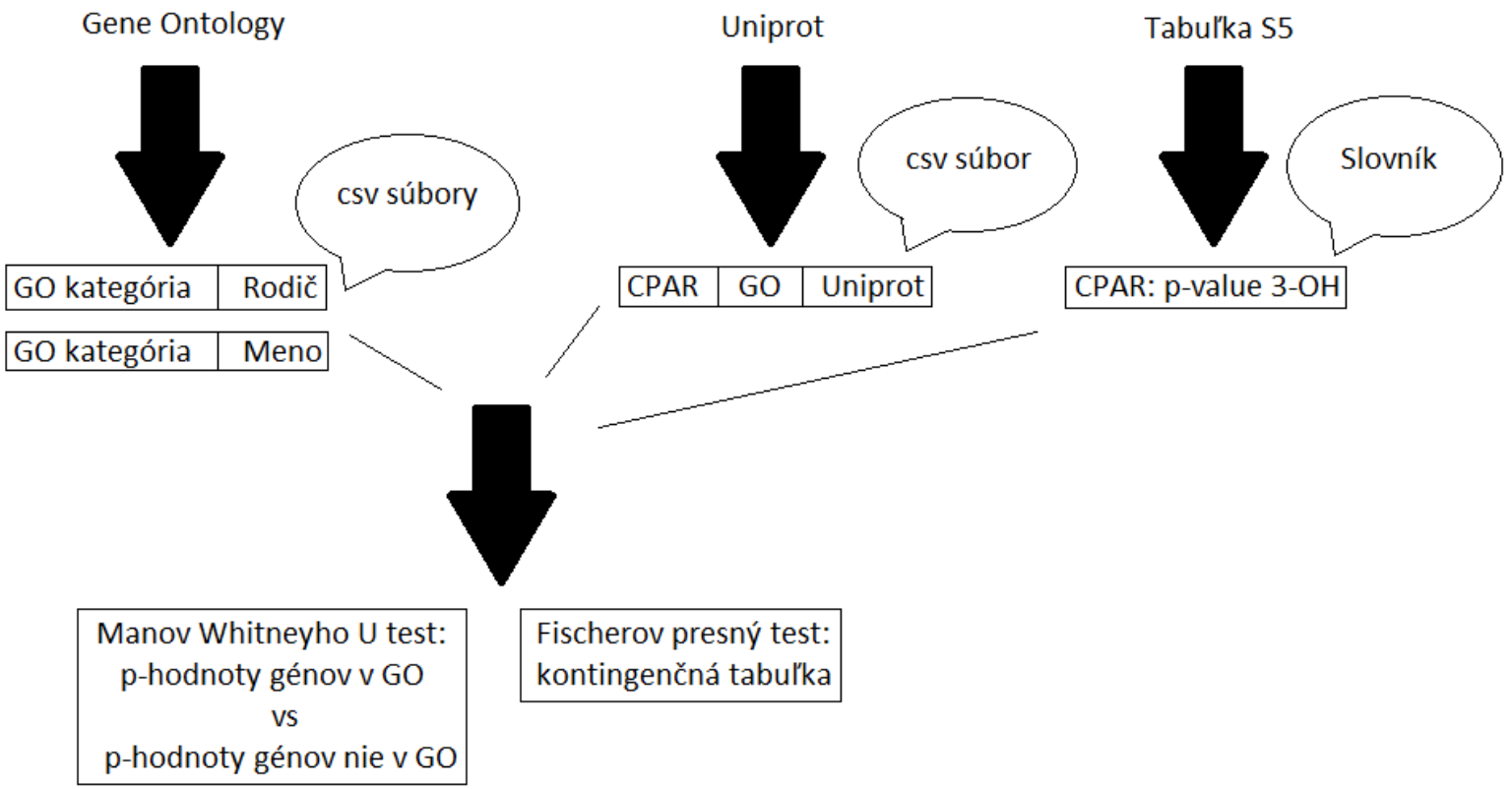
Gene Ontology
csv súbory
GO kategória
Rodič
GO kategória
Meno
Uniprot
csv súbor
CPAR
GO
Uniprot
Tabuľka S5
Slovník
CPAR: p-value 3-OH
Manov Whitneyho U test:
p-hodnoty génov v GO
vs
p-hodnoty génov nie v GO
Fischerov presný test:
kontingenčná tabuľka

TABUĽKA S5

Systematic name	SDS3OH	S3OH P-value	SDS4OH	S4OH P-value
CPAR2_100020	43,20	0,34095	40,86	0,43045
CPAR2_100030	223,22	0,46135	211,13	0,7138
CPAR2_100040	724,13	0,22725	684,90	0,24065
CPAR2_100050	130,00	0,73035	122,95	0,96105
CPAR2_100060	377,39	0,1687	356,94	0,14545
CPAR2_100070	88,28	0,4586	83,50	0,48075
CPAR2_100080	42,13	0,0302	39,85	0,06095
CPAR2_100090	299,79	0,0468	283,54	0,24265
CPAR2_100100	42,66	0,0718	40,35	0,02925
CPAR2_100110	151,09	0,9535	142,90	0,81225
CPAR2_100120	15,08	0,0701	14,26	0,08925
CPAR2_100130	230,92	0,67955	218,41	0,74805
CPAR2_100140	117,24	0,86075	110,89	0,85175
CPAR2_100150	20,15	0,9988	19,05	0,6983

ŠTATISTICKÉ TESTY

Mannov-Whitneyho U test

Gény v GO kategórií vs. gény, ktoré nie sú v danej GO kategórií

Fisherov presný test

Kontingenčná tabuľka

GO:0018678	V GO	Nie v GO
p-value < 0.01	1	133
p-value > 0.01	0	5687

VÝSLEDKY: FISHEROV PRESNÝ TEST – 30H

GO	p-value	Name
GO:0016491	0.000932	oxidoreductase activity
GO:0016712	0.001272	oxidoreductase activity, acting on paired donors, ...
GO:0019336	0.001554	phenol-containing compound catabolic process
GO:0016021	0.002849	integral component of membrane
GO:0042183	0.003062	formate catabolic process
GO:0033573	0.003062	high-affinity iron permease complex
GO:0005381	0.003062	iron ion transmembrane transporter activity
GO:0051287	0.004624	NAD binding
GO:0071949	0.010209	FAD binding
GO:0000103	0.010240	sulfate assimilation
GO:0016709	0.010240	oxidoreductase activity, acting on paired donors, ...
GO:0047617	0.010240	acyl-CoA hydrolase activity
GO:0005506	0.010812	iron ion binding
GO:0022857	0.012016	transmembrane transporter activity
GO:0055085	0.012476	transmembrane transport
GO:0004190	0.016954	aspartic-type endopeptidase activity
GO:0016575	0.017032	histone deacetylation
GO:0005887	0.020972	integral component of plasma membrane
GO:0006783	0.020972	heme biosynthetic process
GO:0018669	0.023020	3-hydroxybenzoate 6-monooxygenase activity

VÝSLEDKY: FISHEROV PRESNÝ TEST – 4OH

GO	p-value	Name
GO:0016712	0.000000000008	oxidoreductase activity acting on paired donors...
GO:0020037	0.000000000096	heme binding
GO:0048037	0.000000000129	cofactor binding
GO:0005506	0.000004522106	iron ion binding
GO:0016491	0.000017218264	oxidoreductase activity
GO:0050662	0.000024949606	coenzyme binding
GO:0050660	0.001273447824	flavin adenine dinucleotide binding
GO:0050661	0.001562286021	NADP binding
GO:0005381	0.003926542547	iron ion transmembrane transporter activity
GO:0033573	0.003926542547	high-affinity iron permease complex
GO:0042183	0.003926542547	formate catabolic process
GO:0051287	0.007217858827	NAD binding
GO:0016021	0.010163593707	integral component of membrane
GO:0047617	0.013050732155	acyl-CoA hydrolase activity
GO:0072593	0.021618975399	reactive oxygen species metabolic process
GO:0022857	0.025340398772	transmembrane transporter activity
GO:0051908	0.026112351830	double-stranded DNA 5'-3'exodeoxyribonuclease
GO:0000709	0.026112351830	meiotic joint molecule formation
GO:0004594	0.026112351830	pantothenate kinase activity
GO:0097344	0.026112351830	Rix1 complex
GO:0004089	0.026112351830	carbonate dehydratase activity
GO:0018678	0.026112351830	4-hydroxybenzoate 1-hydroxylase activity

VÝSLEDKY: MANNOV-WHITNEYHO U TESTU – 3OH

GO	p-value	Name
GO:0030684	0.00000000029	preribosome
GO:0048037	0.00000017582	cofactor binding
GO:0016491	0.00000182463	oxidoreductase activity
GO:0006364	0.00000186734	rRNA processing
GO:0006412	0.00000295479	translation
GO:0030687	0.00000351495	preribosome, large subunit precursor
GO:0006096	0.00000731330	glycolytic process
GO:0050662	0.00000977108	coenzyme binding
GO:1990904	0.00008986945	ribonucleoprotein complex
GO:0032040	0.00013645467	small-subunit processome
GO:0019843	0.00014723066	rRNA binding
GO:0016712	0.00015909622	oxidoreductase activity, acting on paired donors, ...
GO:0005730	0.00023371481	nucleolus
GO:0005975	0.00027544225	carbohydrate metabolic process
GO:0015934	0.00032365998	large ribosomal subunit
GO:0004190	0.00058596249	aspartic-type endopeptidase activity
GO:0042183	0.00065053832	formate catabolic process
GO:0006267	0.00079189687	pre-replicative complex assembly ...
GO:0051287	0.00097601030	NAD binding
GO:0005762	0.00113298943	mitochondrial large ribosomal subunit
GO:0020037	0.00117507883	heme binding

VÝSLEDKY: MANNOV-WHITNEYHO U TESTU – 40H

GO	p-value	Name
GO:0030684	0.0000000000000002	preribosome
GO:0016491	0.0000000000013577	oxidoreductase activity
GO:0005730	0.0000000008347371	nucleolus
GO:0006364	0.0000000016777715	rRNA processing
GO:0048037	0.0000000026963696	cofactor binding
GO:0030687	0.0000000109557119	preribosome, large subunit precursor
GO:0050662	0.0000000249909616	coenzyme binding
GO:0000469	0.0000013456646554	cleavage involved in rRNA processing
GO:0050660	0.0000015733091273	flavin adenine dinucleotide binding
GO:0000447	0.0000017747118327	endonucleolytic cleavage in ITS1 to separate SSU-rRNA ...
GO:0003824	0.0000021135899420	catalytic activity
GO:0016712	0.0000021241551688	oxidoreductase activity, acting on paired donors, ...
GO:0032040	0.0000031350520120	small-subunit processome
GO:0000470	0.0000045465792839	maturation of LSU-rRNA
GO:0000472	0.0000128610367586	endonucleolytic cleavage to generate mature 5'-end ...
GO:0000480	0.0000188473448840	endonucleolytic cleavage in 5'-ETS of tricistronic rRNA ...
GO:0006267	0.0000243999656832	pre-replicative complex assembly ...
GO:0000463	0.0000254145453758	maturation of LSU-rRNA from tricistronic rRNA transcript ...
GO:0016614	0.0000612588847336	oxidoreductase activity, acting on CH-OH group of donors
GO:0006096	0.0000725892544166	glycolytic process
GO:0005656	0.0000994373611316	nuclear pre-replicative complex
GO:0030686	0.0001254881032725	90S preribosome
GO:0020037	0.0001781977232477	heme binding
GO:0042555	0.0002063418514877	MCM complex
GO:0005506	0.0002483050580800	iron ion binding

POROVNANIE VÝSLEDKOV PRE FISHEROV PRESNÝ TEST – 3OH

GO term	p-value
Iron ion transport	0.00036
Transmembrane transport	0.00108
Oxidoreductase activity	0.00958

POROVNANIE VÝSLEDKOV PRE FISHEROV PRESNÝ TEST – 3OH

GO term	p-value
Oxidoreductase activity, acting on paire donors	8.64e-10
Heme binding	1.62e-09
Tetrapyrrole binding	1.62e-09
Oxidoreductase activity	5.37e-08
Cofactor binding	1.03e-07
Monooxygenase activity	1.06e-06
Oxidoreductase activity, acting on paire donors	0.00049
Oxidation-reduction process	0.00114
Iron Ion binding	0.0057

ĎAKUJEM ZA POZORNOSŤ