

Iron Chelator Deferasirox Reduces *Candida albicans* Invasion of Oral Epithelial Cells and Infection Levels in Murine Oropharyngeal Candidiasis

Supplementary Information

Table S1: All *C. albicans* genes that were differentially expressed in response to preventive Deferasirox treatment *in vivo*

Gene ID	Gene Name	Function	log ₂ (fold-change)	P-value
Upregulated <i>C. albicans</i> genes				
C1_04650W_B	<i>DUR3</i>	High affinity spermidine transporter; expression is induced by urea; fungal-specific (no human or murine homolog); not required for virulence in a mouse intravenous model	5.8994	5.00E-05
C4_00430W_B	<i>MEP2</i>	Ammonium permease and regulator of nitrogen starvation-induced filamentation; 11 predicted transmembrane regions; in low nitrogen cytoplasmic C-terminus activates Ras/cAMP and MAPK signal transduction pathways to induce filamentation	4.19734	5.00E-05
C1_04660W_B	<i>DUR1,2</i>	Urea amidolyase; hydrolyzes urea to CO ₂ ; use of urea as N source and for hyphal switch in macrophage; regulated by Nrg1/Hap43; required for virulence; promotes mouse kidney and brain colonization; rat catheter and flow model biofilm induced	4.08792	5.00E-05
C2_01000W_B	<i>HGT7</i>	Putative MFS glucose transporter; glucose, fluconazole, Snf3 induced, expressed at high glucose; 20 member <i>C. albicans</i> glucose transporter family; 12 TM regions predicted; flow model biofilm induced; Spider biofilm repressed	3.46671	5.00E-05
CR_01910C_B	<i>BIO4</i> (alias)	Putative dethiobiotin synthetase; transcript upregulated in clinical isolates from HIV+ patients with oral candidiasis; Hap43-repressed; GlcNAc-induced protein; Spider biofilm induced	3.17951	0.00905
CR_04210C_A	<i>QDR1</i>	Putative antibiotic resistance transporter; regulated by white-opaque switch, Nrg1, Tup1; Hap43, caspofungin repressed; repressed during chlamydospore formation; flow model biofilm induced; Spider biofilm repressed	3.1071	0.00015
CR_03270W_A	<i>VHT1</i>	Predicted membrane transporter, member of the anion:cation symporter (ACS) family, major facilitator superfamily (MFS); amphotericin B, caspofungin repressed; Hap43p-repressed	3.00409	0.00105
CR_01920W_B	<i>BIO31</i> (alias)	Ortholog(s) have adenosylmethionine-8-amino-7-oxononanoate transaminase activity and role in biotin biosynthetic process	2.78716	0.0144
C1_02980W_A	<i>GOR1</i>	Ortholog(s) have glyoxylate reductase activity, role in glyoxylate catabolic process and cytosol, extracellular region, mitochondrion, nucleus localizatio	2.77539	0.00355

C3_02310W_A	<i>MEP1</i>	Ammonium permease; Mep1 more efficient permease than Mep2, Mep2 has additional regulatory role; 11 predicted transmembrane regions; low mRNA abundance; hyphal downregulated; flow model biofilm induced (2.66297	5.00E-05
C4_06530C_A	<i>XUT1</i>	Putative high-affinity, high-capacity xanthine-uric acid/H ⁺ symporter; similar to <i>A. nidulans</i> UapA; member of the Nucleobase-Ascorbate Transporter/Nucleobase-Cation Symporter (NAT/NCS2) family; rat catheter biofilm induced	2.42765	0.0014
C1_08790W_B	<i>TPO3</i>	Putative polyamine transporter; MFS-MDR family; induced by Sfu1, regulated upon white-opaque; decreased expression in hyphae vs yeast-form cells; regulated by Nrg1; Spider biofilm repressed	2.33814	0.0124
C2_03120W_A	<i>AMO1</i>	Putative peroxisomal copper amine oxidase	2.15342	0.0009
CR_02060W_A	<i>PMU4</i>	Protein of unknown function; Spider biofilm induced	2.12432	0.0049
C4_00450C_B	<i>PGA10</i>	Iron acq; GPI anchored membrane protein; utilization of hemin and hemoglobin for Fe in host; Rim101 at pH8/hypoxia/ketoconazole/ciclopirox/hypha-induced; required for RPMI biofilm formation, Bcr1-induced in a/a biofilm; rat catheter biofilm repressed	2.10848	0.00345
C2_08590W_A	<i>YWP1</i>	Secreted yeast wall protein; possible role in dispersal in host; mutation increases adhesion and biofilm formation; propeptide; growth phase, phosphate, Ssk1/Ssn6/Efg1/Efh1/Hap43 regulated; mRNA binds She3; flow and Spider biofilm repressed	2.10571	0.0054
C6_01510W_B	<i>OYE23</i>	Putative NADPH dehydrogenase; induced by nitric oxide, benomyl; oxidative stress-induced via Cap1; Hap43p-repressed; rat catheter biofilm induced	2.03668	0.0264
C2_05890C_A	<i>IDP1</i>	Putative isocitrate dehydrogenase; transcriptionally induced by interaction with macrophage; alkaline induced; Spider biofilm repressed	2.02428	0.00295
C1_05830W_A	<i>TMT1</i> (alias)	Ortholog(s) have trans-aconitate 3-methyltransferase activity and cytosol, nucleus localization	1.97946	0.0404
C2_02580W_B	N/A	Predicted MFS membrane transporter; monocarboxylate porter family member; colony morphology-related gene regulation by Ssn6; flow model biofilm induced; Spider biofilm induced	1.95251	0.018
C4_03950C_A	N/A	Protein of unknown function	1.94228	0.03235
C4_03960W_A	N/A	Protein of unknown function; ORF added to Assembly 21 based on comparative genome analysis; protein detected by mass spec in stationary phase cultures	1.90096	0.00385
C1_01440C_B	<i>POX18</i>	Similar to Pox18, a peroxisomal protein; induced during chlamyospore formation in <i>C. albicans</i> and <i>C. dubliniensis</i> ; A21 sequence updated based on new sequence and analysis, the allelic orf19.10841 was reinstated; Spider biofilm induced	1.78032	0.0082
C2_04460W_A	<i>LYS22</i>	Homocitrate synthase, minor isoform; repressed by nitric oxide and by hypoxia; protein level decreases in stationary phase cultures; induced by ketoconazole, Spider biofilm induced; flow model biofilm repressed	1.76911	0.0071
C4_03500C_A	N/A	Protein of unknown function; regulated by Tsa1, Tsa1B in minimal media at 37 degrees C	1.74569	0.0245
C6_00870C_A	<i>ILV5</i>	Ketol-acid reductoisomerase; antigenic; regulated by Gcn4; GlcNAc, amino acid starvation (3-AT)-induced; macrophage-repressed protein; protein present in exponential and stationary phase; flow model and Spider biofilm repressed	1.73544	0.01485
C6_01680C_B	N/A	Ortholog(s) have endoplasmic reticulum, fungal-type vacuole localization	1.71718	0.0338
C4_00650W_B	<i>HIS5</i>	Putative histidinol-phosphate aminotransferase; Gcn4p-regulated; protein present in exponential and stationary growth phase yeast cultures	1.69341	0.0469
C6_04380W_A	<i>ALS2</i>	Ind by low Fe, ALS family protein; role in adhesion, biofilm formation, germ tube induction; expressed at infection of human buccal epithelial	1.64312	0.00265

		cells; putative GPI-anchor; induced by ketoconazole, low iron and at cell wall regeneration; regulated by Sfu1p		
C2_04230W_B	<i>BAT21</i>	Putative branched chain amino acid aminotransferase; regulated by Gcn4, Gcn2; induced in response to amino acid starvation (3-aminotriazole treatment); early-stage flow model biofilm formation	1.62417	0.00675
C3_04340W_A	<i>ATF1</i>	Putative alcohol acetyltransferase; caspofungin repressed; expression depends on Tac1p	1.59308	0.0097
C4_06120W_A	<i>GDH3</i>	NADP-glutamate dehydrogenase; Nrg1, Plc1 regulated; hypha, hypoxia, Efg1-repressed; Rim101-induced at pH 8; GlcNAc, ciclopirox, ketoconazole induced; exp and stationary phase protein; Spider biofilm repressed; rat catheter biofilm induced	1.52725	0.03635
C2_00180C_B	<i>URO99</i> (alias)	Predicted uricase; ortholog of <i>S. pombe</i> SPCC1223.09; Spider biofilm induced	1.52279	0.0178
CR_01330W_B	<i>CPA2</i>	Putative arginine-specific carbamoylphosphate synthetase; protein enriched in stationary phase yeast cultures; rat catheter biofilm induced; Spider biofilm induced	1.50089	0.02485
C7_02150C_A	<i>ECM42</i>	Ornithine acetyltransferase; Gcn2, Gcn4-regulated; clade-specific gene expression; possibly essential gene, disruptants not obtained by UAU1 method; Spider biofilm induced	1.48418	0.01195
C2_08260W_B	N/A	Protein of unknown function; Hap43-repressed gene; by Rgt1; repressed in Spider biofilms by Bcr1, Tec1, Brg1, Rob1 and induced by Efg1, Ndt80; Spider biofilm induced	1.48262	0.0305
C7_03300C_B	<i>LIP8</i>	Secreted lipase, member of a differentially expressed lipase gene family with possible roles in nutrition and/or in creating an acidic microenvironment; LIP5 and LIP8 are expressed at all stages of both mucosal and systemic infection	1.47284	0.02795
C2_03640W_B	<i>UGA11</i>	Putative gamma-aminobutyrate (GABA) transaminase; macrophage-induced; overlaps orf19.854.1, which is a region annotated as a blocked reading frame; Spider biofilm induced	1.41086	0.0361
C1_02620C_B	<i>HOM6</i>	Putative homoserine dehydrogenase; Gcn4-regulated; induced by amino acid starvation (3-AT treatment); macrophage-induced protein; protein level decreases in stationary phase cultures; flow model biofilm repressed	1.40735	0.02785
C1_11790W_A	<i>CDC8</i>	Ortholog(s) have thymidylate kinase activity, uridylate kinase activity, role in dTDP biosynthetic process, dTTP biosynthetic process, dUDP biosynthetic process and cytosol, nucleus localization	1.37698	0.0315
C6_04130C_B	<i>ALS4</i>	GPI-anchored adhesin; role in adhesion, germ tube induction; growth, temperature regulated; expressed during infection of human buccal epithelial cells; repressed by vaginal contact; biofilm induced; repressed during chlamyospore formation	1.37573	0.0279
CR_01400W_B	<i>LYS12</i>	Homoisocitrate dehydrogenase; catalyzes 4th step in the alpha-amino adipate pathway of lysine biosynthesis; clade-associated gene expression; protein level decreases in stationary phase cultures; Spider biofilm repressed	1.37415	0.02925
C2_06630C_B	N/A	Ortholog of <i>C. parapsilosis</i> CDC317 : CPAR2_104640 and <i>Candida orthopsilosis</i> Co 90-125 : CORT_0B05695	1.33433	0.03015
C1_02620C_A	<i>HOM6</i>	Putative homoserine dehydrogenase; Gcn4-regulated; induced by amino acid starvation (3-AT treatment); macrophage-induced protein; protein level decreases in stationary phase cultures; flow model biofilm repressed	1.26774	0.04095
C1_05080W_A	<i>GPT1</i>	GABA/polyamine transporter; 9 to 11 membrane spanning segments; complements GABA uptake defect of an <i>S. cerevisiae</i> uga4 put4 gap1 triple mutant; complements growth of an <i>S. cerevisiae</i> spe1 mutant under polyamine limitation	1.25542	0.0456
C3_03360W_B	<i>FCY2</i>	Purine-cytosine permease of pyrimidine salvage; mutation associated with resistance to flucytosine in clinical isolates; transposon mutation affects filamentation; farnesol-upregulated in biofilm	1.2481	0.01945

C2_03320W_A	<i>CHK1</i>	Histidine kinase; 2-component signaling, cell wall synthesis; hyphal growth defect; avirulent in mouse, not rat vaginal infection; phagocytosis rate increased; Spider biofilm induced; required for RPMI biofilm; Bcr1-induced in a/a biofilm	1.23818	0.04595
C2_02380W_B	<i>POB3</i>	Protein involved in chromatin assembly and disassembly; ortholog of <i>S. cerevisiae</i> Pob3; transposon mutation affects filamentous growth; rat catheter biofilm repressed	1.22621	0.0441
C4_05540W_B	<i>HOM3</i>	Putative L-aspartate 4-P-transferase; fungal-specific (no human or murine homolog); regulated by Gcn2 and Gcn4; early-stage flow model biofilm induced	1.18615	0.04355
C2_04880C_A	<i>ARH2</i>	Putative adrenodoxin-NADPH oxidoreductase; role in heme biosynthesis	1.1585	0.04425
C5_02270W_B	<i>THR4</i>	Putative threonine synthase; protein present in exponential and stationary growth phase yeast cultures; Gcn4p-regulated; sumoylation target	1.14542	0.0392
C1_00680W_B	<i>ASM3</i>	Putative secreted acid sphingomyelin phosphodiesterase; possible Kex2 substrate; transcript increased in an azole-resistant strain that overexpresses MDR1; flow model biofilm induced; F-12/CO2 early biofilm induced	1.11878	0.0343
C1_10290W_A	<i>GCA1</i>	Extracellular/plasma membrane-associated glucoamylase; expressed in rat oral infection; regulated by carbohydrates, pH, galactose; promotes biofilm matrix formation; flow model biofilm induced; Bcr1 repressed in RPMI a/a biofilms	1.07115	0.048
C4_05070C_B	<i>ARG8</i>	Putative acetylornithine aminotransferase; Gcn2, Gcn4 regulated; rat catheter biofilm induced; Spider biofilm induced	1.01186	0.04885
Downregulated <i>C. albicans</i> genes				
C4_04080C_B	<i>PGA31</i>	Cell wall protein; putative GPI anchor; expression regulated upon white-opaque switch; induced by Congo Red and cell wall regeneration; Bcr1-repressed in RPMI a/a biofilms	-4.18385	0.00425
CM_00360W	<i>RRNS</i>	Mitochondrial ribosomal RNA of the small ribosomal subunit	-2.86056	0.0049
CM_00010W	<i>RRNL</i>	Mitochondrial ribosomal RNA of the large ribosomal subunit	-2.84331	0.00305
C6_03790C_B	<i>HGT10</i>	Glycerol permease involved in glycerol uptake; member of the major facilitator superfamily; induced by osmotic stress, at low glucose in rich media, during cell wall regeneration; 12 membrane spans; Hap43p-induced gene	-2.50627	0.0251
C6_02100W_A	<i>LDG8</i>	Secreted protein; Hap43-repressed; fluconazole-induced; regulated by Tsa1, Tsa1B under H2O2 stress conditions; induced by Mnl1p under weak acid stress; Spider biofilm induced	-2.35105	0.00025
C4_04030W_B	<i>JEN2</i>	Dicarboxylic acid transporter; regulated by glucose repression; induced by Rgt1; disruptants not obtained by UAU1 method; rat catheter and Spider biofilm induced	-2.31791	0.0006
C1_07580C_A	<i>PRY1</i>	Pry family pathogenesis-related protein; extracellular; opaque specific transcript; repressed by alpha pheromone in SpiderM medium; possibly essential, disruptants not obtained by UAU1 method; Spider biofilm induced	-2.30998	0.00245
CR_06460W_B	<i>GST3</i>	Glutathione S-transferase; expression regulated upon white-opaque switch; induced by human neutrophils; peroxide-induced; induced by alpha pheromone in SpiderM medium; Spider biofilm induced	-2.29826	0.0287
CM_00210W	<i>COX1</i>	Subunit I of cytochrome c oxidase, which is the terminal member of the mitochondrial (mt) inner membrane electron transport chain; one of three mt-encoded subunits; alternatively spliced transcripts encode 4 putative splicing endonucleases	-2.24439	0.0051
CM_00140C	<i>ATP9</i>	Subunit 9 of the F0 sector of mitochondrial F1F0 ATP synthase, which is a large, evolutionarily conserved enzyme complex required for ATP synthesis	-2.09495	0.02455

C1_09240C_A	N/A	Protein of unknown function; induced during chlamyospore formation in both <i>C. albicans</i> and <i>C. dubliniensis</i>	-2.09394	0.03785
C4_06390W_A	<i>SOU1</i>	Enzyme involved in utilization of L-sorbose; has sorbitol dehydrogenase, fructose reductase, and sorbose reductase activities; NAD-binding site motif; transcriptional regulation affected by chromosome 5 copy number; Hap43p-induced gene	-2.06913	0.0017
C1_10430W_B	<i>PHO8</i>	Putative repressible vacuolar alkaline phosphatase; Rim101-induced transcript; regulated by Tsa1, Tsa1B in minimal media at 37 deg; possibly adherence-induced	-1.96872	0.02755
C4_03890W_B	<i>PTP2</i>	Predicted protein tyrosine phosphatase; involved in regulation of MAP kinase Hog1 activity; induced by Mnl1 under weak acid stress; rat catheter and Spider biofilm induced	-1.95454	0.0486
CM_00030W	<i>COX2</i>	Subunit II of cytochrome c oxidase, which is the terminal member of the mitochondrial inner membrane electron transport chain; one of three mitochondrially-encoded subunits	-1.90643	0.03815
CR_04420C_B	<i>RBR2</i>	Cell wall protein; expression repressed by Rim101; transcript regulated upon white-opaque switching; repressed by alpha pheromone in SpiderM medium; macrophage-induced gene	-1.84517	0.02255
C4_06620C_B	<i>LDG11</i> (alias)	Protein of unknown function; rat catheter and Spider biofilm induced	-1.83398	0.02635
CR_04960C_A	<i>CRG1</i>	Methyltransferase involved in sphingolipid homeostasis, methylates a drug cantharidin; decreased expression in hyphae compared to yeast; expression regulated during planktonic growth; flow model biofilm induced; Hap43-repressed gene	-1.72716	0.01065
C3_04080W_B	N/A	Ortholog of subunit 6 of the ubiquinol cytochrome-c reductase complex, a component of the mitochondrial inner membrane electron transport chain; Hap43-repressed gene	-1.71289	0.0135
C5_00540C_A	<i>AGA1</i>	Protein with some similarity to agglutinin subunit; expression regulated upon white-opaque switch; Spider biofilm induced	-1.7007	0.0218
C6_03600C_A	<i>ALK1</i> (alias)	Putative cytochrome P450; Spider biofilm induced	-1.65062	0.0158
C4_01100C_B	<i>AGP2</i>	Reg by hap, sef, sfu; Amino acid permease; hyphal repressed; white-opaque switch regulated; induced in core caspofungin response, during cell wall regeneration, by flucytosine; regulated by Sef1, Sfu1, and Hap43; rat catheter and Spider biofilm induced	-1.53575	0.00275
C4_05580C_A	N/A	Secreted protein; exogenously expressed protein is a substrate for Kex2 processing in vitro; fluconazole-regulated; Spider biofilm induced	-1.52322	0.0391
CR_04820W_B	N/A	Protein of unknown function; Hap43-induced; rat catheter and Spider biofilm induced	-1.51326	0.0055
C3_00930W_A	<i>ATO2</i>	Putative fungal-specific transmembrane protein; fluconazole repressed, Hap43-repressed; flow model biofilm induced; Spider biofilm induced	-1.50839	0.012
C1_05890W_B	N/A	Protein of unknown function; substrate for Kex2 processing in vitro; repressed by alpha pheromone in SpiderM medium; Spider biofilm induced; Bcr1-repressed in a/a RPMI biofilms	-1.50432	0.01795
C6_00740W_A	<i>FAT1</i>	Predicted enzyme of sphingolipid biosynthesis; upregulated in biofilm	-1.47092	0.02455
C2_06070W_B	<i>FAA2-1</i>	Predicted long chain fatty acid CoA ligase; upregulated upon phagocytosis; induced by nitric oxide independent of Yhb1	-1.46218	0.0273
CR_03850W_A	<i>HGT3</i>	Putative glucose transporter of the major facilitator superfamily; the <i>C. albicans</i> glucose transporter family comprises 20 members; 12 probable membrane-spanning segments, extended C terminus; expressed in rich medium with 2% glucose	-1.41255	0.01505
C3_02790W_B	N/A	Ortholog of <i>C. parapsilosis</i> CDC317 : CPAR2_102150, <i>C. dubliniensis</i> CD36 : Cd36_82780, <i>Pichia stipitis</i> Pignal : psti_CGOB_00155 and <i>Candida orthopsilosis</i> Co 90-125 : CORT_0B03450 (5)	-1.40587	0.0092
C5_02000C_B	<i>ACH1</i>	Acetyl-coA hydrolase; acetate utilization; nonessential; soluble protein in hyphae; antigenic in human; induced on polystyrene adherence;	-1.39103	0.01505

		farnesol-, ketoconazole-induced; no human or murine homolog; stationary phase-enriched protein		
C2_00680C_A	<i>SOD5</i>	Cu-containing superoxide dismutase; protects against oxidative stress; induced by neutrophils, hyphal growth, caspofungin, osmotic/oxidative stress; oralpharyngeal candidiasis induced; rat catheter and Spider biofilm induced	-1.38752	0.02145
C4_01940W_B	<i>PHO89</i>	Putative phosphate permease; transcript regulated upon white-opaque switch; alkaline induced by Rim101; possibly adherence-induced; F-12/CO2 model, rat catheter and Spider biofilm induced	-1.38298	0.0348
C3_01060W_A	N/A	Ortholog of <i>C. dubliniensis</i> CD36 : Cd36_29340, <i>Spathaspora passalidarum</i> NRRL Y-27907 : spas_CGOB_00040 and <i>Candida albicans</i> WO-1 : CAWG_00248	-1.35489	0.0409
C2_07630C_A	N/A	Possible stress protein; increased transcription associated with CDR1 and CDR2 overexpression or fluphenazine treatment; regulated by Sfu1, Nrg1, Tup1; stationary phase enriched protein; Spider biofilm induced	-1.33091	0.0089
C1_01740W_A	<i>CTN1</i>	Carnitine acetyl transferase; required for growth on nonfermentable carbon sources, not for hyphal growth or virulence in mice; induced in macrophage; macrophage/pseudohyphal-repressed after 16 hr; rat catheter, Spider biofilm induced	-1.32641	0.038
C1_09150W_B	<i>AOX2</i>	Alternative oxidase; cyanide-resistant respiration; induced by antimycin A, oxidants; growth; Hap43, chlamydospore formation repressed; rat catheter, Spider biofilm induced; regulated in Spider biofilms by Bcr1, Tec1, Ndt80, Brg1	-1.30376	0.043
C3_02570W_B	N/A	Predicted metalloendopeptidase; Spider biofilm induced	-1.25884	0.0359
C1_10740C_B	<i>ASR1</i>	Heat shock protein; transcript regulated by cAMP, osmotic stress, ciclopirox olamine, ketoconazole; repressed by Cyr1, Ras1; colony morphology-related regulated by Ssn6; stationary phase enriched; Hap43-induced; Spider biofilm induced	-1.25044	0.01335
C1_08330C_B	<i>ADH2</i>	Alcohol dehydrogenase; soluble in hyphae; expression regulated by white-opaque switching; regulated by Ssn6; induced by Mnl1 in weak acid stress; protein enriched in stationary phase yeast cultures; Spider biofilm induced	-1.2281	0.04495
C6_00160W_A	<i>PGA48</i>	Putative GPI-anchored adhesin-like protein; similar to <i>S. cerevisiae</i> Spi1p, which is induced at stationary phase; transcript induced in high iron; flow model biofilm induced; Spider biofilm repressed	-1.21915	0.02295
C5_04880C_B	<i>PUT2</i>	Putative delta-1-pyrroline-5-carboxylate dehydrogenase; alkaline upregulated; protein present in exponential and stationary growth phase yeast cultures; flow model biofilm induced; Spider biofilm induced	-1.21881	0.0476
C4_02660W_B	<i>SCD99</i> (alias)	Protein with a glucose/ribitol dehydrogenase family domain; mutants are viable	-1.21814	0.04515
C1_04300C_B	<i>SSA2</i>	HSP70 family chaperone; cell wall fractions; antigenic; beta-defensin peptides import; ATPase domain binds histatin 5; at hyphal surface, not yeast; farnesol-repressed in biofilm; flow model, Spider biofilm repressed; caspofungin repressed	-1.2119	0.0199
C2_06990W_A	<i>AQR1</i> or <i>IFT1</i> (aliases)	Protein of unknown function; expression regulated by white-opaque switch; repressed by alpha pheromone in SpiderM medium; Spider biofilm induced	-1.20295	0.03995
C6_03470W_A	<i>CSR1</i> (alias)	Putative phosphatidylinositol transfer protein; possibly an essential gene, disruptants not obtained by UAU1 method	-1.18416	0.03595
CR_06550C_A	N/A	Protein of unknown function; induced by nitric oxide; predicted ORF from Assembly 19; removed from Assembly 20; restored based on transcription data	-1.18299	0.02885
C1_11850W_A	N/A	Protein of unknown function; Hap43-repressed gene; mRNA binds to She3; repressed in hyphae; Efg1 and Efh1 regulated; 5'-UTR intron; induced by Mnl1 under weak acid stress; rat catheter biofilm induced	-1.1733	0.04345

C7_03340C_B	<i>PRR2</i>	Putative serine/threonine protein kinase; mutation confers resistance to 5-fluorocytosine (5-FC)	-1.14876	0.0326
CR_02510W_B	N/A	C2H2 transcription factor; induced by Mnl1 under weak acid stress	-1.09957	0.03065
C3_04020C_B	<i>ZCF16</i>	Predicted Zn(II)2Cys6 transcription factor; mutants are viable; rat catheter biofilm induced	-1.05928	0.0478
C6_02500C_B	<i>GCV1</i>	Putative T subunit of glycine decarboxylase; transcript negatively regulated by Sfu1; Spider biofilm repressed	-1.05165	0.03175

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