

Table S5. List of TFs up-regulated under developmental conditions

	TF Family	Locus	TF name	Previously studied TFs	Homologues gene (Putative function)
Conidiation	APSES	MGG_08463.6	TF010	<i>MoAPS2</i>	<i>Swi6</i> (regulation of cell cycle progression from G1 to S phase) in <i>S. cerevisiae</i>
	APSES	MGG_09869.6	TF011	<i>MoAPS1</i>	-
	bHLH	MGG_01321.6	TF003		-
	bHLH	MGG_10837.6	TF008		white collar-2 in <i>N. crassa</i> ; sexual development transcription factor in <i>A. nidulans</i>
	Forkhead	MGG_01853.5	FOK1		A minor role in the expression of G2/M phase genes in <i>S. cerevisiae</i>
	Forkhead	MGG_06422.5	FOK3		Chromatin modification-related protein vid-21 in <i>P. anserina</i>
	Homeobox	MGG_04853.6	HOX1	<i>MoHOX1</i>	tRNA isopentenyltransferase in <i>A. Nidulans</i>
	Homeobox	MGG_00184.6	HOX2	<i>MoHOX2</i>	-
	Homeobox	MGG_01730.6	HOX3	<i>MoHOX3</i>	<i>PTR2</i> (transcriptional repressor) in <i>S. cerevisiae</i>
	Homeobox	MGG_06285.6	HOX4	<i>MoHOX4</i>	-
	Homeobox	MGG_11712.6	HOX6	<i>MoHOX6</i>	-
	Homeobox	MGG_12958.6	HOX8	<i>MoHOX8</i>	TF that activated by a MAP kinase signaling cascade in <i>S. cerevisiae</i>
	Myb	MGG_00138.6	TF041		-
	Myb	MGG_01012.6	TF042		Chromatin remodelling complex ATPase chain ISW1 in <i>N. crassa</i>
	Myb	MGG_01426.6	TF044		nitrate nonutilizer-4 in <i>N. crassa</i> ; nitrogen assimilation TF <i>nirA</i> in <i>A. nidulans</i> .
	Myb	MGG_02746.6	TF046		nitrate nonutilizer-2 in <i>N. crassa</i> ; regulatory protein areA in <i>A. nidulans</i> .
	Myb	MGG_05099.6	TF048		Transcription coactivator in <i>S. cerevisiae</i>
	Myb	MGG_05240.6	TF049		Regulation of basal and induced expression in <i>S. cerevisiae</i>
	Myb	MGG_05748.6	TF050		-
	Myb	MGG_06434.6	TF053		<i>TamA</i> in <i>N. crassa</i>
	GATA	MGG_02755.6	TF031		Transcriptional activator for nitrogen catabolite repression in <i>S. cerevisiae</i>
	GATA	MGG_07319.6	TF035		<i>Gln3p</i> and <i>Dal80p</i> ; expression repressed by leucine in <i>S. cerevisiae</i>
	C2H2	MGG_00139.6	TF058		E3 ubiquitin-protein ligase <i>BRE1</i>
	C2H2	MGG_01171.6	TF059		-
	C2H2	MGG_09837.6	TF068		<i>Swi6</i> in <i>N. crassa</i> , <i>A. nidulans</i> , <i>P. anserina</i> , and <i>F. graminearum</i>
	C2H2	MGG_00702.6	TF070		-
	C2H2	MGG_02447.6	TF073		-
	C2H2	MGG_08340.6	TF085		-
	C2H2	MGG_00373.6	TF094		-
	C2H2	MGG_02474.6	TF116		Activates expression of early G1-specific genes in <i>S. cerevisiae</i>
	C2H2	MGG_02505.6	TF117		-
	C2H2	MGG_11252.6	TF133		-
	C2H2	MGG_02845.6	TF134		<i>xlnR</i> (transcriptional activator) in <i>N. crassa</i> and <i>P. anserina</i>
	C2H2	MGG_06507.6	TF150		Induction of <i>CLN3</i> transcription in response to glucose in <i>S. cerevisiae</i>
	C2H2	MGG_08114.6	TF155		-
	Zn2Cys6	MGG_00672.6	TF165	<i>MoLEU3</i>	-
	Zn2Cys6	MGG_00934.6	TF166		Glucose-responsive TF in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_01518.6	TF169	<i>MoNIT4</i>	Arsenite resistance protein <i>Ars2</i> in <i>N. crassa</i>
	Zn2Cys6	MGG_01777.6	TF173		Lactose regulatory protein <i>LAC9</i> in <i>P. anserina</i>
	Zn2Cys6	MGG_01833.6	TF175		Siderophore regulation in <i>N. crassa</i> ; <i>SREA</i> in <i>A. nidulans</i> .
	Zn2Cys6	MGG_02377.6	TF180		-
	Zn2Cys6	MGG_03711.6	TF192		Transcriptional activator for derepression of a variety of genes in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_04951.6	TF206		-
	Zn2Cys6	MGG_06243.6	TF220		-
	Zn2Cys6	MGG_06279.6	TF221		-
	Zn2Cys6	MGG_07063.6	TF230		-
	Zn2Cys6	MGG_07131.6	TF231		Regulation of lysine biosynthesis pathway in <i>S. cerevisiae</i> ; <i>RfeC</i> in <i>N. crassa</i> .
Zn2Cys6	MGG_07218.6	TF233		Activation of the <i>GAL</i> genes in response to galactose in <i>S. cerevisiae</i>	
Zn2Cys6	MGG_07681.6	TF241		-	
Zn2Cys6	MGG_08094.6	TF246		<i>SWR1</i> -complex protein 4 in <i>N. crassa</i> .	
Zn2Cys6	MGG_09263.6	TF260		-	
Zn2Cys6	MGG_09312.6	TF263		Activation of the <i>GAL</i> genes in response to galactose in <i>S. cerevisiae</i>	
Zn2Cys6	MGG_12037.6	TF264		-	
Zn2Cys6	MGG_09825.6	TF268		-	
Zn2Cys6	MGG_09829.6	TF269		Vacuolar segregation protein <i>pep7</i> in <i>N. crassa</i> .	
Zn2Cys6	MGG_09950.6	TF271		pH-response transcription factor <i>pacC/RIM101</i> in <i>N. crassa</i> .	
Zn2Cys6	MGG_10528.6	TF276		-	
Germination	bHLH	MGG_00595.6	TF001		-
	bHLH	MGG_10575.6	TF007		-
	C2H2	MGG_01127.6	TF142		Stimulates expression of proteasome genes in <i>S. cerevisiae</i>

	Myb	MGG_06120.6	TF052	UBX domain-containing protein in <i>N. crassa</i>
	Myb	MGG_08137.6	TF056	-
Appressorium formation	C2H2	MGG_09035.6	TF086	-
	C2H2	MGG_05518.6	TF078	-
	Zn2Cys6	MGG_01946.6	TF178	-
	Zn2Cys6	MGG_15023.6	TF184	-
	Zn2Cys6	MGG_15346.6	TF253	-
	Zn2Cys6	MGG_06954.6	TF229	Sterol regulatory element binding protein in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_15085.6	TF234	Transcriptional regulator involved in the stress response in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_09276.6	TF262	-
All the conditions	bHLH	MGG_05709.6	TF006	-
	C2H2	MGG_00076.6	TF069	<i>Sip-5</i> in <i>N. crassa</i>
	C2H2	MGG_03581.6	TF118	-
	C2H2	MGG_02775.6	TF100	Transcriptional regulation of the methionine biosynthetic genes in <i>S. cerevisiae</i>
	C2H2	MGG_04699.6	TF101	<i>kaleidoscope-1</i> in <i>N. crassa</i> .
	C2H2	MGG_10280.6	TF090	-
	C2H2	MGG_07011.6	TF104	-
	C2H2	MGG_08015.6	TF106	-
	C2H2	MGG_09701.6	TF131	Melanization defective-1 in <i>N. crassa</i>
	C2H2	MGG_05714.6	TF154	Activates expression of early G1-specific genes in <i>S. cerevisiae</i>
	Homeobox	MGG_12865.6	HOX7	<i>MoHox7</i> protoperithecium-1 in <i>N. crassa</i> ; <i>SteA</i> in <i>A. nidulans</i>
	Myb	MGG_06898.6	TF054	<i>APF1</i> in <i>N. crassa</i> ; antigenic determinant of <i>recA</i> protein in <i>A. nidulans</i>
	Zn2Cys6	MGG_01285.6	TF167	-
	Zn2Cys6	MGG_05343.6	TF210	-
	Zn2Cys6	MGG_00320.6	TF161	Acridiflavine sensitivity control protein <i>acr-2</i>
	Zn2Cys6	MGG_01624.6	TF170	-
	Zn2Cys6	MGG_14900.6	TF199	Telomere uncapping and elongation as component in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_05939.6	TF218	-
	Zn2Cys6	MGG_10197.6	TF272	-
	Zn2Cys6	MGG_10422.6	TF275	-
	Zn2Cys6	MGG_00021.6	TF158	-
	Zn2Cys6	MGG_00049.6	TF159	-
	Zn2Cys6	MGG_02880.6	TF186	-
	Zn2Cys6	MGG_06492.6	TF226	Positive regulator in multiple nitrogen degradation pathways in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_06832.6	TF228	-
	Zn2Cys6	MGG_07845.6	TF244	<i>RING-6</i> in <i>N. crassa</i> and <i>F. graminearum</i>
	Zn2Cys6	MGG_08199.6	TF249	-
	Zn2Cys6	MGG_08314.6	TF250	Unknown function that may interact with ribosomes in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_08753.6	TF255	-
	Zn2Cys6	MGG_08917.6	TF257	Transcriptional activator of proline utilization genes in <i>S. cerevisiae</i>
	Zn2Cys6	MGG_10802.6	TF278	Positively regulates transcription in <i>S. cerevisiae</i>

	: <i>M. oryzae</i> specific TFs
	: Reduction of conidia production by T-DNA insertion mutants
	: Production of abnormal conidia by T-DNA insertion mutants
	: No conidia production