

iScience, Volume 25

Supplemental information

**Functional analysis of the *Candida albicans*
kinome reveals Hrr25 as a regulator
of antifungal susceptibility**

Yunjin Lee, Sean D. Liston, Dongyeob Lee, Nicole Robbins, and Leah E. Cowen

Figure S1. Scatter plots and Pearson correlation values for technical duplicates in the caspofungin (a) and fluconazole (b) susceptibility screens (related to Figure 2). Each point represents a strain. The correlation coefficient (r) for each condition was assessed using GraphPad Prism.

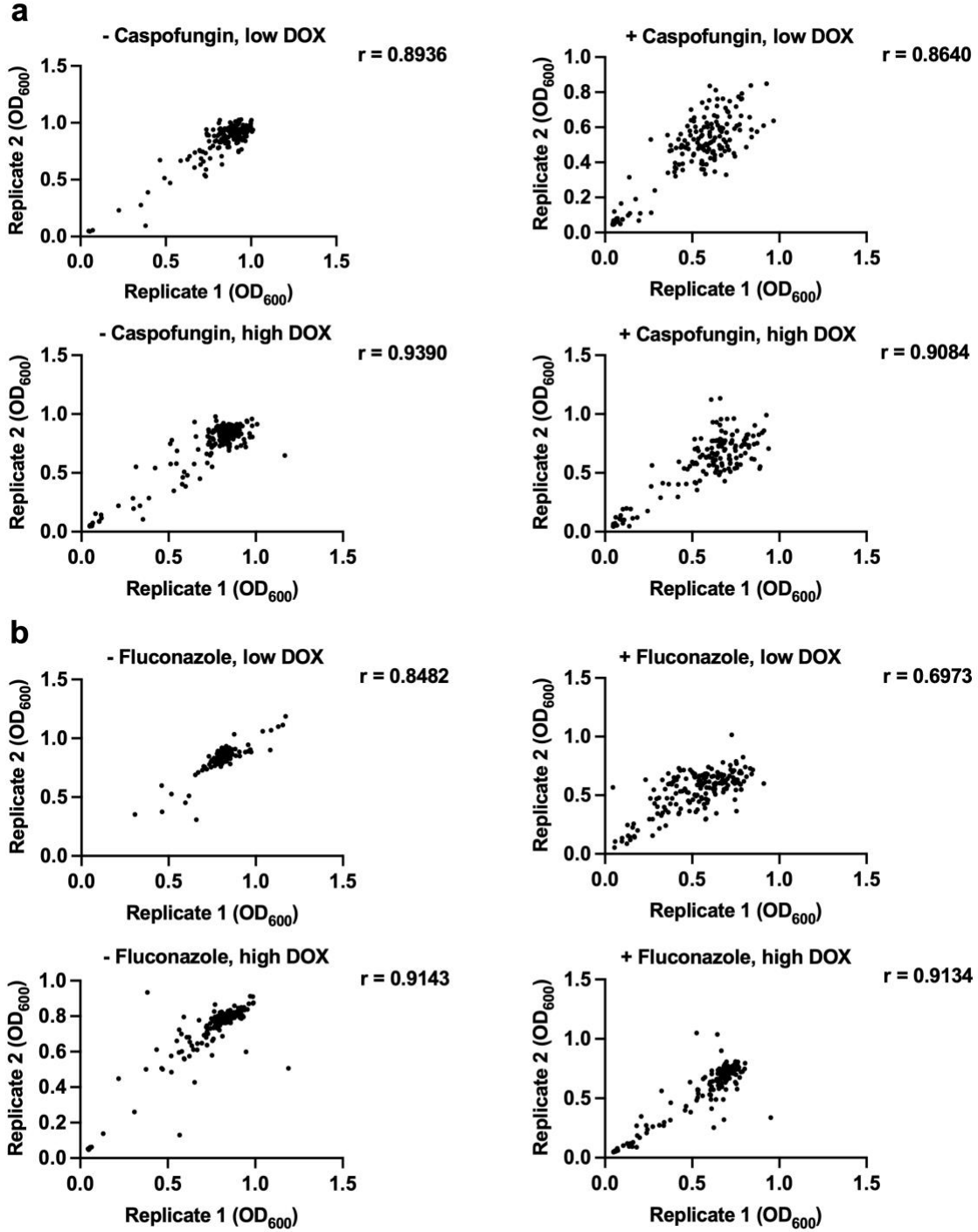


Figure S2. *HRR25* transcript levels are depleted upon treatment with doxycycline (DOX) (related to Figure 3). Strains were grown in the absence or presence of DOX (0.5 $\mu\text{g/ml}$ or 5 $\mu\text{g/ml}$) overnight, subcultured into fresh medium of the same condition, and grown to mid-log phase. Target gene transcript levels were normalized to *ACT1* and *TEF1*. Data are means \pm S.E.M for technical triplicates. Expression was compared to the wild-type no-DOX control and significance was determined by 2-way ANOVA (Tukey's test). Asterisks indicate level of significance (**P-value < 0.01, ****P-value < 0.0001). Testing was repeated as an independent biological replicate to confirm results.

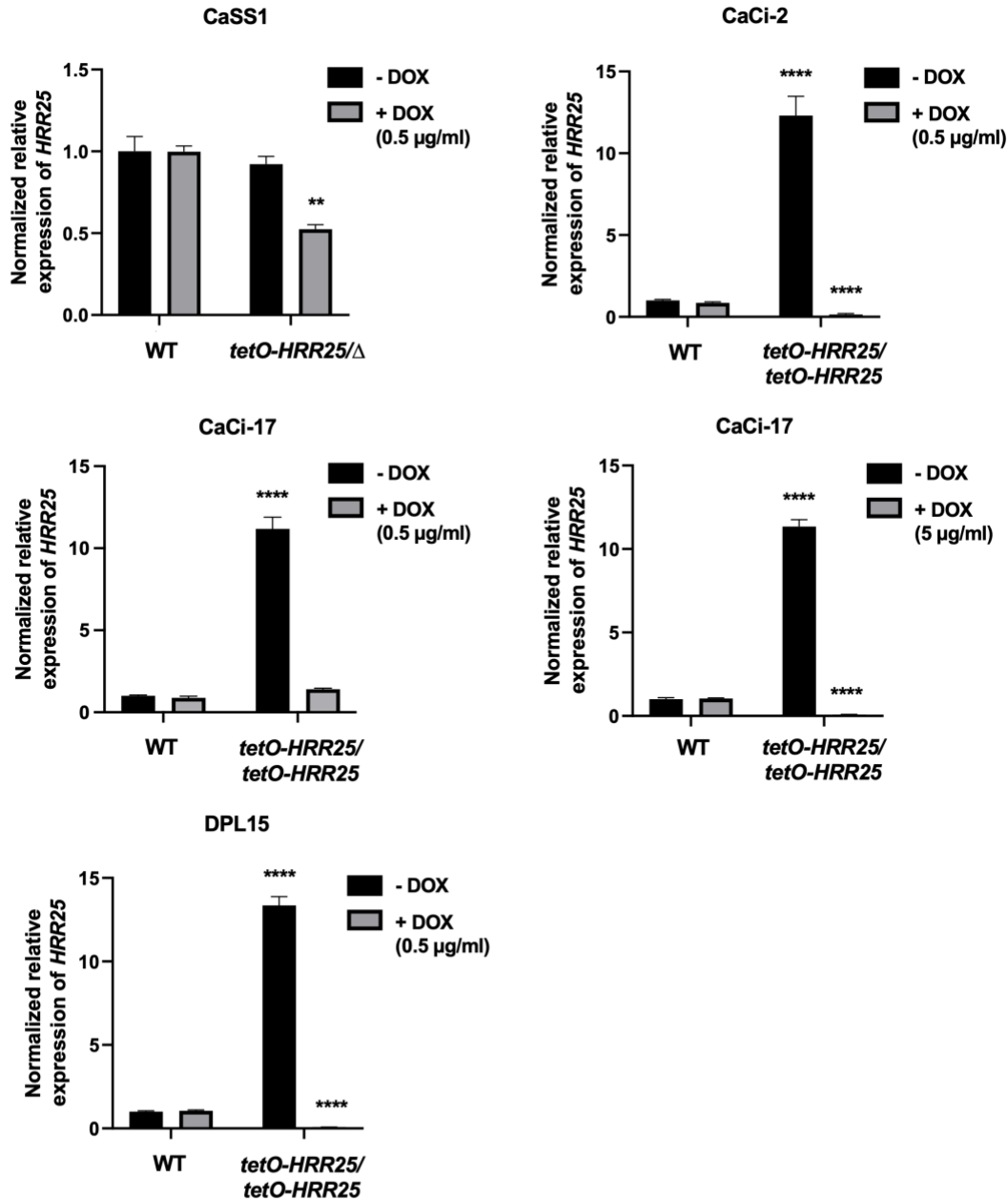


Figure S3. TAP-tagged version of *C. albicans* Swi6 is functional (related to Figure 4). Dose-response assays were performed in YPD with a two-fold dilution gradient of caspofungin. Growth (OD_{600}) was measured after 24 hours at 30°C. Optical densities were averaged for duplicate measurements and normalized to the no-drug wild-type control. Testing was repeated as an independent biological replicate to confirm results.

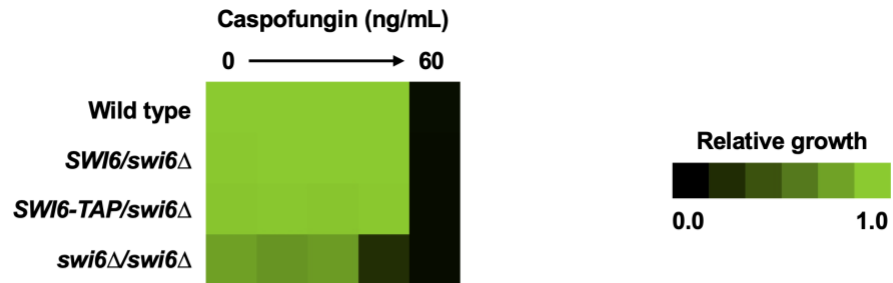


Table S1. Strains and plasmids used in this study (related to STAR methods).

Strain/Plasmid	Description	Source
CaLC6106 (CaSS1)	<i>ura3::imm434/ura3::imm434 his3::hisG/his3::hisG</i> <i>leu2::tetRGAL4AD-URA/LEU2</i>	(Roemer et al., 2003)
CaLC79 (CaCi-2)	Clinical isolate	(White, 1997)
CaLC91 (CaCi-17)	Clinical isolate	(White, 1997)
CaLC990 (DPL15)	Clinical isolate, <i>FKS1^{T1922C}/FKS1^{T1922C}</i>	(Park et al., 2005)
CaLC7462	<i>TAR-tetO-HRR25::NAT/TAR-tetO-HRR25::NAT</i>	This study
CaLC8121	<i>TAR- tetO-HRR25/TAR- tetO-HRR25</i>	This study
CaLC8125	<i>FKS1^{T1922C}/FKS1^{T1922C} TAR- tetO-HRR25/TAR- tetO-HRR25</i>	This study
CaLC1588	<i>ura3::limm434/ura3::limm434 arg4::hisG/arg4::hisG</i> <i>his1::hisG/his1::hisG swi4::hisG/swi4::ARG4</i> <i>swi6::URA3/swi6::HIS1</i>	(Hussein et al., 2011)
CaLC1594 (CB420)	<i>ura3::limm434/ura3::limm434 arg4::hisG/arg4::hisG</i> <i>his1::hisG/his1::hisG (HIS+ URA3+ARG4+)</i>	(Hussein et al., 2011)
CaLC239 (SN95)	<i>arg4/arg4 his1/his1 URA3/ura3::imm434</i> <i>IRO1/iro1::imm434</i>	(Noble and Johnson, 2005)

CaLC3393	<i>arg4 /arg4 his1 /his1 URA3/ura3::imm434 IRO1/iro1::imm434 SWI6/SWI6-TAP-ARG4</i>	(Xie et al., 2017)
CaLC8115	<i>arg4/arg4 his1/his1 URA3/ura3::imm434 IRO1/iro1::imm434 HRR25-6his3Flag-SAT1/HRR25-6his3Flag- SAT1</i>	This study
CaLC7471	<i>arg4 /arg4 his1 /his1 URA3/ura3::imm434 IRO1/iro1::imm434 HRR25-6his3Flag-SAT1/HRR25-6his3Flag-SAT1 SWI6/SWI6-TAP- ARG4</i>	This study
CaLC3786	<i>arg4/arg4 his1/his1 URA3/ura3::imm434 IRO1/iro1::imm434 hsp90::FRT CaTAR-FRT::TetO-HSP90, HSF1/HSF1-TAP-ARG4</i>	(Veri et al., 2018)
pLC1041	pV1393 with sgRNA targeting CaHRR25 promoter, amp ^R nat ^R	(Caplan et al., 2020)
pLC1081	<i>C. albicans</i> CAS9 vector pV1093	(Liu and Myers, 2017; Min et al., 2016)

Table S2. Primers used in this study (related to STAR methods).

Primer ID	Sequence (5' to 3')
oLC1988	CCTCCAATTCGTCAAGAAGG
oLC1989	CCGATCTTGTAACATCTTGC
oLC2285	GACCTTGAGATACCCAATTG
oLC2286	CAGCTTGAATGGAAACGTAG
oLC4714	TCGTTTCTGATGGGCTTTTC
oLC5850	TTCTTTTGGTTTTTTTTTTTTTTTTTTGTCGTTTGCTTTAAGGAAACAGCTATGACCATG
oLC5851	TACGACCAATACGGTATTTCTTACCAACTCTTAAATCCATCGACTATTTATATTTGTATG
oLC5852	GGGACAATTCAAGTCAAGTC
oLC5853	GGCTTCATATTCCAATTGTGG
oLC6141	GAGTGGTGGTGTGGTATTC
oLC6142	CACGATGAATAAAACATCTGGC
oLC6926	AAGAAAGAAAGAAAACCAGGAGTGAA
oLC6927	ACAAATATTTAAACTCGGGACCTGG
oLC6928	GCGGCCGCAAGTGATTAGACT
oLC6929	GCAGCTCAGTGATTAAGAGTAAAGATGG
oLC6942	CTAATTAACGTGTGTGTATGGATC
oLC8270	AGAATCAAAGCCTGAAGAGTCAAATCTGAACAATCATAAAAATTGAAAACAGTTCAAC AACTTTATATAATATATTAATGCtcgatgaattcgagctcg

oLC9125	TCAACTGAATCAAATTATAGTGGCACTAAATCTGCTCAACCACAAGCCCAACAACCTC CtCAACAAGGcAATCCtGCATGGCTTggtcgacggatcccc
oLC9126	CCACAACAAGGTAATCCAGCCAAATTAATAATAGTTTACGCAAGTC
oLC9127	GCTGGATTACCTTGTTGTGGGTTTTAGAGCTAGAAATAGCAAGTTAAA
oLC9129	ATCTTTACCATGGCAAGGATTGAAAGCC
oLC9130	GAAGATGGTGAACCAATTCAAAATGGTGC