Supplementary Figures

Critical role for *CaFEN1* and *CaFEN12* of *Candida albicans* in cell wall integrity and biofilm Formation

Md. Alfatah, Vinay K. Bari, Anubhav S. Nahar, Swati Bijlani and K. Ganesan

CSIR-Institute of Microbial Technology, Sector 39-A, Chandigarh-160 036, India

Contents:

Figure S1 Figure S2 Figure S3 Figure S4

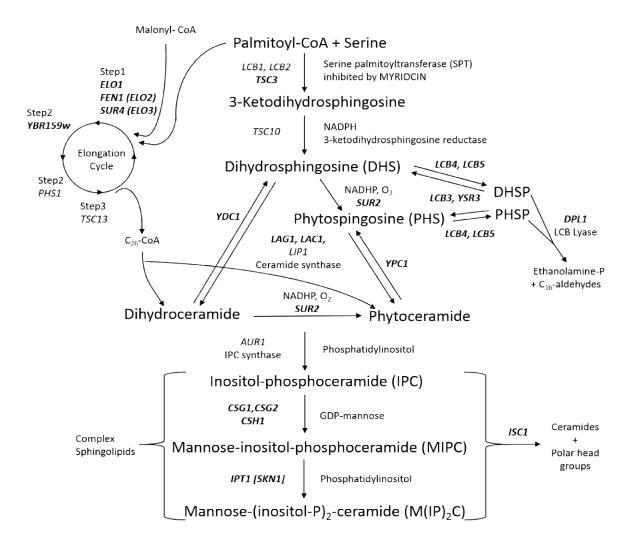


Figure S1. Overview of sphingolipid biosynthetic pathway of yeast. Genes that can be deleted without loss of cell viability are shown in bold font. *Adapted from:* Dickson, *Journal of lipid research* 49, 909-921 (2008), and Rego et al. *FEMS Yeast Res* 14, 160-78 (2014).

Amphotericin B (µg/ml)

	0	0.025	0.05	0.1	0.25	0.5
SN95					• • • •	
$Cafen1\Delta/\Delta$		00095			٠ ا	
$Cafen12\Delta/\Delta$	• • • • • *	00080	• • • 3 *	• *		
$Cafen1\Delta/\Delta Cafen12\Delta/\Delta$	• • • * ·	1 ⁶⁸		•		
$Cafen1\Lambda/CaFEN1$ Cafen12 Λ/Λ			• • • • 4	0 0 0 0 ú	۵ 🔅	7
$Cafen1\Delta/\Delta$ $Cafen12\Delta/CaFEN12$			• • • • • •	• • • • •		

b			Calcofluor	white (µg/ml)		
	0	50	100	200	400	800
SN95 Cafen1Δ/Δ Cafen12Δ/Δ Cafen1Δ/ΔCafen12Δ/Δ Cafen1Δ/CaFEN1 Cafen12Δ/Δ Cafen1Δ/Δ Cafen12Δ/CaFEN12	●●63 × ●●63 ·2 ●●54 ·2 ●●54 ·2			0 0 0 8 ~ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		• • • • • • • • • • • • • • • • • • •

c	Congo red (µg/ml)							
	0	50	100	200	400	800		
			• • • •		۲	۲		
	States States and States		🕒 🕲 🕸 👘	•	0			
$Cafen12\Delta/\Delta$	South State of the second state of the	🌔 🕘 🎱 🗞 🖓		•				
$Cafen1\Delta/\Delta Cafen12\Delta/\Delta$		• *						
$Cafen1\Delta/CaFEN1$ $Cafen12\Delta/\Delta$			🕘 🕘 🔮 🗟		• •			
$Cafen1\Delta/\Delta$ $Cafen12\Delta/CaFEN12$			🕘 🕘 🏘 🖓			-		
Cujent Di Di Cujent 2D Cur EN12								

Figure S2. Sensitivity of double delete strain (*Cafen1* Δ/Δ *Cafen1* $2\Delta/\Delta$) of *C. albicans* to amphotericin B (Panel **a**), calcofluor white (Panel **b**) and congo red (Panel **c**) is suppressed in the strains with reintegrated wild type copies of *CaFEN1* (*Cafen1* Δ /*CaFEN1 Cafen1* $2\Delta/\Delta$) or *CaFEN12* (*Cafen1* Δ/Δ *Cafen1* 2Δ /*CaFEN12*).

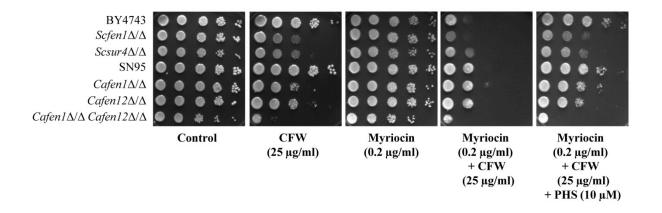


Figure S3. Sphingolipid depletion by myriocin sensitises cells calcofluor white.

S. cerevisiae strains deleted in *FEN1* or *SUR4* and *C. albicans* strains deleted in *FEN1* or *FEN12* or both were tested for their sensitivity to CFW alone or in the presence of myriocin or myriocin and phytosphingosine (PHS). The CFW sensitivity, enhanced by sublethal concentration of myriocin, is suppressed by PHS.

AmB (µg/ml)

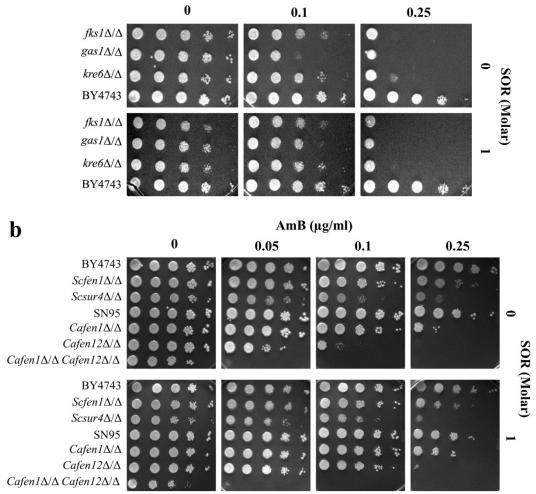


Figure S4. Effect of osmotic stabiliser on amphotericin B sensitivity. (a) AmB sensitivity of *S. cerevisiae* strains deleted in *FKS1*, *GAS1* or *KRE6* genes is not suppressed by sorbitol. AmB susceptibility of the parent (BY4743), $kre6\Delta/\Delta$, $gas1\Delta/\Delta$ and $fks1\Delta/\Delta$ strains were tested alone (upper panels) or in the presence of 1 M sorbitol (lower panels). (b) AmB sensitivity for *C. albicans* single strains deleted in *CaFEN1* or *CaFEN12* is partially reversed by sorbitol. Parent and delete strains of *S. cerevisiae* and *C. albicans* were tested for their sensitivity to AmB alone (upper panels) or in the presence of 1 M sorbitol (lower panels).