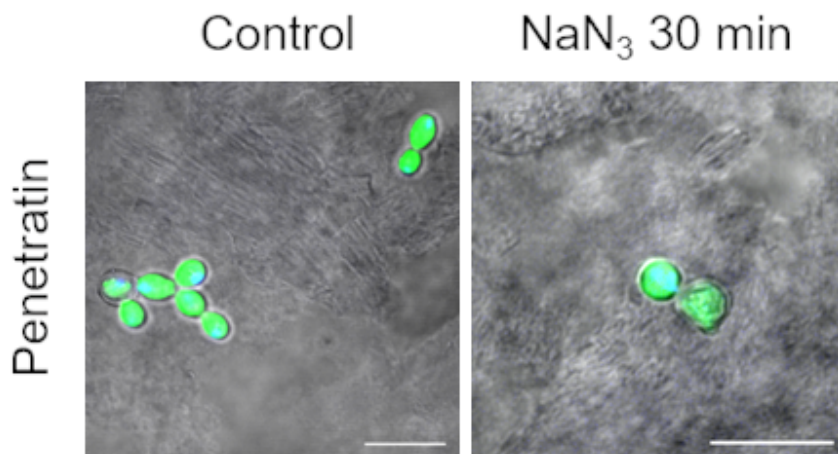


Supplementary material

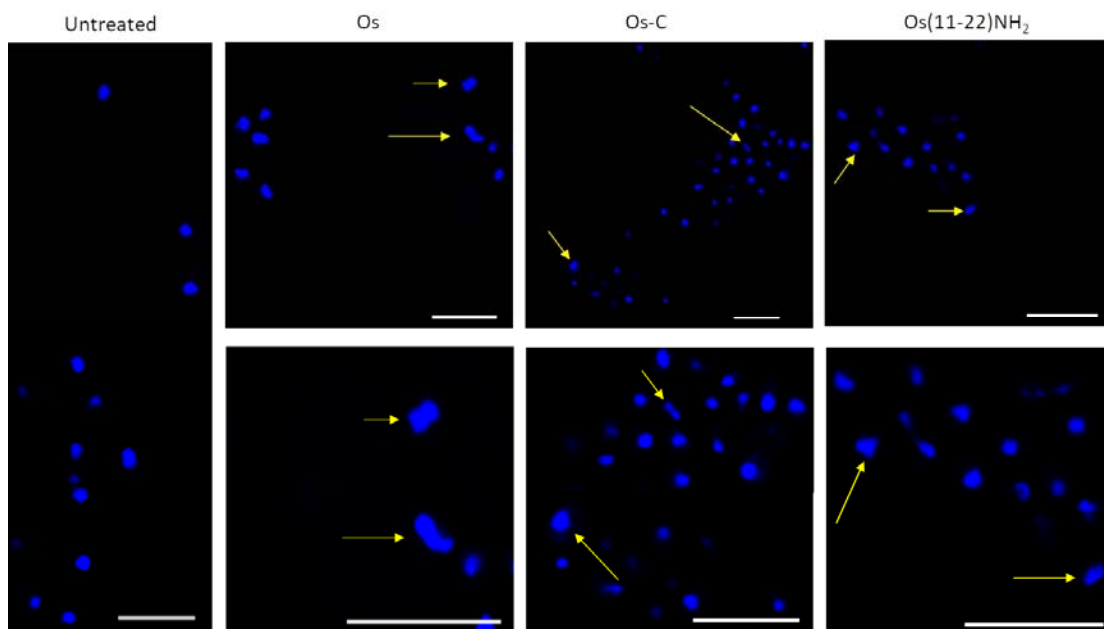
Supplementary Table 1. Physicochemical properties and antifungal activity of OsDef2 derived peptides.

Peptide	Sequence	Q	MW (g/mol)	<H>	MIC ^a (μM)
OsDef2	GYGCPFNQYQCHSHCKGIRGYKGGYCKGAF KQTCKCY	+6	4186	0.371	ND
Os fragments					
Os	KGIRGYKGGYCKGAFKQTCKCY	+6	2460	0.249	1.9 ± 0.1
Os (1-10)	KGIRGYKGGY	+3	1098	0.073	> 200 ^c
Os(3-12)	IRGYKGGYCK	+3	1144	0.227	22.8 ± 0.0***
Os(5-14)	GYKGGYCKGA	+2	1003	0.179	> 200 ^b
Os(7-16)	KGGYCKGAFK	+3	1058	0.163	> 200 ^b
Os(9-18)	GYCKGAFKQT	+2	1102	0.266	> 200 ^b
Os(11-20)	CKGAFKQTCK	+3	1113	0.225	> 200 ^b
Os(11-22)	CKGAFKQTCKCY	+3	1380	0.396	> 200 ^b
Os(13-22)	GAFKQTCKCY	+2	1148	0.420	> 200 ^b
Os-C fragments					
Os-C	KGIRGYKGGYKGAFAKQTKY	+6	2151	0.045	2.2 ± 0.9
Os-C(1-10)	KGIRGYKGGY	+3	1098	0.073	> 200 ^b
Os-C(3-12)	IRGYKGGYKGA	+3	1098	0.073	> 200 ^b
Os-C(7-16)	KGGYKGAFAKQ	+3	1083	0.013	> 200 ^b
Os-C(9-18)	GYKGAFAKQTKY	+3	1290	0.099	> 200 ^b
Amidated fragments					
Os(3-12)NH ₂	IRGYKGGYCK-NH₂	+4	1143	ND	15.4 ± 0.6***
Os(11-22)NH ₂	CKGAFKQTCKCY-NH₂	+4	1379	ND	4.4 ± 1.7
Control					
Melittin	GIGAVLKVLTTGLPALISWIKRKRQQ-NH₂	+6	2847	0.511	3.0 ± 0.2

Peptides showing activity are in bold and residues in Os comprising the γ -core region (X₁₋₃GXCX₃₋₉C/ CX₃₋₉CXGX₁₋₃/ CX₃₋₉GXCX₁₋₃) are underlined. Q, net charge at pH 7; <H>, mean hydrophobicity, obtained from HeliQuest. ^a MIC determined with the RD assay and data are means ± SE of 3 independent experiments in triplicate. ^b MIC was not attained in RD assay at up to 200 μM peptide. ***, MIC of peptide is significantly higher ($p < 0.001$) than that of Os. ND, not determined.



Supplementary Fig. 1. Effect of sodium azide on the intracellular translocation of 5-FAM penetratin. *C. albicans* cells were pre-incubated with 5 mM NaN_3 for 30 min and treated with 5-FAM penetratin. The cells were counterstained with DAPI (blue) and visualized by confocal microscopy. Scale bars are 10 μm .



Supplementary Fig. 2. DAPI stained images of 5-FAM-peptides in *C. albicans*. Cells were exposed for 50 min to 2.5 μM of 5-FAM-peptides, counterstained with DAPI (blue) and visualized by confocal microscopy. Top and bottom panel show same images at lower and higher magnification, respectively. Short arrow: fragmented nuclear DNA; long arrow: tubular-shaped DNA, in contrast to single and round nucleus observed in untreated cells. Images are representatives of three independent experiments, in duplicate. Scale bars are 10 μm .