Supplementary Table 1. MIC ranges to amphotericin B, anidulafungin and caspofungin. *A. fumigatus* isolates are grouped based on their azole susceptibility profile and their Cyp51A modifications.

Cyp51A modifications (# isolates)	WGS Cluster	MIC/MEC ranges to other classes of clinical antifungal drugs (mg/L)		
		AmB	ANF	CSF
AZL-S				
WT (20)	I-II	0.25-1	0.007-0.06	0.125-0.5
5SNPs* (6)	III	0.125-1	0.015-0.06	0.25-0.5
3SNPs** (11)	IV	0.125-0.5	0.03-0.06	0.25-0.5
AZL-R - point mutations				
G54 (12)	I-II	0.25-0.5	0.015-0.06	0.25-0.5
M220 (7)	I-II	0.25-0.5	0.015-0.06	0.25-0.5
G448S (5)	I-II	0.25-0.5	0.015-0.06	0.25-0.5
AZL-R - TR integrations&				
TR_{34}/L98H (12)	II	0.25-0.5	0.007-0.06	0.25-0.5
TR_{34}/L98H/ S297T/F495I (3)	II	0.25-0.5	0.015-0.06	0.25-0.5
TR_{46}/Y121F/T289A (4)	II	0.25-0.5	0.015-0.06	0.25-0.5
TR_{53} (3)	II	0.25-0.5	0.03-0.06	0.25-0.5

AmB (amphotericin B), ANF (anidulafungin) and CSF (caspofungin)
MIC (minimal inhibitory concentration) for AmB and MEC (minimal effective concentration) for echinocandins
AZL-S (azole susceptible), AZL-R (azole resistant)
*5SNPs: F46Y/M172V/N248T/D255E/E427K
**3SNPs: F46Y/M172V/E427K
&Tandem repeat (TR) integration in the *cyp51A* promoter in combination, or not, with point mutations.

Table S2. MIC ranges to four new triazole DMIs. *A. fumigatus* isolates are grouped based on their azole susceptibility profile and their Cyp51A modifications.

Cyp51A modifications (# isolates)	WGS Cluster	MIC ranges to triazole DMIs (mg/L)			
		BTN	MCB	TDM	PCZ
AZL-S					
WT (20)	I-II	4-8	8-16	>32	8-16
5SNPs* (6)	III	4- >32	16- >32	>32	16
3SNPs** (11)	IV	2-8	8-16	>32	8-16
AZL-R - point mutations					
G54 (12)	I-II	1-2	1-8	16->32	4-8
M220 (7)	I-II	2- >32	16- >32	>32	8- >32
G448S (5)	I-II	>32	>32	>32	16- >32
AZL-R - TR integrations&					
TR_{34}/L98H (12)	II	>32	>32	>32	32- >32
TR_{34}/L98H/ S297T/F495I (3)	II	>32	>32	>32	>32
TR_{46}/Y121F/T289A (4)	II	>32	>32	>32	>32
TR_{53} (3)	II	>32	>32	>32	>32

BTN (bitertanol), MCB (myclobutanil), TDM (triadimenol), PCZ (paclobutazol)
&Tandem repeat (TR) integration in the *cyp51A* promoter in combination, or not, with single point mutations.