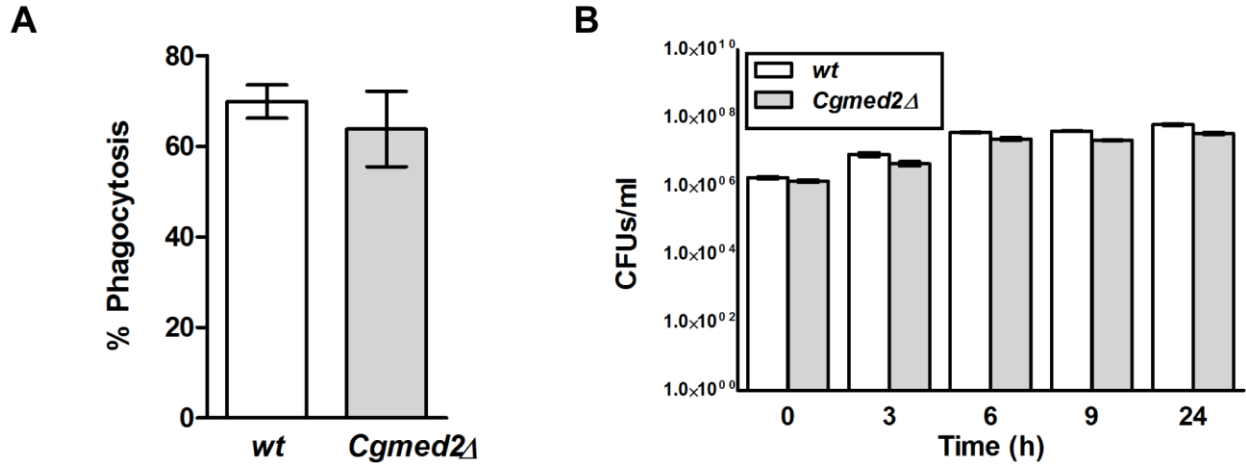


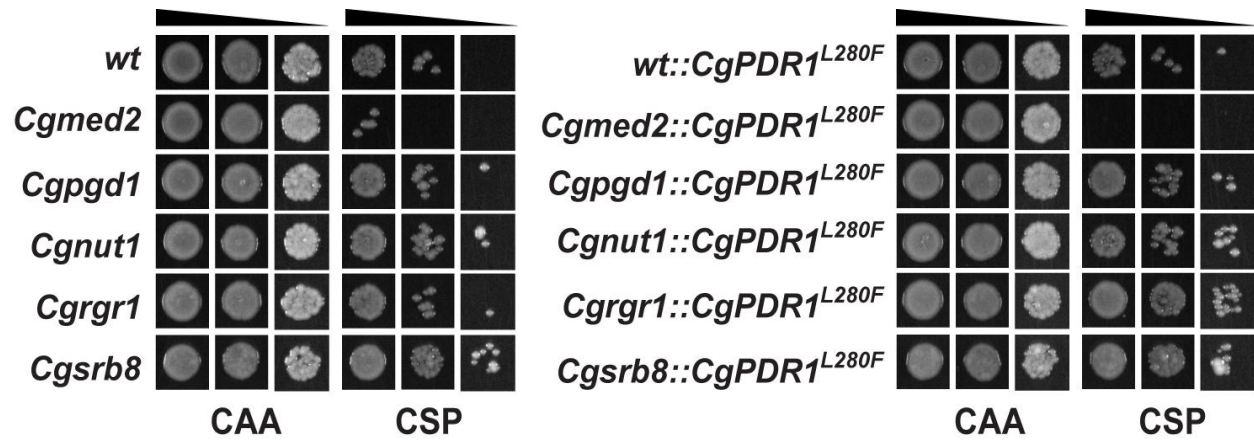
**Figure S1. Disruption of the *CgMED2* gene leads to increased susceptibility to fluconazole.**

Growth profile analysis of indicated *C. glabrata* strains in the YPD medium containing or lacking 16 µg/ml fluconazole (FLC 16) at 30°C. Data represent the means from three independent growth analyses ± SEM. Solid and dotted lines indicate untreated and fluconazole-treated cultures, respectively.

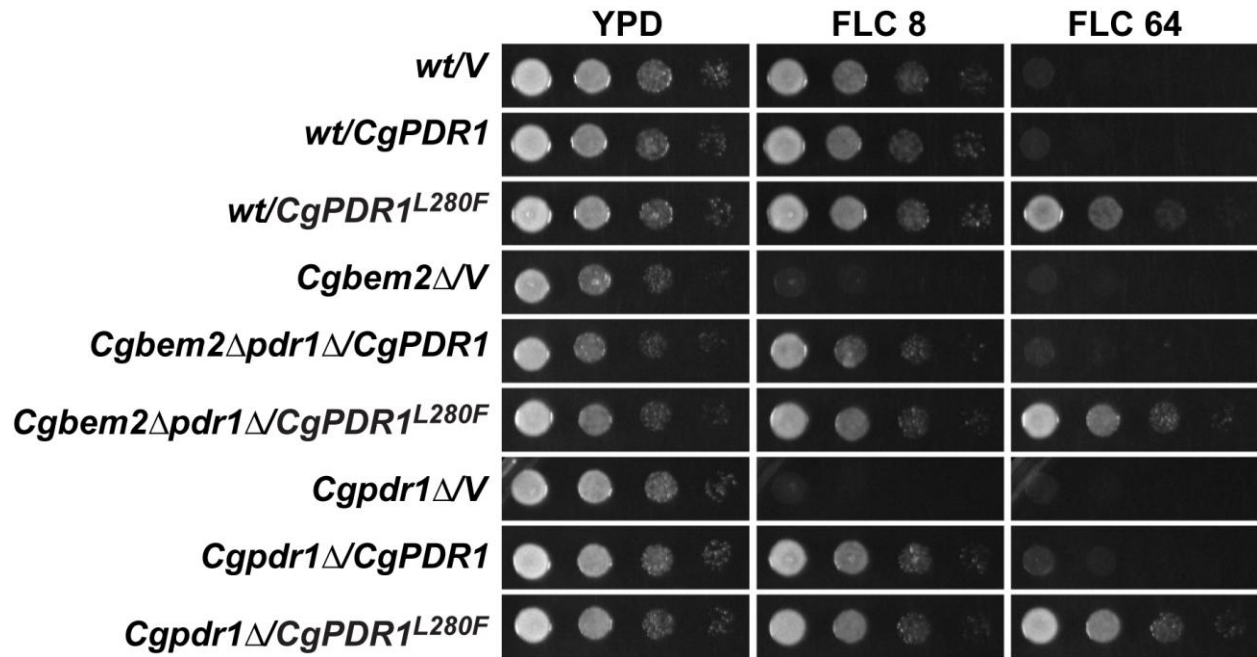


**Figure S2. Disruption of the *CgMED2* gene does not affect the uptake of *C. glabrata* cells by THP-1 macrophages.**

- A. *wt* and the *Cgmed2*Δ cells were infected to THP-1 macrophages at a MOI of 1:10. After 2 h coincubation, extracellular *C. glabrata* cells were washed off with three PBS washes and the number of intracellular yeast cells was determined by plating appropriate dilutions of macrophage lysates on YPD medium. % phagocytosis rate was calculated by dividing the number of intracellular yeast cells 2 h post infection to the number of yeast cells infected to THP-1 macrophages. Data represent means ± SEM of three independent infection experiments.
- B. *wt* and the *Cgmed2*Δ cells were grown in RPMI medium for indicated time periods and growth was recorded by plating appropriate culture dilutions on YPD medium and counting the total number of CFUs.

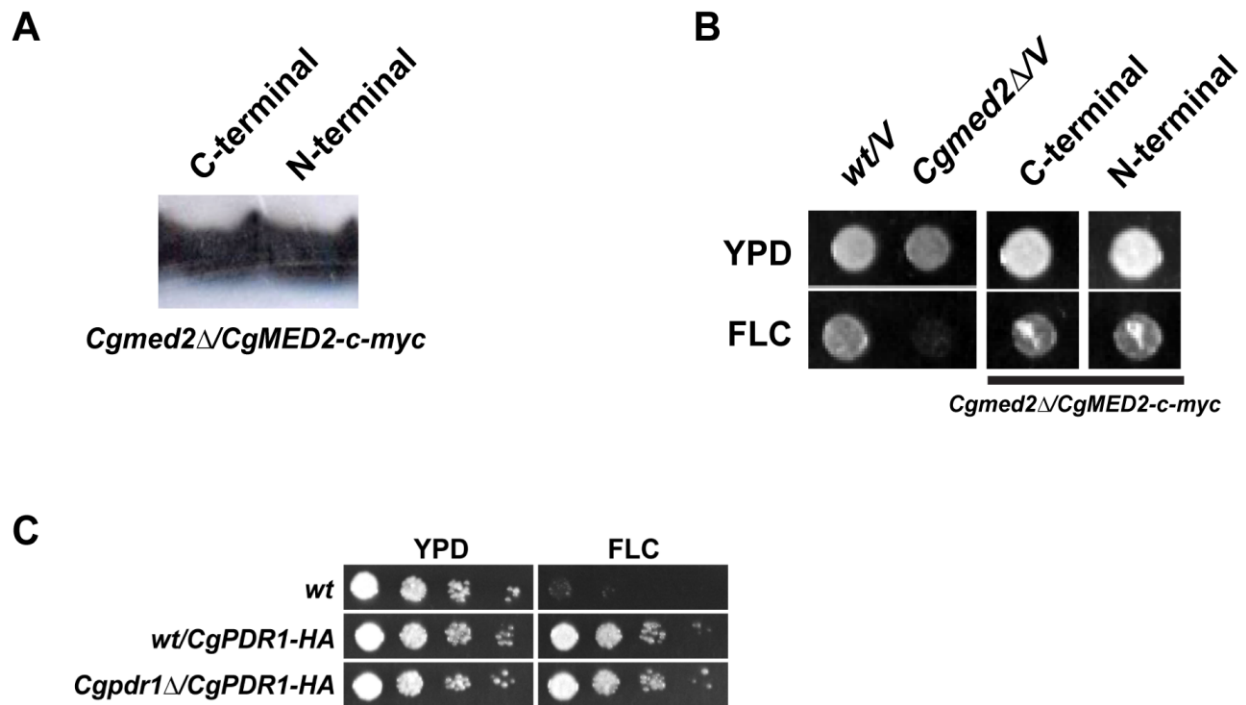


**Figure S3. The *Cgmed2*Δ mutant exhibits sensitivity to caspofungin.** *wt* and *Cgmed2*Δ cells were grown in CAA medium lacking or containing 0.05 μg/ml caspofungin for 24 h, diluted 10-, 100- and 1000-fold in PBS and 3 μl of each culture dilution was spotted on YPD medium. Growth was recorded after 24 h.



**Figure S4. Expression of the GOF *CgPDR1* allele conferred fluconazole resistance in *Cgbem2Δ* cells.**

Serial dilution spot assay of indicated *C. glabrata* strains on YPD and YPD medium containing 8 (FLC 8) and 64  $\mu\text{g/ml}$  (FLC 64) fluconazole. The *Cgpdr1Δ* mutant was used as a control. Expression of the wild-type *CgPDR1* allele complemented the fluconazole sensitivity of the *Cgpdr1Δ* mutant while expression of the GOF *CgPDR1<sup>L280F</sup>* allele rendered the mutant hyper-resistant to fluconazole. Plates were imaged after 1 day of incubation at 30°C.



**Figure S5. N- and C-terminally-myc-tagged CgMed2 could rescue the fluconazole sensitivity of the *Cgmed2Δ* mutant.**

- A. Representative Western blot analysis for expression of N- and C-terminally-myc-tagged CgMed2 protein in log-phase *wt* cells. Protein extracts were resolved on a SDS-12% PAGE and immunoblotted with the polyclonal antibody against the myc-tag (Sigma-Aldrich # C3956).
- B. Serial dilution spot assay of indicated *C. glabrata* transformants on YPD and YPD medium containing 8  $\mu\text{g/ml}$  fluconazole (FLC). Plates were imaged after 1 day of incubation at 30°C.
- C. Serial dilution spot assay of indicated *C. glabrata* transformants on YPD and YPD medium containing 32  $\mu\text{g/ml}$  (FLC) fluconazole. Plates were imaged after 1 day of incubation at 30°C.

**Table S1: List of strains and plasmids used in the study**

| Strain            | Relevant genotype  | Reference                         |
|-------------------|--|-----------------------------------|
| <b>Yeast</b>      |  |                                   |
| BG2               | Clinical isolate   | Fidel <i>et al.</i> , 1996        |
| YRK19             | <i>ura3Δ::Tn903 G418<sup>R</sup></i>                             | Cormack and Falkow, 1999          |
| YRK20             | <i>URA3</i>  | De Las Peñas <i>et al.</i> , 2003 |
| YRK527            | <i>ura3Δ::Tn903 G418<sup>R</sup>Cgbem2Δ::nat1</i>                | Borah <i>et al.</i> , 2011        |
| YRK747            | <i>Cgmed2Δ::nat1</i>   | This study                        |
| YRK758            | <i>ura3Δ::Tn903 G418<sup>R</sup>Cgmed2Δ::nat1</i>                | This study                        |
| YRK798            | YRK758/pBRK74  | This study                        |
| YRK799            | YRK758/pBRK1021  | This study                        |
| YRK809            | <i>ura3Δ::Tn903 G418<sup>R</sup>Cgpd1Δ::nat1</i>                 | This study                        |
| YRK810            | <i>ura3Δ::Tn903 G418<sup>R</sup>Cgbem2ΔCgpd1Δ::nat1</i>          | This study                        |
| YRK812            | YRK809/pBRK943 ( <i>Cgpd1Δ/V</i> )                               | This study                        |
| YRK813            | YRK809/pBRK945 ( <i>Cgpd1Δ/CgPDR1</i> )                          | This study                        |
| YRK814            | YRK809/pBRK946 ( <i>Cgpd1Δ/Cgpd1<sup>L280F</sup></i> )           | This study                        |
| YRK815            | YRK810/pBRK943 ( <i>Cgbem2ΔCgpd1Δ/V</i> )                        | This study                        |
| YRK816            | YRK810/pBRK945 ( <i>Cgbem2ΔCgpd1Δ/CgPDR1</i> )                   | This study                        |
| YRK817            | YRK810/pBRK946<br>( <i>Cgbem2ΔCgpd1Δ/Cgpd1<sup>L280F</sup></i> ) | This study                        |
| YRK821            | YRK19/pBRK943 ( <i>wt/V</i> )                                    | This study                        |
| YRK822            | YRK19/pBRK945 ( <i>wt/CgPDR1</i> )                               | This study                        |
| YRK823            | YRK19/pBRK946 ( <i>wt/Cgpd1<sup>L280F</sup></i> )                | This study                        |
| YRK835            | YRK758/pBRK943 ( <i>Cgmed2Δ/V</i> )                              | This study                        |
| YRK836            | YRK758/pBRK945 ( <i>Cgmed2Δ/CgPDR1</i> )                         | This study                        |
| YRK837            | YRK758/pBRK946 ( <i>Cgmed2Δ/Cgpd1<sup>L280F</sup></i> )          | This study                        |
| YRK858            | YRK758/pBRK961( <i>Cgmed2Δ/CgMED2-c-myc</i> )                    | This study                        |
| YRK859            | YRK758/pBRK963 ( <i>Cgmed2Δ/CgMED2-c-myc</i> )                   | This study                        |
| YRK1130           | YRK19/ <i>CgPDR1-HA</i>  | This study                        |
| YRK1131           | YRK809/ <i>CgPDR1-HA</i>   | This study                        |
| <b>Transposon</b> |  |                                   |
| Tn7               | Tn7 R6Kγori <i>URA3 npt</i> (Km <sup>R</sup> )                   | Castañó <i>et al.</i> , 2003      |
| YRK673            | <i>Cgmed2Δ::Tn7</i>  | Borah <i>et al.</i> , 2011        |
| YRK675            | <i>Cgpgd1Δ::Tn7</i>  | Borah <i>et al.</i> , 2011        |
| YRK943            | <i>Cgnut1Δ::Tn7</i>  | Kaur <i>et al.</i> , 2004         |
| YRK945            | <i>Cgrgr1Δ::Tn7</i>  | Kaur <i>et al.</i> , 2004         |
| YRK947            | <i>Cgsrb8Δ::Tn7</i>  | Kaur <i>et al.</i> , 2004         |
| YRK1011           | <i>wt::Cgpd1<sup>L280F</sup></i>                                 | This study                        |
| YRK1012           | <i>Cgmed2Δ::Tn7::Cgpd1<sup>L280F</sup></i>                       | This study                        |
| YRK1014           | <i>Cgpgd1Δ::Tn7::Cgpd1<sup>L280F</sup></i>                       | This study                        |
| YRK1015           | <i>Cgrgr1Δ::Tn7::Cgpd1<sup>L280F</sup></i>                       | This study                        |
| YRK1016           | <i>Cgnut1Δ::Tn7::Cgpd1<sup>L280F</sup></i>                       | This study                        |

|                |  |                              |
|----------------|--|------------------------------|
| YRK1017        | <i>Cgsrb8Δ::Tn7::Cgpdrl<sup>L280F</sup></i>  | This study                   |
| <b>Plasmid</b> | <b>Description</b>   | <b>Reference</b>             |
| pRK74          | CEN-ARS plasmid (pGRB2.2) of <i>C. glabrata</i> carrying <i>S. cerevisiae URA3</i> as a selection marker. MCS sites are flanked by <i>S. cerevisiae PGK1</i> promoter at one end and by 3' UTR of <i>HIS3</i> at the other end | Frieman <i>et al.</i> , 2002 |
| pBRK943        | CEN-ARS vector pCgACU5   | Sanglard laboratory          |
| pBRK945        | pSF4, pCgACU5-derived plasmid containing <i>CgPDR1</i> from wild-type strain   | Sanglard laboratory          |
| pBRK946        | pSF5, pCgACU5-derived plasmid containing <i>CgPDR1</i> from azole resistant strain (DSY565)  | Sanglard laboratory          |
| pBRK947        | pSF2, <i>CgPDR1</i> deletion plasmid, <i>SATI-FLIP</i> marker  | Sanglard laboratory          |
| pBRK949        | pSF67, plasmid with <i>CgPDR1</i> hyperactive allele (DSY565)  | Sanglard laboratory          |
| pBRK961        | <i>CgMED2</i> tagged with c-myc at C-terminal  | This study                   |
| pBRK963        | <i>CgMED2</i> tagged with c-myc at N-terminal  | This study                   |
| pBRK1021       | <i>CgMED2</i> ( <i>CAGLOC04477g</i> ) cloned into pRK74 plasmid  | This study                   |

**Table S2: List of primers used in the study**

| Primer   | Sequence  | Details  | Reference  |
|--|---|--|------------|
| <b>Primers for generation of <i>Cgmed2</i>Δdeletion strain</b> |   |  |            |
| OgRK801  | GTATCATCGGGGGTTGTGAC  | <i>CgMED2</i> 5' UTR<br>Forward                  | This study |
| OgRK802  | GCGTCGACCTGCAGCGTACGAA<br>AGACCCAGTGTTTCGAGT                          | <i>CgMED2</i> 5' UTR<br>Reverse                  | This study |
| OgRK803  | CGACGGTGTTCGGTCTCGTAGAA<br>AGTTTGAAAGTGTTTTACCTG<br>TG                | <i>CgMED2</i> 3' UTR<br>Forward                  | This study |
| OgRK804  | ATGGGATGTCATAGACGATCAA  | <i>CgMED2</i> 3' UTR<br>Reverse                  | This study |
| OgRK805  | CGGGTACCCATATTTTCGATG   | <i>CgMED2</i> 5'<br>integration check<br>Forward | This study |
| OgRK806  | TTGCTCAGCATGTTCTCCAG  | <i>CgMED2</i> 5'<br>integration check<br>Reverse | This study |
| OgRK807  | AATCCATCTGCCATGCTAGG  | <i>CgMED2</i> 3'<br>integration check<br>Forward | This study |
| OgRK808  | TGCAAAGAGTCGAGAAAGCA  | <i>CgMED2</i> 3'<br>integration check<br>Reverse | This study |
| OgRK809  | AATCCATCTGCCATGCTAGG  | <i>CgMED2</i> internal<br>Forward                | This study |
| OgRK810  | GTCTAGGTCACCGCCTTAC   | <i>CgMED2</i> internal<br>Reverse                | This study |
| <b>Primers for cloning</b>                                     |   |  |            |
| OgRK843  | GAGACCCGGGGCGAACACTGG<br>GTCTTTTT                                     | <i>CgMED2</i> Forward                            | This study |
| OgRK844  | GAGGTCGACGCATTTAGATATT<br>AAAGCCATTTAGG                               | <i>CgMED2</i> Reverse                            | This study |
| OgRK1143   | GAGACCCGGGTGGAACAAAA<br>CTTATTTCTGAAGAAGATCTGA<br>GTTACAAGAACAGGCTTAC | <i>CgMED2-c-myc</i><br>Forward                   | This study |
| OgRK1144   | GAGGTCGACTTACAGATCTTCT<br>TCAGAAATAAGTTTTTGTTT<br>GATATTAAAGCCATTTAGG | <i>CgMED2-c-myc</i><br>Reverse                   | This study |
| OgRK1179   | CCGGATCCAATATGCAAACATT<br>AGAACTACATCA                                | <i>CgPDR1-HA</i><br>Forward                      | This study |
| OgRK1182   | CGCCCCGGGTAAAGCGTAGTCT<br>GGGACGTCGTATGGGTACAAGT<br>AAACATCAGAAA      | <i>CgPDR1-HA</i><br>Reverse                      | This study |
| <b>Primers for qRT-PCR</b>                                     |   |  |            |



|          |                        |                           |                           |
|----------|------------------------|---------------------------|---------------------------|
| OgRK127  | TGCAGGACCAAGTCAGACAG   | <i>CgCDR1</i> Forward     | Borah <i>et al.</i> ,2011 |
| OgRK128  | CTCATCGGAAGTAGGGTCCA   | <i>CgCDR1</i> Reverse     | Borah <i>et al.</i> ,2011 |
| OgRK133  | ACGGTACCAAGCCATACGAG   | <i>CgERG11</i><br>Forward | Borah <i>et al.</i> ,2011 |
| OgRK134  | GAACACTGGGGTGGTCAAGT   | <i>CgERG11</i> Reverse    | Borah <i>et al.</i> ,2011 |
| OgRK135  | AAAGGGAGTGACAGCGAGAA   | <i>CgPDR1</i> Forward     | Borah <i>et al.</i> ,2011 |
| OgRK136  | CTCAATGGCGTCAATGGATGA  | <i>CgPDR1</i> Reverse     | Borah <i>et al.</i> ,2011 |
| OgRK191  | TTTCAGAGTGCCAACTGTCG   | <i>CgTDH3</i> Forward     | Borah <i>et al.</i> ,2011 |
| OgRK192  | TGAAACAACAGCGTCCTCAG   | <i>CgTDH3</i> Reverse     | Borah <i>et al.</i> ,2011 |
| OgRK1183 | ACTATGTTACTTTATGGTTA   | <i>CgEPA1</i> Forward     | This study                |
| OgRK1184 | TGAGCCCCAGATGGCGTAGG   | <i>CgEPA1</i> Reverse     | This study                |
| OgRK1592 | CCGAATTAGATCATTTACCGG  | <i>CgEPA7</i> Forward     | Iraquiet <i>al.</i> ,2005 |
| OgRK1593 | GAAGGAGTACTATTGGTGATCG | <i>CgEPA7</i> Reverse     | Iraquiet <i>al.</i> ,2005 |

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