SCY-247, a novel antifungal, demonstrates *in vitro* activity against genetically diverse *Candida auris* isolates, including *FKS1* mutants

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SCY-247, a novel second-generation IV/oral triterpenoid antifungal, demonstrates *in vitro* activity against *C. auris* including the majority of strains exhibiting high MICs for echinocandins

Abstract

Candida auris causes large and persistent outbreaks in healthcare settings. Multidrug resistance is increasing, while treatment options are limited due to few approved antifungals. Here, we tested the novel antifungal SCY-247, a novel second-generation IV/oral triterpenoid antifungal which inhibits 1,3-beta-glucan biosynthase (encoded by *FKS1* gene), against 65 *C. auris* isolates including 14 echinocandin non-wild type *FKS1* mutants.

While anidulafungin (AFG) and micafungin (MFG) MICs correlate well, SCY-247 shows lower MICs against most *FKS1* mutants. Especially against most common mutations S639F and S639P, SCY-247 shows a higher *in vitro* activity making this a promising drug for future trials.

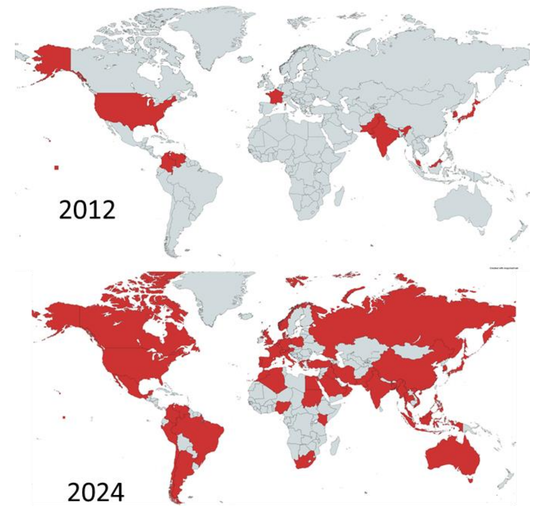

Figure 1: Countries having reported *Candida auris* in 2012 and 2024. Created with mapchart.net

Results

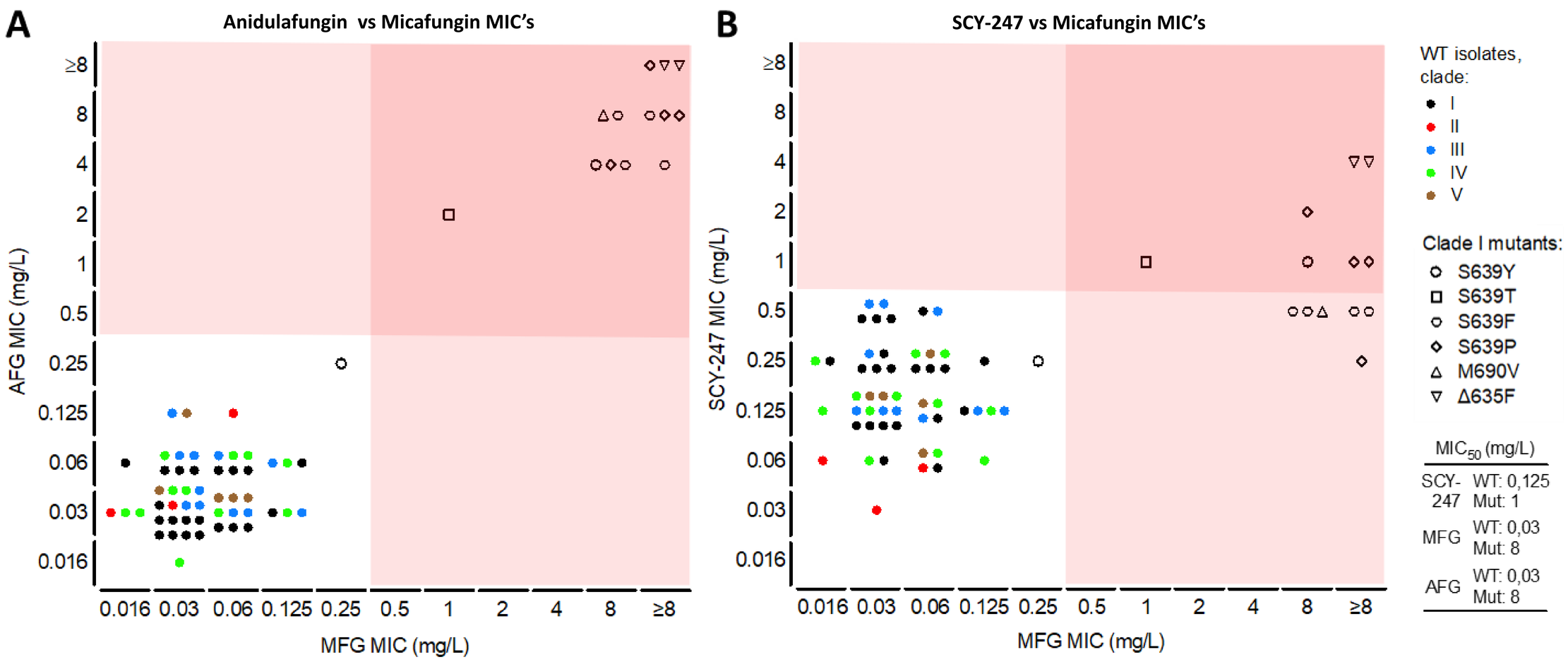

Figure 2: *In vitro* antifungal susceptibility testing of *Candida auris* against echinocandins and SCY-247

Methods

- 65 genetically diverse *C. auris* isolates tested
- EUCAST methodology
- 5 clades
- 14 isolates with various *FKS1*

Conclusions

- SCY-247 demonstrates robust *in vitro* activity and differs from echinocandins in its efficacy to inhibit WT and FKS1 mutant isolates
- SCY-247 MICs are lower than echinocandins for all *FKS1* mutants
- SCY-247 MICs has a higher *in vitro* activity against echinocandin resistant isolates

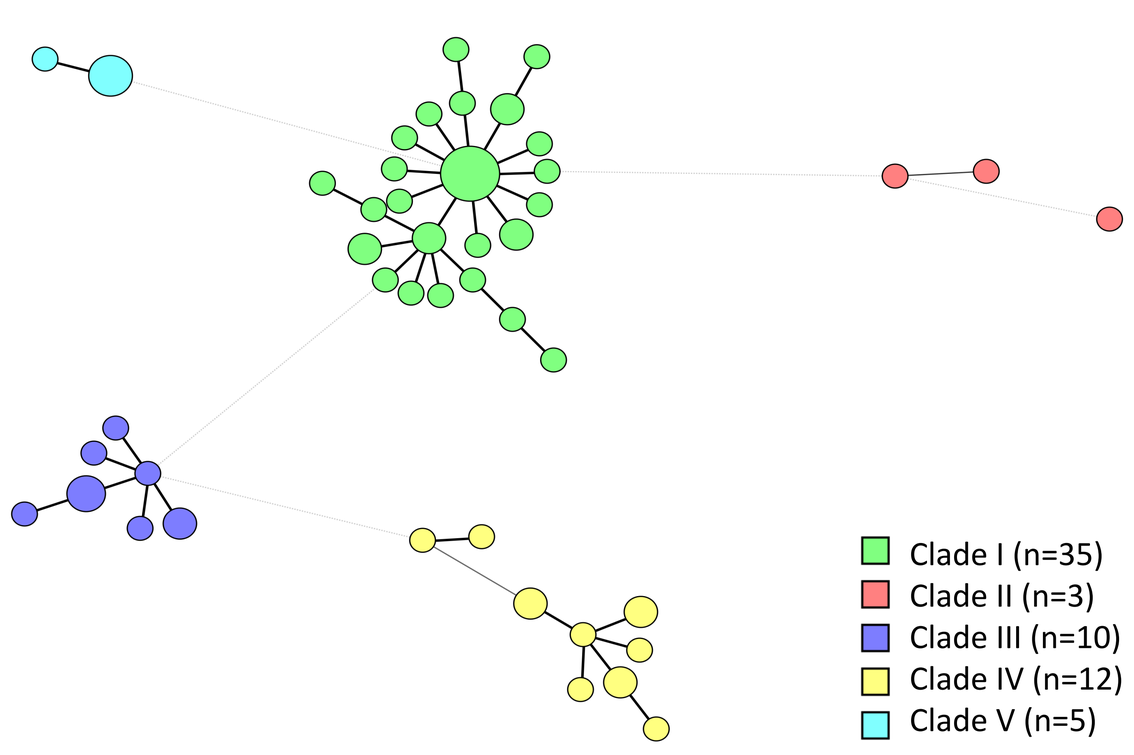

Figure 3: Minimum-spanning tree of 65 *Candida auris* isolates based on short tandem repeat genotyping

References

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