Evaluation of the In Vitro Activity of CD101, a Novel Echinocandin, and Comparators Against Recent Clinical Isolates of Candida spp.

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Abstract (Amended)

Objective

To establish the baseline in vitro activity of CD101 against the prevalent species of Candida and to compare CD101 with other echinocandins and antifungals using a recent, representative population of isolates.

Methods

- **Test isolates for MIC testing included clinical isolates from the Micromyx Repository (Kalamazoo, MI).**
- **A total of 100 each of C. albicans, C. glabrata, and C. krusei were tested.**
- **Of the tested isolates, 470 isolates were from the US (2012–2015) and 2016 isolates were obtained from the recent clinical Candida spp.**
- **Test isolates included standard quality control isolates from the American Type Culture Collection (ATCC, Manassas, VA).**
- **The susceptibility of test isolates to CD101 and comparators was performed using broth microdilution in accordance with CLSI guidelines M27-S3 and M27-S3-R** (with the following exceptions: C. glabrata and C. krusei were tested using broth microdilution in accordance with CLSI guidelines M27-A7 and M27-S3-R and tested in 96-well microtiter plates with 5% FCS in RPMI media).
- **MICs were determined by broth microdilution in accordance with CLSI guidelines M27-A7 and M27-S3-R.**

Results

- **Table 1. Summary of Activity by MIC**
- **Table 2. MIC Distribution of Echinocandins – C. tropicalis**
- **Table 3. MIC Distribution of Echinocandins – C. parapsilosis**
- **Table 4. MIC Distribution of Echinocandins – C. glabrata**

Conclusions

- **CD101 had potent MICs similar to anidulafungin and lower than micafungin and caspofungin (typically at 0.5–1 µg/mL).**
- **Fluconazole and voriconazole had an MIC of 0.12/0.25 µg/mL, similar to that of anidulafungin (0.004/0.008 µg/mL) and lower than caspofungin (0.015/0.03 µg/mL).**
- **C. tropicalis isolates were highly susceptible (98% S) to the evaluated echinocandin comparison.**
- **The susceptibility of test isolates to CD101 and comparators was performed using broth microdilution in accordance with CLSI guidelines M27-S3 and M27-S3-R.**

Introduction

**CD101 is a novel echinocandin with a long half-life currently undergoing development for the treatment of candidemia and other forms of candidiasis.**

- **As part of the ongoing development of CD101, it is important to evaluate the in vitro activity of CD101 relative to comparators against large volumes of clinical isolates.**
- **In this study, the susceptibility of recent clinical isolates of prevalent Candida spp. C. albicans, C. parapsilosis, C. tropicalis, and C. glabrata was evaluated by broth microdilution.**

References