Introduction

A novel echinocandin, biafungin, displaying superior in vitro antifungal activity against other echinocandins against common wild-type strains (MIC50, 0.03/0.06 μg/ml) was eight-fold more active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these selected resistant isolates (Table 1). Biafungin displayed good activity that was slightly greater than caspofungin (MIC50/90, 0.015/0.03 μg/ml) and comparable to anidulafungin (MIC50/90, 0.015/0.015 μg/ml) against these selected resistant isolates (Table 1).

Materials and Methods

Objectives

An overview of M-1082

Abstract

The introduction of two novel antifungal agents, biafungin and anidulafungin, is redefining the current therapeutic spectrum of antifungal treatment in patients with life-threatening fungal infections. Biafungin is a novel echinocandin developed by Seachaid Pharmaceuticals, which shows promising activity against Candida spp. and Aspergillus spp. resistance. This study aims to evaluate the in vitro and in vivo efficacy of biafungin and compare it to other echinocandin compounds.

Activity of a Novel Echinocandin Biafungin (CD101) Tested against Most Common Candida and Aspergillus Species, Including Echinocandin- and Azole-resistant Strains

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ABSTRACT

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RESULTS

Table 1. Frequency distributions of biafungin and comparator echinocandin compounds when tested against Candida spp. clinical isolates.

Summary Table

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 2. Frequency distributions of biafungin and comparator echinocandin compounds when tested against Aspergillus spp. clinical isolates.

The activity of biafungin against A. fumigatus strains (MIC50, 0.12 μg/ml) was eight-fold more active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these selected resistant isolates (Table 1).

Table 3. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 4. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 5. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 6. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 7. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 8. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 9. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 10. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.

Table 11. Activity of biafungin and caspofungin against Candida spp. strains carrying relevant fks mutations.

The activity of biafungin against C. parapsilosis strains (MIC50, 0.12 μg/ml) and both compounds were less active than caspofungin (MIC50/90, 0.015/0.03 μg/ml) against these species according to the CLSI method results.