We recently demonstrated that isavuconazole had acceptable breakthrough activity against a collection of opportunistic fungi. In this study, we wanted to investigate the activity of isavuconazole and comparator agents using reference broth microdilution methods against a large collection of fungal pathogens including Candida, Aspergillus, Fusarium, and Acremonium species. Isavuconazole was compared against fluconazole, voriconazole, posaconazole, micafungin, and anidulafungin.

### RESULTS

#### MATERIALS AND METHODS

**Antifungal susceptibility testing.** A total of 1,740 filamentous fungus isolates were collected prospectively from 113 hospitals located in North America during 2012. MICs for isavuconazole were determined using CLSI broth microdilution methods. We also tested isavuconazole and comparator agents against 295 filamentous fungus clinical isolates strains that had been collected in a worldwide surveillance program during 2012.

**Analysis:**
- **MICs:** Isavuconazole MICs were determined using CLSI broth microdilution methods.
- **Cutoff values:** Isavuconazole MICs were interpreted according to the CLSI guidelines.

### CONCLUSIONS

- **Isavuconazole** was as effective as voriconazole and much more effective than micafungin and anidulafungin. Isavuconazole significantly reduced the organism burden in kidneys of mice with candidemia.
- **Comparative activity:** Isavuconazole was significantly more active against Candida krusei than voriconazole and posaconazole. Isavuconazole was also more active against Fusarium solani and Aspergillus fumigatus than voriconazole and posaconazole.

### ACKNOWLEDGEMENTS

This is a preliminary report of an ongoing study supported by Astellas Pharma Inc. All authors are independent from the sponsor.

**REFERENCES**


### CONCLUSIONS

- **Isavuconazole** displayed very good activity against the contemporary collection of filamentous fungi, including the most common species of Candida. C. tropicalis and A. fumigatus species, the activity of which is already compromised in vitro by voriconazole and posaconazole, was not seen at the same levels when tested with isavuconazole.

### ACKNOWLEDGEMENTS

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