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## SUSCEPTIBILITY OF GLOBAL ISOLATES OF *CANDIDA* SPECIES TO FLUCONAZOLE AND VORICONAZOLE BY DISK DIFFUSION

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**Purpose:** To determine the in vitro susceptibility of *Candida* species to fluconazole and voriconazole using a disk diffusion method recently endorsed by the NCCLS. For fluconazole, 79,664 yeast isolates were tested from mid-1997 through 2001 and, for voriconazole, 18,569 yeast isolates were tested in 2001. Study data were contributed by 89 centers in 35 countries.

**Methods:** All isolates were adjusted to provide inocula equivalent to a 0.5 McFarland turbidity standard, and were cultured onto Mueller-Hinton agar medium supplemented with 2% glucose and 0.5 mcg/mL methylene blue. Antifungal agents were tested employing a commercially prepared 25 mcg fluconazole disk, or a 1 mcg disk for voriconazole. Test plates were incubated for 18-24 hrs, and automatically read and electronically recorded using BIOMIC Image Analysis Systems. Duplicate isolates and uncontrolled test results were not included in the analyses. In accordance with NCCLS-accepted guidelines for fluconazole, zones of inhibition of 19 mm or more indicated Susceptible (S) isolates, 15-18 mm indicated Susceptible-Dose Dependent (S-DD) isolates, and 14 mm or less indicated Resistant (R) isolates.

**Results:** 98.4% of 52,987 *C. albicans* were susceptible to fluconazole. The highest resistance rate for *C. albicans* was found in Ecuador (8.6% of 512 isolates). Between 1997-1998 and 2001, the proportion of *C. albicans* decreased from 69.7% to 63% of all isolates, and there was a parallel increase in the numbers of *C. tropicalis* and *C. parapsilosis* isolates. Excluding *C. krusei*, the overall susceptibility of all *Candida* species to fluconazole was 93.0% (S only) or 96.1% (S and S-DD). For voriconazole, zone diameters were reported, although interpretive criteria have yet to be determined.

**Conclusions:** The disk diffusion assay provides a rapid, reproducible, and cost-effective method for determining the susceptibility of *Candida* species to the triazoles, fluconazole and voriconazole. Additionally, this assay may serve as the basis for development of disk diffusion susceptibility testing for other classes of antifungal agents.