

	<b>GM positive (N=75)</b>	<b>GM or culture or PCR positive (N=147)</b>	<b>GM and culture negative but Aspergillus species PCR positive (N = 65)</b>	<b>GM, culture and Aspergillus species PCR negative (N = 157)</b>
Antifungal therapy started around BAL (-5, +14 days) (n/N)	71/75 (95%)	129/147 (88%)	52/65 (80%)	103/157 (66%)
Median duration of antifungal treatment (days and IQR)	28 (12–78)	28 (11 – 85)	26 (11 – 131)	18 (7 – 63)
6-week mortality (n/N)	21/74 (28%)	21%	9/65 (14%)	25/156 (16%)

**Table 2. Outcome of patients according to the mycological test that was positive.**

Abbreviations: BAL=bronchoalveolar lavage; IQR=interquartile range; PCR=polymerase chain reaction

**P475**  
**Bee health and the antifungal activity of honey**

Kenya Fernandes, Bridie Stanfield, Daniel Susantio, Dee Carter  
University of Sydney, Sydney, Australia

Poster session 1, September 21, 2022, 12:30 PM - 1:30 PM

**Objectives:** Various components have been identified which contribute to the antimicrobial properties of honey, many of which are secreted by bees into the honey as it is being processed. Here we investigate the relationship between bee and hive health and the antifungal properties of honey.

**Methods:** Samples of honey were collected from hives that were either healthy or experiencing some kind of distress as assessed by beekeepers. Healthy hives displayed strong population numbers and good brood patterns while distressed hives exhibited warning signs such as low population numbers, patchy brood patterns, evidence of chalkbrood fungal disease, or small hive beetle infestation. Honey samples were tested for antifungal activity against yeast and mold species via broth microdilution, tested for hydrogen peroxide levels via colorimetric assay, and spread on agar plates to assess the abundance and diversity of microbes present in the raw honey.

**Results:** Honey samples were effective against the yeast *Cryptococcus deuterogattii* and the dermatophyte mold *Trichophyton interdigitale* but ineffective against the yeast *Candida dubliniensis* and the mold *Aspergillus flavus*. The hydrogen peroxide levels of the honeys were variable and did not always align with activity. Less microbes in number and abundance were present on agar plates grown from healthy hive honey compared to distressed hive honey.

**Conclusion:** These results indicate that bee health may play a role in contributing to the antifungal properties of honey and that promoting strong and healthy hives is beneficial.

**P476**  
**Monitoring antifungal resistance in a global collection of *Candida* spp. surveillance isolates, including *C. auris*—analysis of resistance in antifungals (ARIA) 2020 study**

Nimmi Kothari<sup>1</sup>, Stephen Hawser<sup>1</sup>, Sara Olari<sup>1</sup>, Silvia Sartori<sup>1</sup>, Tarun Mathur<sup>2</sup>  
<sup>1</sup>IHMA Euprope Sari, Monthey, Switzerland  
<sup>2</sup>IHMA INDIA LLP, Gurugram, India

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**Objectives:** Analysis of resistance in antifungals (ARIA) is a recent longitudinal global surveillance initiative collecting yeast and fungal isolates from hospitals worldwide designed to determine susceptibility profiles and monitor the resistance trends among antifungal agents. ARIA reports the susceptibility patterns of data concerning echinocandins, second-generation triazoles, and fluconazole against clinical *Candida* spp., and filamentous fungal isolates from worldwide sources.

**Methods:** *Candida* spp. isolates ( $n = 662$ ) were collected from hospitals worldwide during 2020 from 13 different sites—Argentina ( $n = 1$ ), Australia ( $n = 2$ ), Germany ( $n = 1$ ), India ( $n = 2$ ), Italy ( $n = 1$ ), Panama ( $n = 1$ ), Spain ( $n = 1$ ), Turkey ( $n = 1$ ), United Kingdom ( $n = 1$ ), and United States ( $n = 2$ ). These isolates were shipped to a central laboratory at IHMA Europe, Switzerland, and re-identified by MALDI-TOF or molecular methods. The MICs were performed by broth microdilution method in line with CLSI susceptibility testing standards—CLSI M27-A4 and M38-A2—methodologies and percentage susceptibility (%S) were calculated. Antifungals tested were amphotericin B (AMB), anidulafungin (ANID), fluconazole (FLU), isavuconazole (ISA), caspofungin (CASP), micafungin (MIC), posaconazole (POS), and voriconazole (VOR).

**Results:**

Table 1: Summary MIC and susceptibility data of *Candida* spp. isolates for all countries combined

**Conclusions:** The data from the ARIA 2020 study indicate that overall antifungal resistance is low among the *Candida* spp. isolates except for *C. glabrata* and *C. krusei* where resistance to one or more antifungal agents was observed. However, there was no significant difference in susceptibility pattern was observed when susceptibility data of *C. glabrata* and *C. krusei* from different continents were compared. The emergence of resistance was evident among *C. auris* isolates as they have shown reduced susceptibility to azoles in this study.

Antifungal resistance surveillance and investigation into resistance mechanisms are of paramount importance. The ongoing ARIA surveillance study will provide resources to monitor antifungal resistance trends, provide key information to caregivers and provide essential information with respect to the development of novel antifungal agents.