

**P1612**  
**Paper Poster Session**  
**Update in fungal resistance and susceptibility**

**Azole resistance in *Aspergillus fumigatus* in Switzerland; survey in a rural area**

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**Background:** Azole resistance of *Aspergillus fumigatus* isolates has been reported worldwide. Mainly it was reported in isolates from patients who received long-term itraconazole (ITZ) therapy and from agricultural fields where high levels of azole fungicides were employed. The status of azole resistance in Switzerland is not yet known in detail. The aim of this study was to determine the present status of azole resistance in *Aspergillus fumigatus* in a rural part of Switzerland.

**Material/methods:** To explore the prevalence of azole resistant *Aspergillus fumigatus* in the environment in a rural part of Switzerland, we collected samples from agricultural field. Airborne spore contamination was also monitored on every agricultural field where soil sample were taken. All *Aspergillus fumigatus* isolates were investigated for susceptibility to ITZ and voriconazole (VOR).

**Results:** *Aspergillus fumigatus* grew from 12 of 21 (57%) soil samples analyzed. In 6 of 21 (29%) air samples grew *Aspergillus fumigatus*. 42 *Aspergillus fumigatus* isolates were screened for azole resistance. The median minimum inhibitory concentration (MIC) of the *Aspergillus fumigatus* isolates was 0.5 (0.125-16) mg/L against ITZ. The median MIC for VOR was 0.2 (0.0625-16) mg/L. High MIC of ITZ ( $\geq 8$  mg/L) were displayed by three isolates. All were found from different soil samples. Two isolates revealed high MIC for VOR ( $\geq 2$  mg/L). The *Aspergillus fumigatus* isolates with high MIC's were only found in cornfields (2 samples). On fields growing potatoes or maize no *Aspergillus fumigatus* with higher MIC were detected.

**Conclusions:** The present study reports that resistant *Aspergillus fumigatus* isolates can also be found in Switzerland. Physicians who treat patients with Aspergillus diseases should be aware of the possibility of azole resistance, also in azole-naïve patients, especially the patient is living in a rural area