

# Allergy and Asthma: The qualitative nature of indoor allergenic fungi in Saudi Arabia

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**Background:** Airborne fungi are important source of indoor allergens. The indoor fungal flora contains potent allergenic species known to cause IgE mediated sensitization. There are many studies which provide convincing evidences of their role in the development of allergic diseases.

**Methods:** As part of a project on various indoor allergens including animal and insect origin allergens, 462 house dust samples were collected from different regions in Saudi Arabia. Samples were analyzed for the presence of fungal allergens in the dust samples by dilution plates method. Petri plates containing Sabouraud Dextrose Agar (SDA) and Potato Dextrose Agar (PDA) were employed for cultivation of fungi. The cultivated plates were incubated at 25 °C up to 5 days and colonies were enumerated and identified by colony count and microscopic morphology.

**Results:** Fungal colonies of various species were isolated and identified from the collected samples. The majority of fungi identified belonged to the allergenic genera *Aspergillus*, *Alternaria*, *Cladosporium*, and *Penicillium* with variable percentages. *Aspergillus niger* constituted 38.11%, *Aspergillus fumigatus* 16.75%, *Rhizopus spp* 12.02%, *Penicillium spp* 10.1%, *Aspergillus spp* 7.93%, Yeast 4.48%, *Mucor* 3.71%, *Alternaria spp* 3.07%, *Cladosporium spp* 2.17%, *Bipolaris sp.* 0.50 %, and other minor fungal types 1.15%.

**Conclusion:** Continuous or prolonged indoor exposure to certain fungal species may cause new sensitization, allergic reactions in sensitized individual, and/or increased frequency of asthma symptoms and severity. It is therefore suggested that elimination of fungi should be implemented

with cleaning and removal of stored items such as fruits, vegetables, leather garments as well as removal of old wallpapers in humid areas. Humidity control measures also need to be adapted to minimize the growth of fungi.



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3<sup>rd</sup> September 2016

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<b>Abstract Presenter:</b>	SYED HASNAIN
<b>Type of Presentation:</b>	<b>ORAL PRESENTATION</b>

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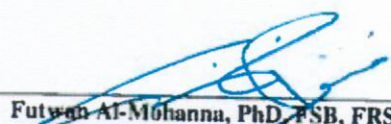
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