Dissimilar to bacterial colonization or infections, the epidemiology and pathogenicity of colonization and fungal respiratory infections are less known. According to the present study, the prevalence rate of respiratory colonization in patients was reported in 73.5%. Among mold isolates, Aspergillus has also been the most common genus followed by Scedosporium species. In contrast to the reports from western countries, A. fumigatus was also identified as the most prevalent species of Aspergillus from ME countries including Iran and India.

In some studies, allergic bronchopulmonary aspergillosis (ABPA) in CF patients was evaluated. In our recent experience with 60 patients with CF, 8% of CF patients were investigated for ABPA. A. fumigatus was the most common agent followed by A. fumigatus, A. terreus and A. niger.

A significant proportion of Scedosporium and Aspergillus isolates from CF patients against the main antifungal agents in vitro. In patients who have antifungal treatment history, resistant strains were isolated. According to these evaluations, a few are related to Research Topic 'Fungal Respiratory Infections and Colonization in CF' from Iran and some other ME countries. Therefore, in this presentation, we are going to highlight our experiences and other studies from Iran and ME in the management of fungal respiratory infections.

In addition, we introduced a new method for clinical diagnosis, and an in vitro antifungal susceptibility patterns of fungal isolates from CF patients, and common treatments and prophylactic strategies.

**S10.1b** Bacterial and fungal co-infections in cystic fibrosis
Benoit Briard1
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**S10.2** Fungal respiratory infections in Cystic Fibrosis, September 24, 2022, 10:30 AM - 12:00 PM

**S10.2a** New mechanism and detection methods forazole-resistant Aspergillus fumigatus
Alkira Waterston, Teppoi Arii, Hatice Majma
Medical Mycology Research Center, Chiba University, Chiba, Japan

**S10.2b** Pathology, physiology, and management of chronic pulmonary aspergillosis
Keishi Isakauma
Department of Infectious Diseases, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan

**S10.2c** Successful treatment of mucormycosis in hematological diseases
Hiroshi Kakeya
Infection Control Science, Graduate School of Medicine, Osaka Metropolitan University, Japan

**S10.2d** A unique clinical appearance of Candida auris infection in Japan
Takahiro Umeyama, Masahisa Abe, Takayuki Shiraora, Taka MIzakaki, Yutaka Yoshida
National Institute of Infectious Diseases, Tokyo, Japan, 2University of Miyazaki, Miyazaki, Japan

**S10.2e** Fungal respiratory infections in cystic fibrosis patients in the Middle East
Mohammad Hedayati1, Mona Ghasemi-Farnia2,3, Mahdi Ashrafi-Khosrow2,3, Sahel Asadi Shabi sareri2,3, Somayeh Gharbavand2,3, Masoud Saboor1,2,3, Sadegh Khosrow2,3
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**S10.3** Fungal respiratory infections in Cystic Fibrosis, September 24, 2022, 10:30 AM - 12:00 PM

Cystic Fibrosis (CF) is among the most common genetic disorders, which involve multiple organs including the respiratory tract. CF is due to a missense mutation in the transmembrane conductance regulator (CFTR) gene, which leads to an inactivation of a chloride channel (CFTR) in the epithelial cells. The prevalence of CF patients is estimated at 1 in 10,000 - 50,000, while the incidence is estimated at 1 in 2000-5000 live births. Several studies from ME revealed that many children with CF develop chronic pulmonary infections and frequent respiratory episodes. CF patients are at the risk of respiratory infection due to antibiotic and respiratory disease. According to the experts’ idea, CF may be more common in Iran than expected before.

Chronic colonization of the airways of CF patients and infections due to a wide variety of opportunistic fungal pathogens including Aspergillus species, Candida species, Exophiala邸et al., Ramonella arcangelicus complex, and Lomentospora prolificans are currently increasing. On the other hand, the resistance of these opportunistic pathogens to commonly available antimicrobial challenges therapeutic options and consequently endanger the CF patients’ life.

**S10.3a** ***Fusarium oxysporum*** ssp. *sambucifolium* and *Fusarium solani* are the two main identified species in several reports. According to previous reports, the prevalence rate of respiratory colonization in ME countries was reported in 73.5%. Among mold isolates, Aspergillus has also been the most common genus followed by *Scedosporium* species. In contrast to the reports from western countries, *A. fumigatus* was also identified as the most prevalent species of *Aspergillus* from ME countries including Iran and India.

In some studies, allergic bronchopulmonary aspergillosis (ABPA) in CF patients was evaluated. In our recent experience with 60 patients with CF, 8% of CF patients were investigated for ABPA. *A. fumigatus* was the most common agent followed by *A. fumigatus*, *A. terreus* and *A. niger*.

A significant proportion of *Scedosporium* and *Aspergillus* isolates from CF patients against the main antifungal agents in vitro. In patients who have antifungal treatment history, resistant strains were isolated. According to these evaluations, a few are related to Research Topic ‘Fungal Respiratory Infections and Colonization in CF’ from Iran and some other ME countries. Therefore, in this presentation, we are going to highlight our experiences and other studies from Iran and ME in the management of fungal respiratory infections.

In addition, we introduced a new method for clinical diagnosis, and an in vitro antifungal susceptibility patterns of fungal isolates from CF patients, and common treatments and prophylactic strategies.