Background
The incidence of invasive fungal infections (IFI) is increasing worldwide. Evermore invasive medical care as well as increasing numbers of long-term immunocompromised patients are considered major contributing factors. A wide variety of so-called “emerging fungi” accounts for a significant proportion of IFI. Data on their epidemiology, pathogen biology and clinical course is scarce, impeding evidence-guided decision making in the clinical setting. The objective of FungiScope™ – Global Emerging Fungal Infection Registry is to overcome these difficulties and eventually improve patient care. The registry has been created in 2003 and gained importance in the field. Recently, the FDA approved isavuconazole for the treatment of invasive mucormycosis on the basis of data from the registry.

Methods
- Documenting clinical patient data in an online case report form:
  - Inclusion criteria: Cultural, histopathological or molecular biological evidence of IFI
  - Exclusion criteria: Infections due to Aspergillus spp., Candida spp., Cryptococcus neoformans, Pneumocystis jiroveci and any endemic fungal infection
  - Colonization
  - Analysis of host factors, clinical presentation, treatment and outcome
  - FungiThek: Biobanking and reference analysis of cultured isolates, as well as exchange with other centers for research projects
  - FungiQuest: A search engine of the FungiScope database www.fungiquest.net
  - Therapeutic antifungal drug monitoring

The registry is open to everybody wishing to collaborate and contribute a case of an emerging fungal infection.

Results

- From January 2003 – January 2016, 478 cases have been documented and considered valid – Mucorales are the most commonly registered pathogens, followed by Fusarium and yeast.

Conclusions
- Increasing relevance of rare IFI
- Efficient method: 478 cases of rare IFI from Europe, Asia, and North and South America have been documented
- Actively collecting fungal isolates for central identification and research
- Increasing annual case numbers
- Improved FungiQuest website

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