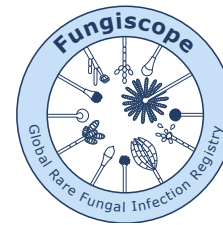


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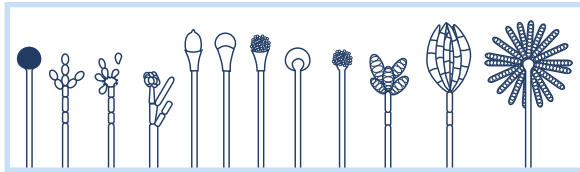
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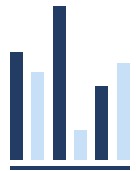
Registration and Password  
Acquisition



Documentation



**Diagnostics**



**Statistical  
Analysis**



**Culture/  
Biopsy Banking**

### Financial compensation:

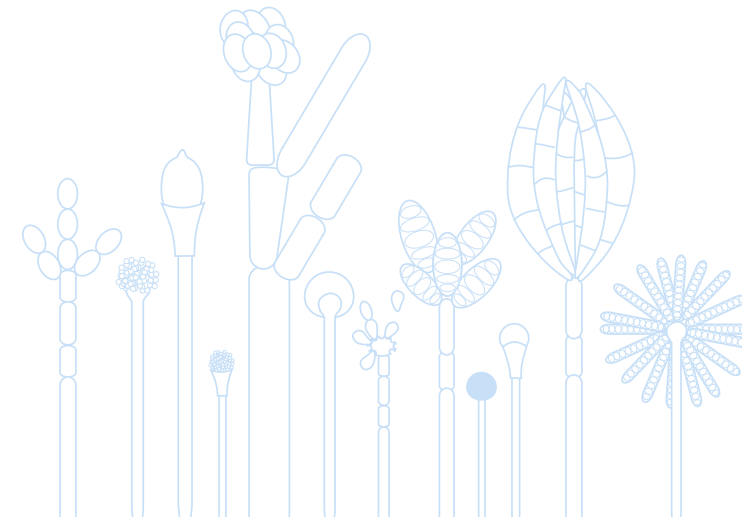
100 € /Case documentation

50 € /Sample (histology or culture)

Documentation assistance available upon request

# Fungi scope

Global Rare Fungal  
Infection Registry





## Introduction

The incidence and clinical relevance of rare invasive fungal infections is increasing worldwide. This includes infections with filamentous fungi, especially zygomycetes, *Fusarium* spp. and other less common infections caused by, e.g. *Scedosporium* spp., *Penicillium* spp., *Acremonium* spp., *Paecilomyces* spp., *Trichoderma* spp., dematiaceous fungi, such as *Alternaria* spp., *Aureobasidium* spp., *Bipolaris* spp., *Cladophialophora* spp., *Cladosporium* spp., *Curvularia* spp., *Exophiala* spp., and *Phialophora* spp., and rare yeasts, e.g. *Trichosporon* spp.. The etiology of this epidemiological development is not completely understood, and may in part be due to heightened awareness and intensified diagnostics. However, major contributing factors are the increasing number of transplantation procedures around the world (estimated at a total of 500,000 per year), a widening of the indications for intensive chemotherapy, and the growing number of other clinical conditions requiring immunosuppressive treatment.



The clinical presentation of an invasive infection with a so called "rare fungus" is often indistinguishable from more frequent invasive fungal infections, i.e. candidiasis, aspergillosis and cryptococcosis. While these more frequent pathogens may be identified by the use of diagnostic markers ( $\beta$ -glucan, galactomannan and cryptococcal antigen), infection with a rare invasive fungus can only be confirmed by culture or biopsy that are often difficult to obtain. Development of new diagnostic methods is warranted.

The same is true for therapeutic standards, which have been developed for the most frequent invasive fungal

infections above. The increasing number of invasive fungal infections caused by rare fungi is, however, not paralleled by the creation of corresponding treatment guidelines. Under these circumstances, clinicians are forced into therapeutic decisions without the help of a solid basis of evidence.

## Objectives

The objective of this registry is to broaden the knowledge on epidemiology, diagnostic procedures and the clinical course of invasive fungal infections caused by unusual invasive fungi.

The specific objectives are:

- To determine the fungal species causing invasive fungal infection in different parts of the world.
- To determine the clinical pattern of disease and document procedures performed for confirmation of the diagnosis.
- To describe the therapeutic regimens used and their efficacy.
- To share clinical isolates among the contributors of Fungiscope.
- To develop molecular biology tools for identification of strains in histopathologically proven invasive fungal infection.

## Patients and Methods

Patient Definition

*Inclusion Criteria*

- Cultural, histopathological, antigen, or DNA evidence of invasive fungal infection

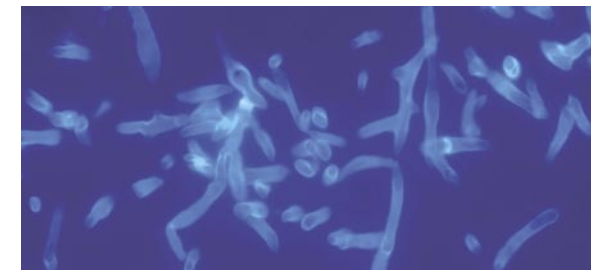
*Exclusion Criteria*

- Infection due to *Aspergillus* spp., *Candida* spp., *C. neoformans*, *Pneumocystis jiroveci*, *Zygomycetes*

- Endemic fungal infection such as coccidioidomycosis or histoplasmosis
- Colonisation or other non-invasive infection

## Case Report Form

The CRF is an internet based form accessed through <http://www.fungiscope.net/dataentry.html>. Prior to data entry, contributors must complete registration and request a password. This password needs to be obtained only once and will be valid for all subsequent case documentations.



## Strain Collection/Fungithek

Isolates will be sent to and stored by the reference laboratories, where formal identification will be done based on culture and molecular biology results. Susceptibility patterns/MIC according to CLSI and/or EUCAST methods/MFC of the isolates will be applied as appropriate. If possible, we prefer slant or cryo cultures.

## Tissue Collection

Every effort should be made to obtain tissue samples. If fresh frozen tissue is not available, 10 slices of formaldehyde fixated tissue should be obtained.

## Pharmacokinetics

Plasma levels of all common azoles, echinocandins and polyenes can be determined from serum, CSF, and other tissue samples by Dr. Carsten Müller, Institut für Pharmakologie, Uniklinik Köln, Germany. This service is provided for free to all participating investigators.