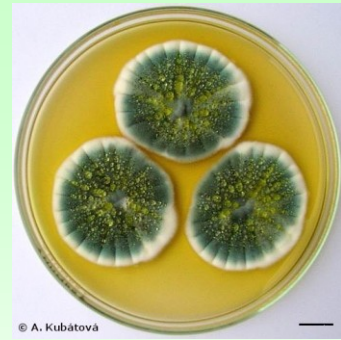




Mycology



Cultivation: Sabourad agar (SABA) with antibiotics, thiamin (enables pigmentation of filamentous fungi), cultivation 28-30 °C, dimorphic fungi 22 and 37 °C

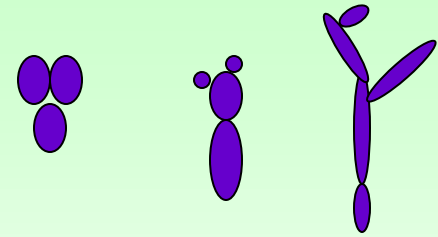
Biochemistry: various

Predisposition: DM, immunocompromised patients, patients treated with broad spectrum antibiotics, transplanted, burns aj.

Therapy: antimycotics - local or systemic

Yeasts

Candida



Microscopy: G+potato-like forms

Cultivation: on Sabourad agar grow in creamy colonies, via 28-30 C, in 5-7 days, on BA in 24h, smell like bread

Biochemistry: asimilate various sugars (auxanograms, zymograms)

Pathogenicity: superficial infections – soor, vaginal candidiasis, oesophagitis, onychomycosis

systemic infections – cystitis, sepsis

Dg.: direct – microscopy, cultivation, PCR

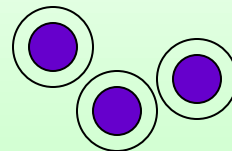
Therapy: systemic fluconazol, itraconazol, amphotericin, local clotrimazol etc.

C. albicans, *C. tropicalis*, *C. krusei+glabrata* (both resistant to fluconazol)

Cryptococcus neoformans

Microscopy: thick capsule

Pathogenicity: pneumonia, meningitis



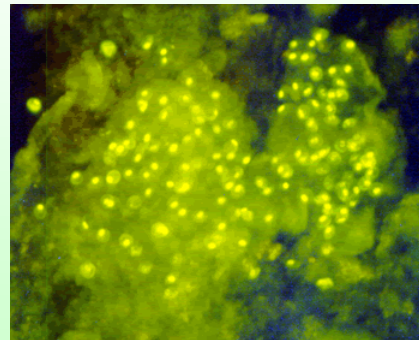
Pneumocystis carinii (jiroveci)

Pathogenicity: frequent in HIV patients, new-borns, after transplantations...

Pneumocystis pneumonia – hard respiratory insufficiency

Dg.: microscopy – Giemsa staining, silver staining, PCR

Therapy: cotrimoxazol



Dimorphic fungi

Lower temperature – filamentous form, higher temperature – yeast form

Coccidioides immitis

Cultivation: 3-5 days

Pathogenicity: lung damage

Filamentous fungi

Zygomycetes (*Mucor*, *Rhizopus* etc.)

Cultivation: quickly growth, jacket like brown/black colonies

Pathogenicity: systemic mycosis (rhinocerebral, pulmonar),
burn infections, otomycosis

Therapy: amphotericin



Quickly growing other

Genus *Aspergillus*

Cultivation: various pigments

Pathogenicity: lung aspergilosis, asthma, mycotoxin producers, damage kidneys and liver (contamination of peanuts, cashew nut aj.)

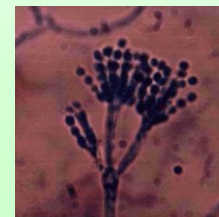
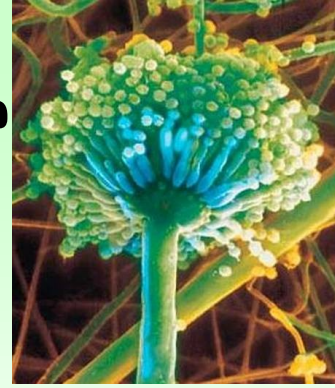
Dg.: microscopy – silver staining, hematoxylin, [Parker ink](#)

Indirect: double immunodiffusion, imunoELFO

Therapy: amphotericin

Genus *Penicillium*

Patogenicity: asthma, allergy, dermatomycosis. Serve as starting cheese cultures, produce toxins!!



Dermatophytes

Genus *Epidermofyton*, *Trichofyton*, *Microsporum* etc...

Cultivation: 2-6 weeks, various pigments

Biochemistry: various

Pathogenicity: infection of skin due to dermatophytes is called tinea: capitis, corporis, pedis...

Therapy: difficult, weeks to months

Dg.: microscopy: **Parker stain**/Rylux, cultivation on SABA, special tests

