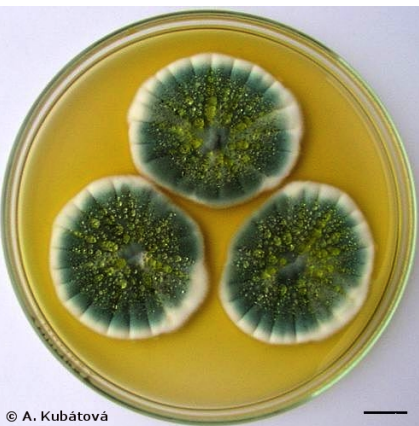


Lab 8: Common Molds

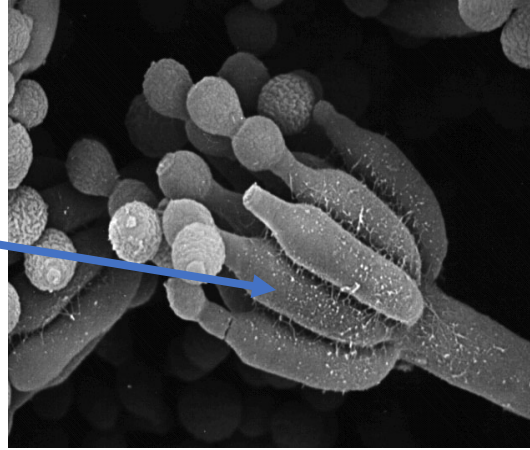


Ascomycota, Eurotiomycetes

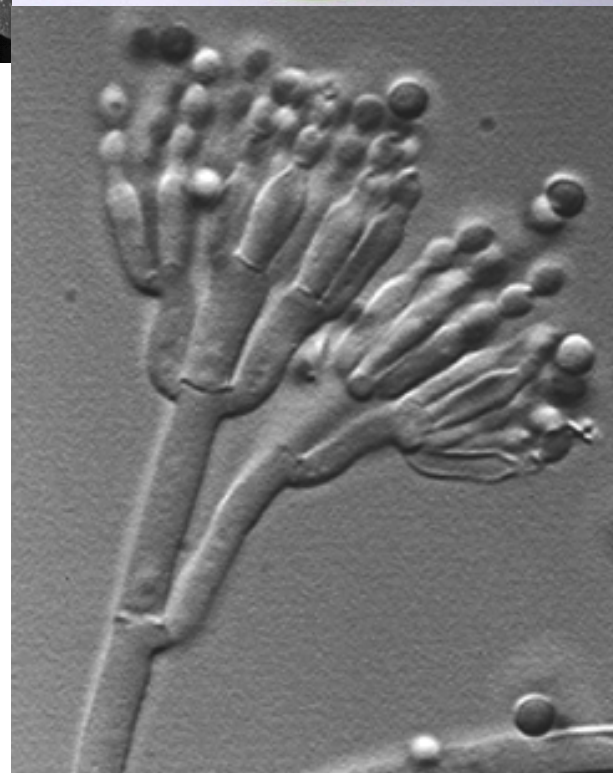
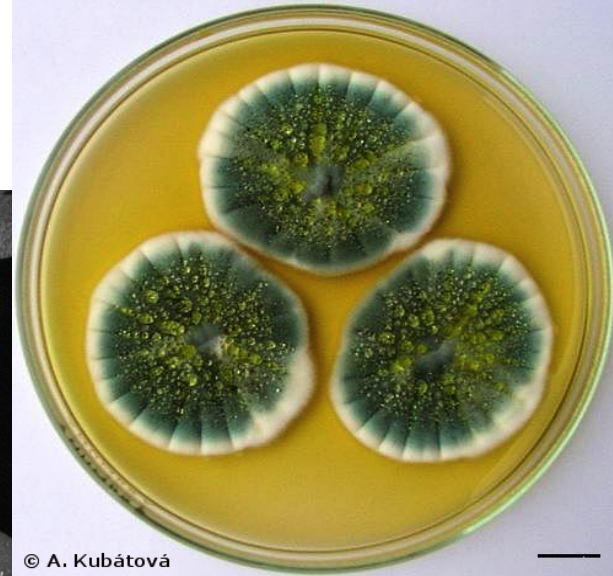
Penicillium

- Phialides

- **verticillate**
- **biverticillate**



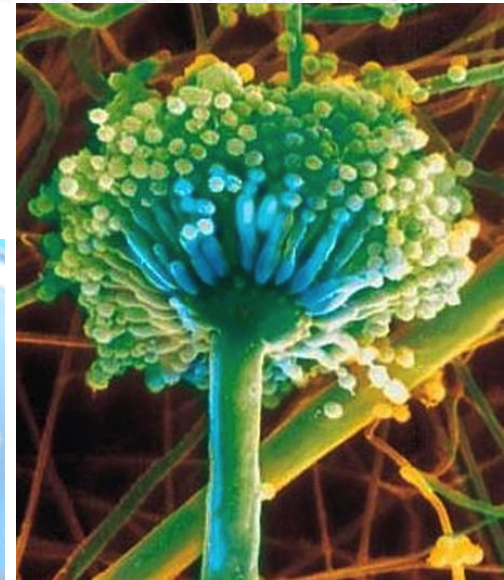
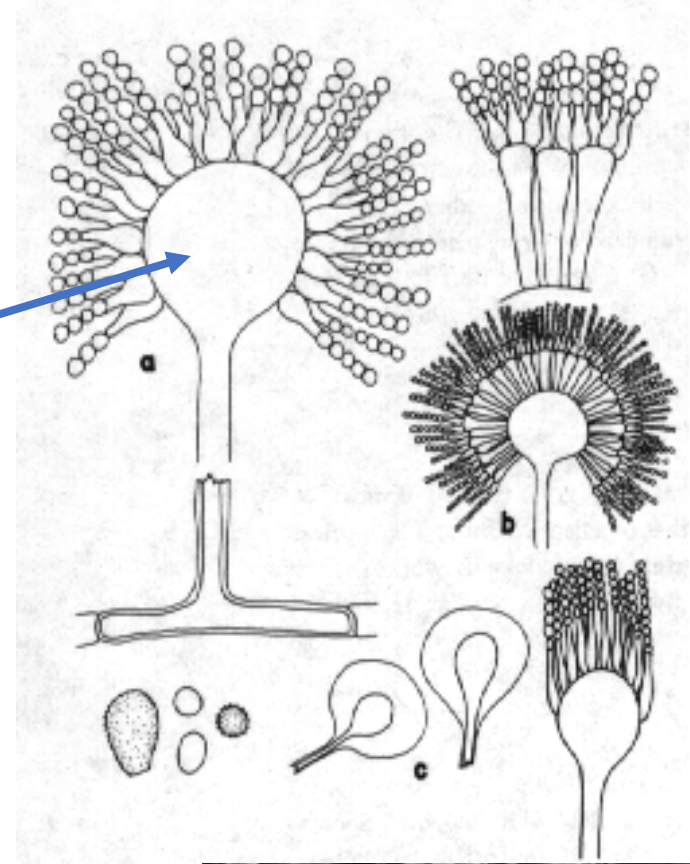
- chains of conidia – paint brush
- youngest conidium is at the tip of the chain
- culture (common species):
 - upper surface green with a white border
 - lower surface white



Ascomycota, Eurotiomycetes

Aspergillus

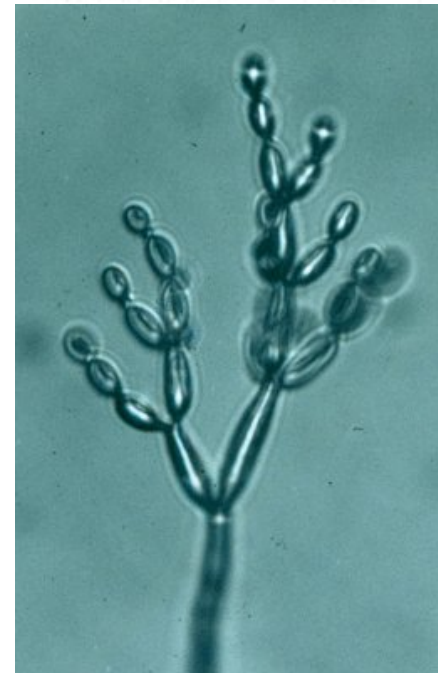
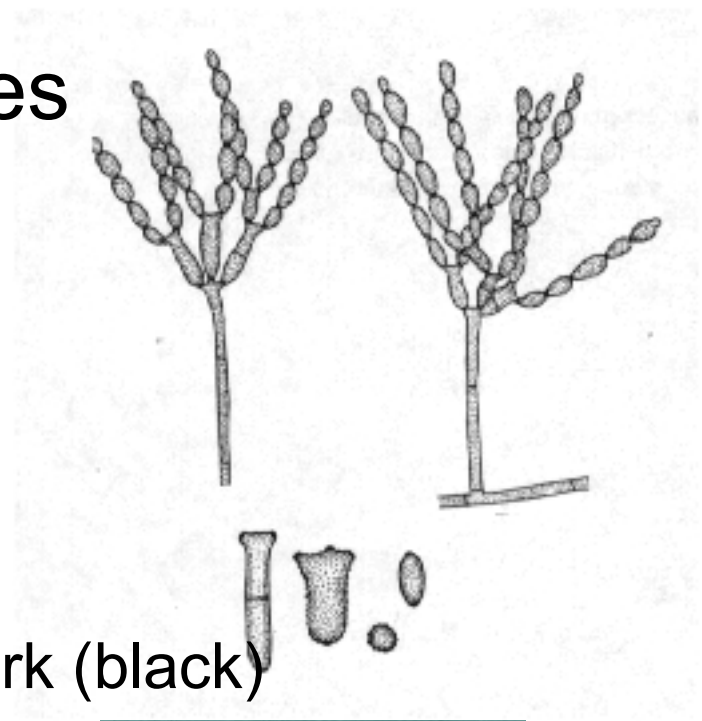
- conidiophore with swollen vesicle
- conidiogenous cell - phialidic
- Chains of conidia – toilet bowl brush
- uniseriate - phialides produced from vesicle
- biseriate - phialides produced from metulae
- youngest conidium is at the base of the chain
- culture – variable by species!



Ascomycota, Dothideomycetes

Cladosporium

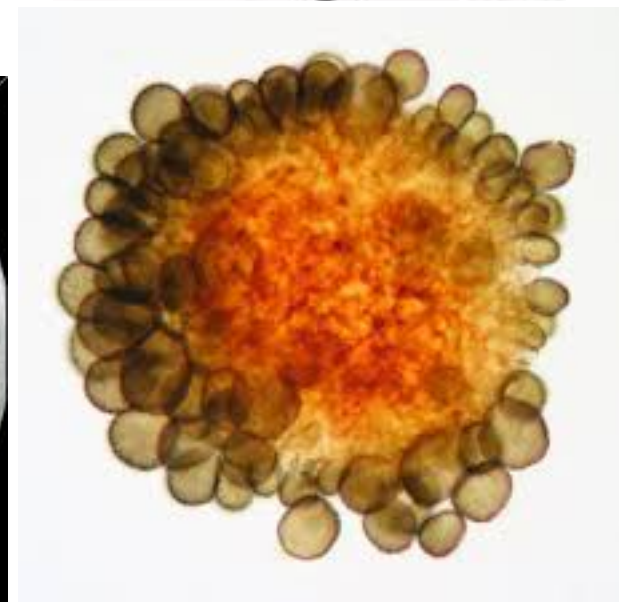
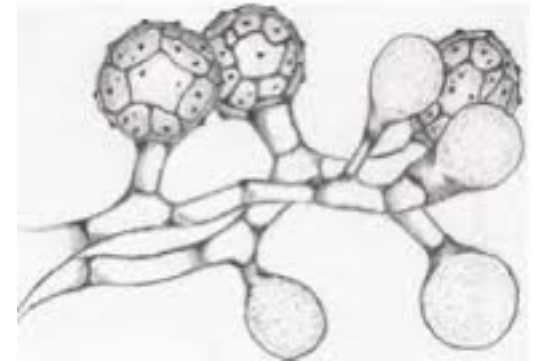
- Darkly pigmented
- Acropetal chains of conidia
- Conidia – darkly pigmented
- Culture
 - Upper surface - olive green, dark (black)
 - Lower surface – dark (black)



Ascomycota, Dothideomycetes

Epicoccum

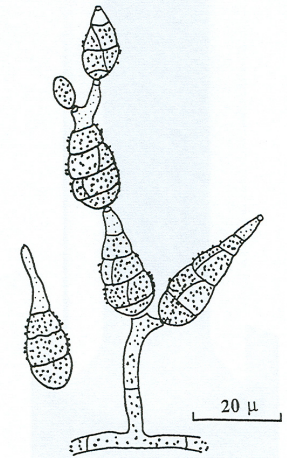
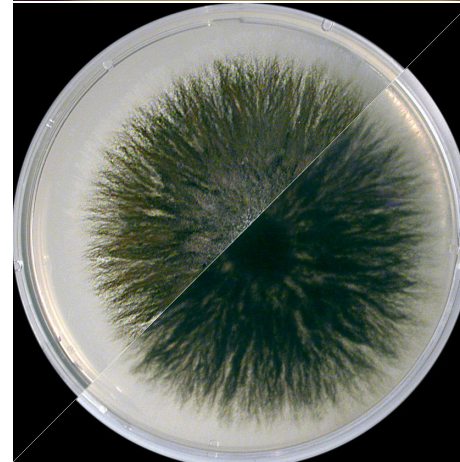
- Conidia
 - Darkly pigmented
 - **Dictyoseptate**
- Sporodochia
- Cultures
 - Upper surface - white to red to brown, fluffy
 - Lower surface – red to brown



Ascomycota, Dothideomycetes

Alternaria

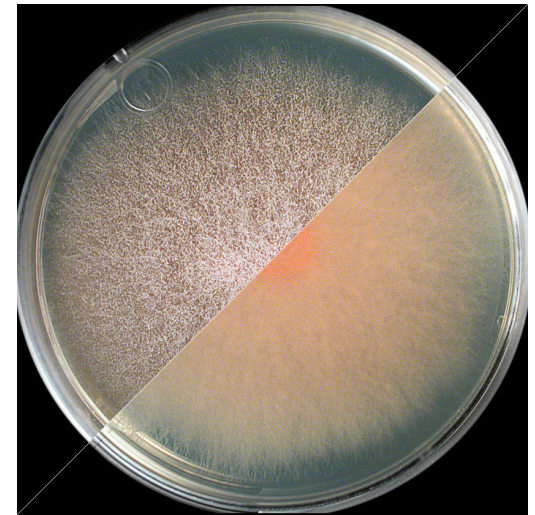
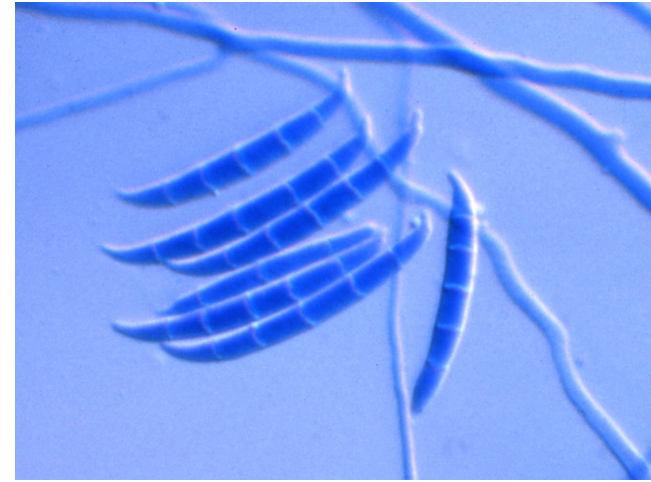
- Conidia
 - Oblong, darkly pigmented, dictyoseptate
 - Acropetal chains
- Culture
 - Upper – black, floccose
 - Lower – black
- Plant pathogen, endophyte
- Aeromycology
 - airborne
 - Human allergens



Ascomycota, Sordariomycetes

Fusarium

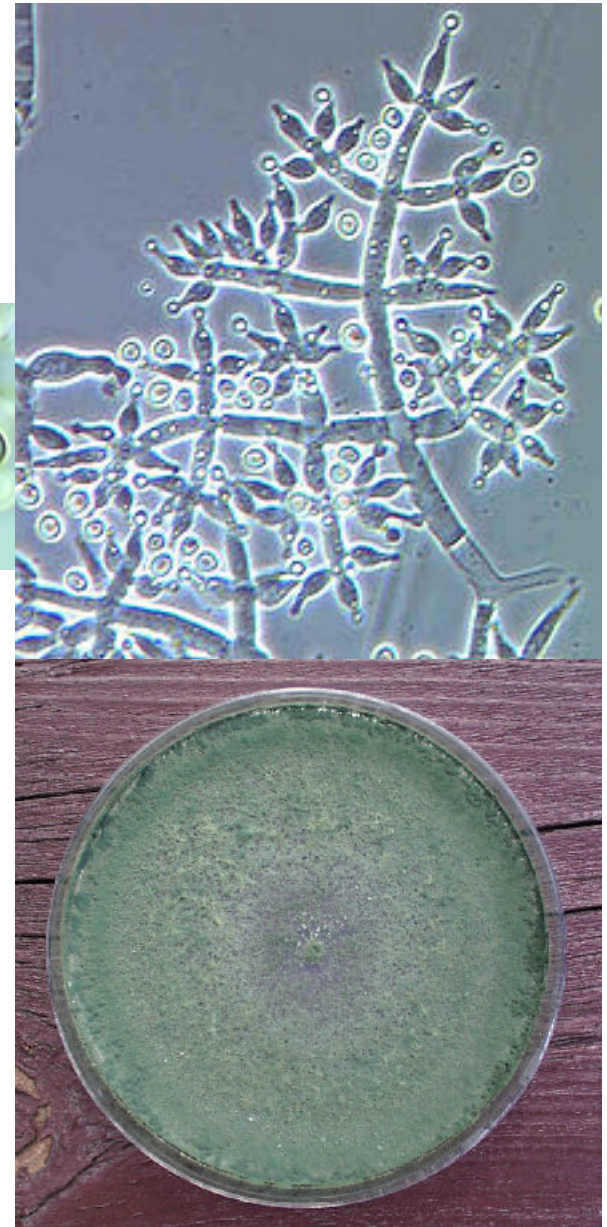
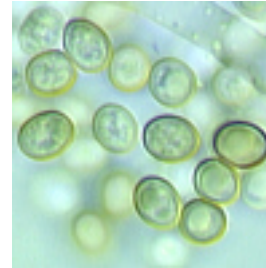
- Conidia
 - “banana-shaped” macroconidia, septate
- Culture
 - Upper – cottony, white, reddish pigments
 - Lower – white with light red to light orange pigments
- Common group of plant pathogens



Ascomycota, Sordariomycetes

Trichoderma

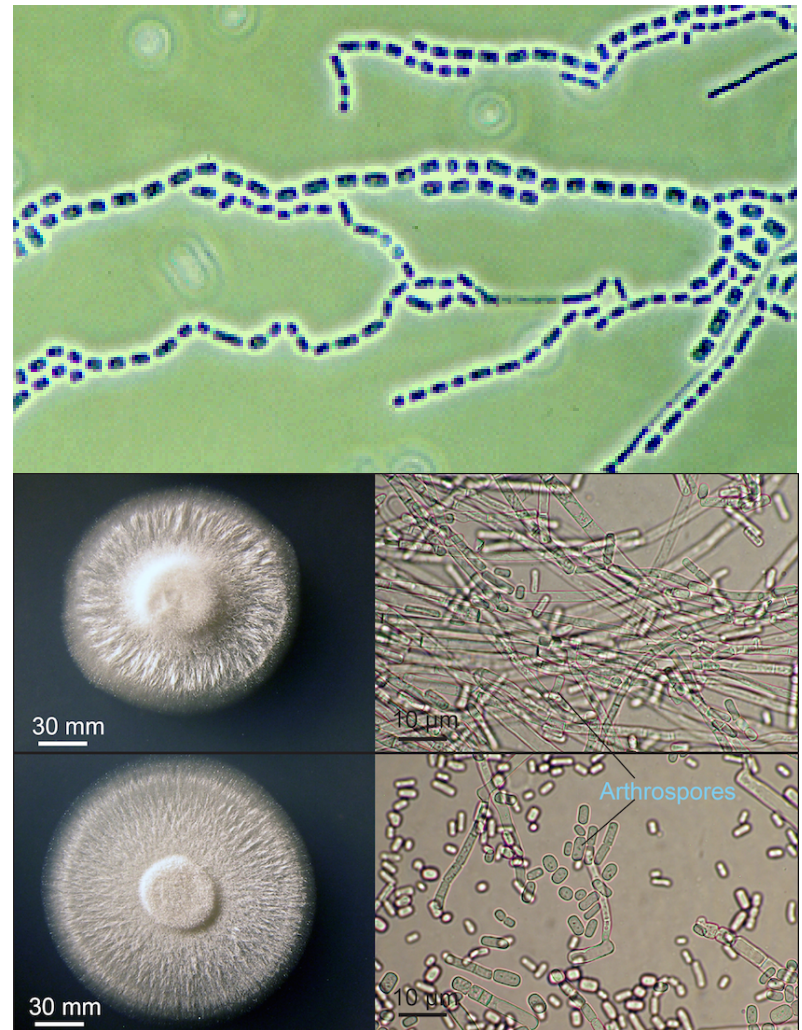
- Conidia
 - Small, round, green
 - Whirls of short phialides
- Culture
 - Upper – green, powdery
 - Lower – white to light green
- Mycoparasite
 - Biological control agent
 - Pathogen of commercial mushroom production



Ascomycota, Saccharomycotina

Geotrichum

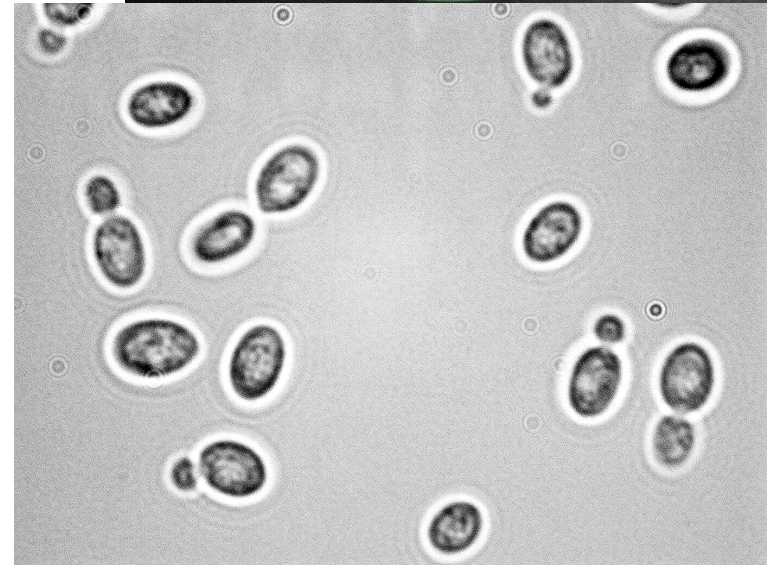
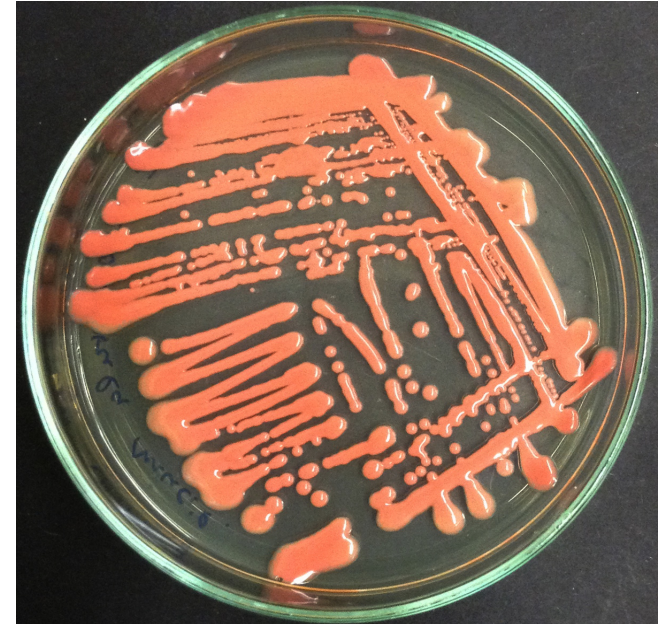
- Culture
 - Upper - fast growing, white to cream,
 - Lower - no reverse pigment
- Conidia
 - one-celled arthroconidia
- Soil, water, air
- Opportunistic human pathogen in immunocompromised persons



Basidiomycota, Pucciniomycotina

Rhodotorula

- Red yeasts
- Common isolate from soil, water, air
- Emerging pathogens in persons with compromised immune systems



Mucoromycota, Mucorales

Rhizopus

- “zygomycete”
- Sporangiphore
- Collumella
- Sporangium with numerous sporangiospores
- Rhizoids & stolons at base of sporangiphore
- Culture
 - Upper – white, cottony, black sporangia
 - Lower – white
 - Fast growing saprobe
 - **Large diameter hyphae, without septations**



Mucoromycota, Mucorales

Mucor

- Similar to *Rhizopus*
- Lacks rhizoids at base of sporangiophore
- Colonies fast-growing
 - Upper white-to-gray
 - Lower light-colored to white
- **Hyphae are wide, aseptate**
- Sporangiophores are long, frequently branched
- Sporangia large (50-300 μ), round

