

## Cladosporium

Mitosporic ("mitosis" and "sporic") fungus. Hyphomycetes. Teleomorphs (sexual state): *Mycosphaerella*, *Venturia* (Ascomycetes).

### Characteristics

#### Distribution

Approx. 28-40 species. One of the most common genera, worldwide. and identified in over 70% of homes in US and Canada.

#### Where Found

Soil of many different types, plant litter, plant pathogen, leaf surfaces, old or decayed plants.

#### Mode of Dissemination

Dry spore (formed in very fragile chains, easily dispersed). Wind. Peak spore concentrations in late spring (June and July) and early fall (September and October).

#### Growth Indoors

Widespread (found in over 70% of homes in US and Canada), on many substrates, including textiles, wood, moist windowsills. Grows at 0°C, and so is associated with refrigerated foods. Aw=0.85-0.88 (minimum for various species). Matures within 7 days.

#### Industrial Uses

*C. herbarum* produces enzymes which are used in the transformation of steroid intermediates such as pregnenolone and progesterone, biologically important hormones used in the industrial production of oral contraceptives.

#### Other Comments

G.S. deHoog & J. Guarro have placed species associated with human infection in a new genus *Cladophialophora*, i.e. *Cladophialophora carrionii*, *C. bantiana*. Older medical texts refer to this fungus by its formname *Hormodendron* species.

### Potential Health Effects

#### Allergens

Common and important allergen. Type I allergies (hay fever, asthma). Type III hypersensitivity pneumonitis: Hot tub lung, Moldy wall hypersensitivity.

#### Potential Opportunist or Pathogen

Generally, non-pathogenic. One species, *Cladosporium carinii*, is an agent of chromoblastomycosis in subtropical and tropical regions (grows at 35-37°C).

#### Potential Toxin Production

Cladosporin, emodin. (Neither are highly toxic.)

### Laboratory Notes

#### Growth/Culture Characteristics

Grows on all general fungal media. Some species sporulate better than others, and some may need cycles of light to produce spores.

#### Spore Trap Recognition

Distinctive, with wide variation in size and shape. Spores with dark attachment scars and some olive to brown pigmentation are identified as *Cladosporium*.

