THE L&R GROUP

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Alternaria

Mitosporic (“mitosis” and “sporic”) fungus. Hyphomycetes. Anamorphic Pleosporaceae.

Characteristics

Distribution
Ubiquitous. Approx. 40-50 species.

Where Found
Soil, dead organic debris, on food stuffs and textiles. Plant pathogen, most commonly on weakened plants. It reaches peak concentrations during late summer and fall.

Mode of Dissemination
Dry spore. Wind.

Growth Indoors
On a variety of substrates and matures within 1 to 8 days. Water activity is between 0.85-0.88 (minimum for various species).

Industrial Uses
Biocontrol of weeds and other plants.

Other Comments
One of the most common fungi worldwide.

Potential Health Effects

Allergens
Commonly recognized as one of the most common mold allergens. Type I allergies (hay fever, asthma). Type III hypersensitivity pneumonitis: Woodworker's lung, Apple store hypersensitivity. May cross react with Ulocladium, Stemphylium, Phoma, others.

Potential Opportunist or Pathogen
Nasal lesions, subcutaneous lesions, nail infections; most infections reported from persons with underlying disease or in those taking immunosuppressive drugs. Most species of Alternaria do not grow at 37°C.

Potential Toxin Production
A. Alternata produces the antifungal alternariol. Other metabolites include AME (alternariol monomethylether), tenuazonic acid, and altertoxins (mutagenic).

Laboratory Notes

Growth/Culture Characteristics
Grows well on general fungal media. Colonies are dark olive green to brown, floccose to velvety (heavily sporulating). Colonies become pleomorphic over time, and lose the ability to sporulate with subsequent transfer.

Spore Trap Recognition
Distinctive. Young spores or spore fragments may be confused with Ulocladium, Pithomyces, Stemphylium, or Epicoccum. (Some Alternaria species cannot be separated from Ulocladium.)