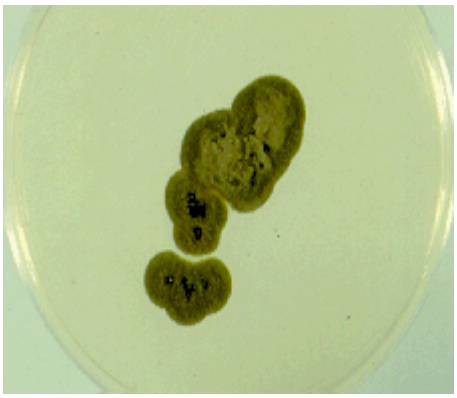
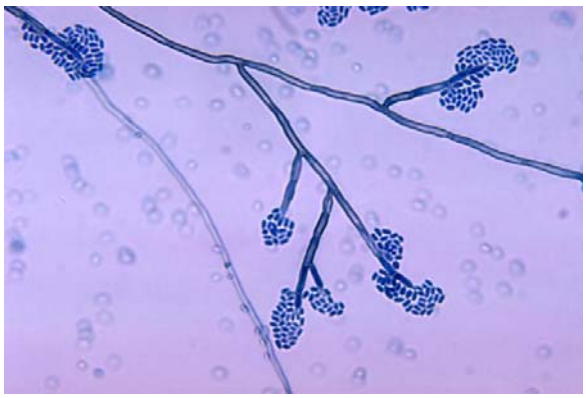
Mold of the Month March 2009

Exophiala sp.



Culture of *Exophiala jeanselmei.*



Sporangiophores of *Exophiala* sp.

Colony Description

Exophiala is the main genus of black yeasts, characterized by annellidic coniodogenesis. Some cultures are entirely yeast-like, or form phialidic collarettes, sympodial conidiophores, or dry conidial chains. Colonies are mostly restricted, slimy at the center due to yeast-like growth, and smooth near the margin. Later often becoming velvety or lanose, olivacious-black.

Microscopic Morphology

These cells often form long chains. As the culture gets older, septate hyphae which bear conidiogenous cells (annelides) are eventually formed. The annelides are tubular and rocket-shaped and typically taper to form a narrow elongated tip. Ellipsoidal, conidia (1-3x3-6 µm) are produced from the annelides. These conidia are usually one-celled and are found in clusters at the apices of annelides or at the sides of the conidiophores.

Ecology

Exophiala is a dematiaceous fungus widely distributed in soil, plants, water, and decaying wood material. As well as being a saprophyte in nature, it is the causative agent of various human infections.

Health Effect

Exophiala spp. are among the fungi causing infections wholly referred to as phaeohyphomycosis. Subcutaneous infections such as mycetoma and chromoblastomycosis may develop due to *Exophiala* isolates. These infections are usually acquired via traumatic implantation and are associated with the existence of local or systemic immunosuppression, such as organ transplantation. As well as infection and abscess formation in subcutaneous tissues, prosthetic valvular vegetations, fungemia, and disseminated infections due to *Exophiala* spp. have also been reported. *Exophila pisciphila* is a neurotropic species causing infections in fish as well as humans.