

# FUSARIUM

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# Taxonomic position

- Division **Mycota**
- Sub Division **Eumycotina**
- Form class **Deutermycotina**
- Form order **Moniliales**
- Form family **Tuberculariaceae**
- Form genus *Fusarium*
- Form species *oxysporum*

# General characters

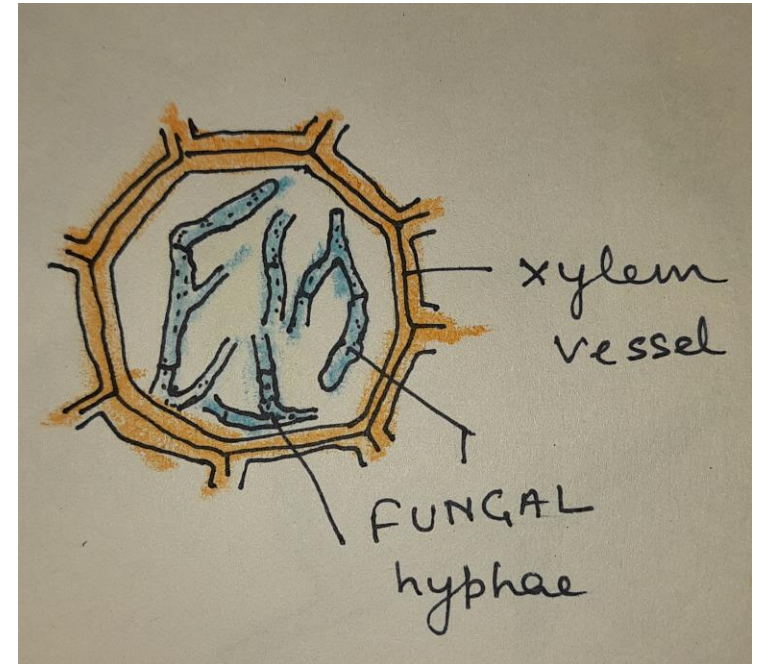
- Includes large number of species.
- Mostly saprophytic, some facultative parasite, others parasitic.
- Most species are soil fungi.
- Worldwide distribution.
- Some are plant pathogens causing root and stem rot, vascular wilt or fruit rot.
- Several species have emerged as important opportunistic pathogens in humans causing hyalohyphomycosis ( especially in burn victims and bone marrow transplant patients).

# Most destructive species ( vascular fusaria)

- *Fusarium udum* wilt of arahar
- *F.lycospersi* wilt of tomatoes
- *F.lini* wilt of flax
- *F.orthaceras* wilt of gram
- *F.vasinfectum* wilt of cotton
- *F.cubense* parasitic on banana( Panama disease)

# Mycelium

- Extensive
- Hyphae septate and branched
- Intercellular and intracellular
- Mycelium dark coloured at maturity
- Plug vascular tissues and produce toxins
- Plant wilts and dies



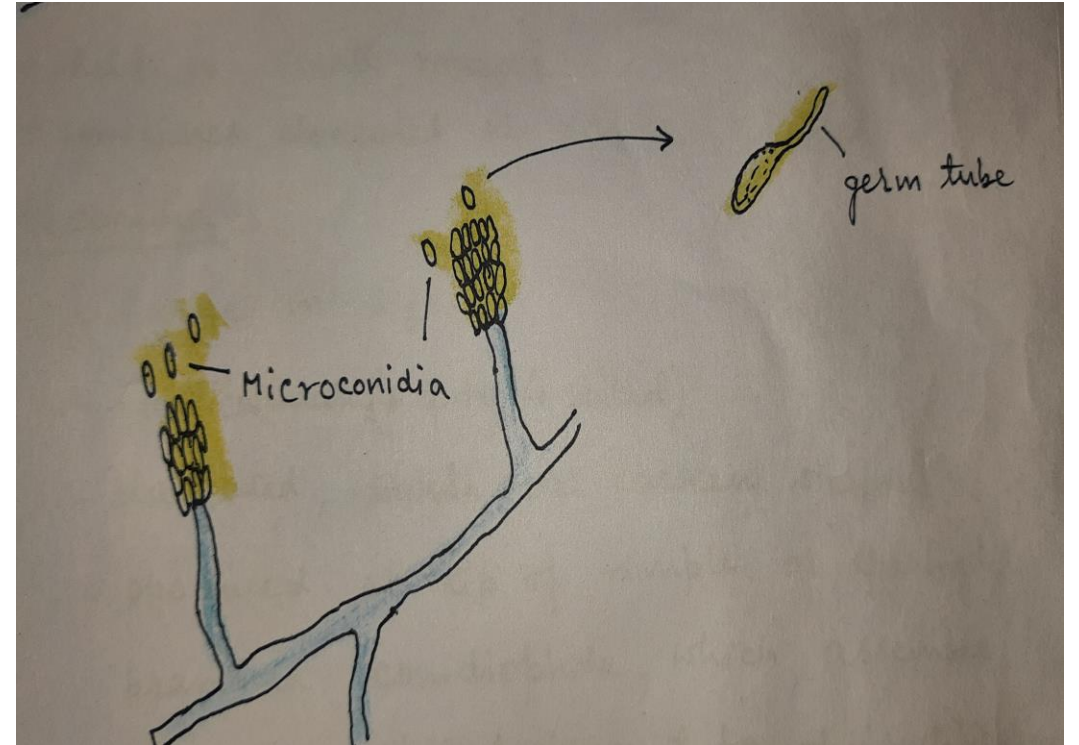
# Asexual reproduction

Three kind of asexual spores are produced:

- Microconidia
- Macroconidia
- Chlamydospores
- Sclerotia

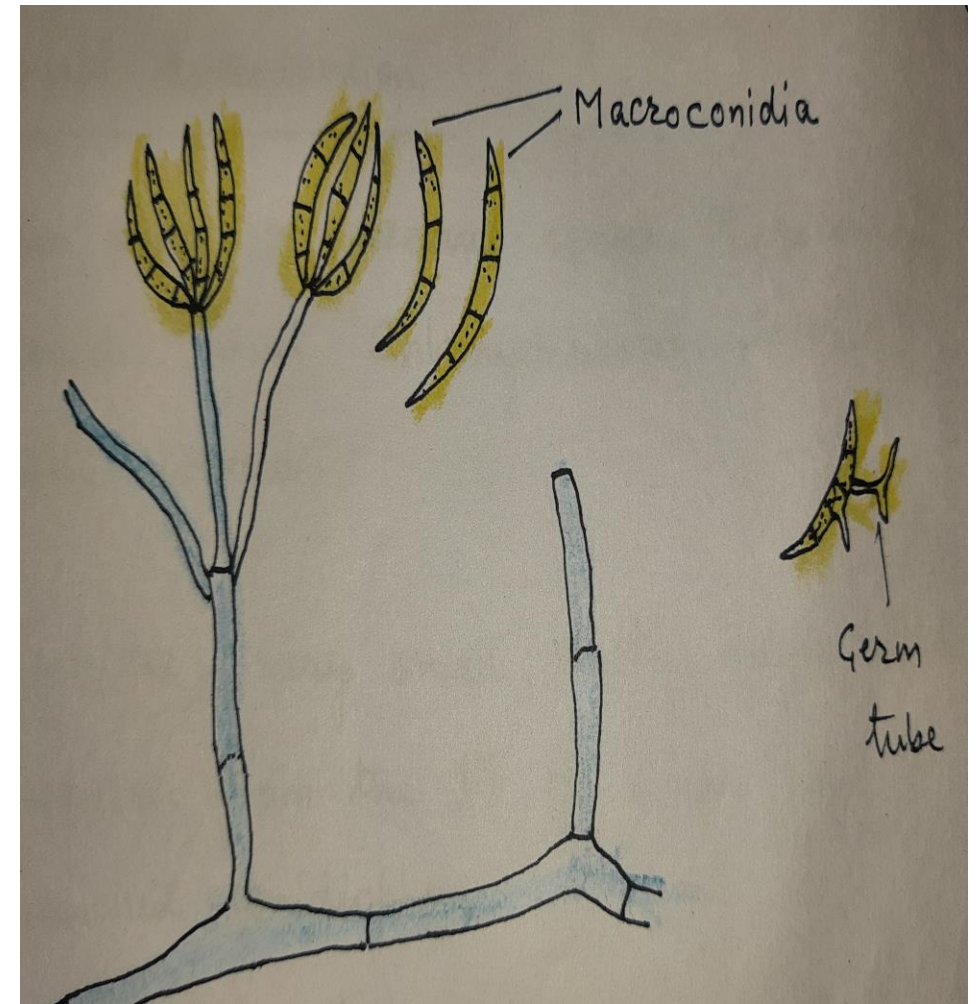
# Microconidia

- Very small, mostly single celled
- Produced from the tip of simple or branched conidiophore
- Round to oval
- Held in small masses
- Sometimes elongated or crescent shaped



# Macroconidia

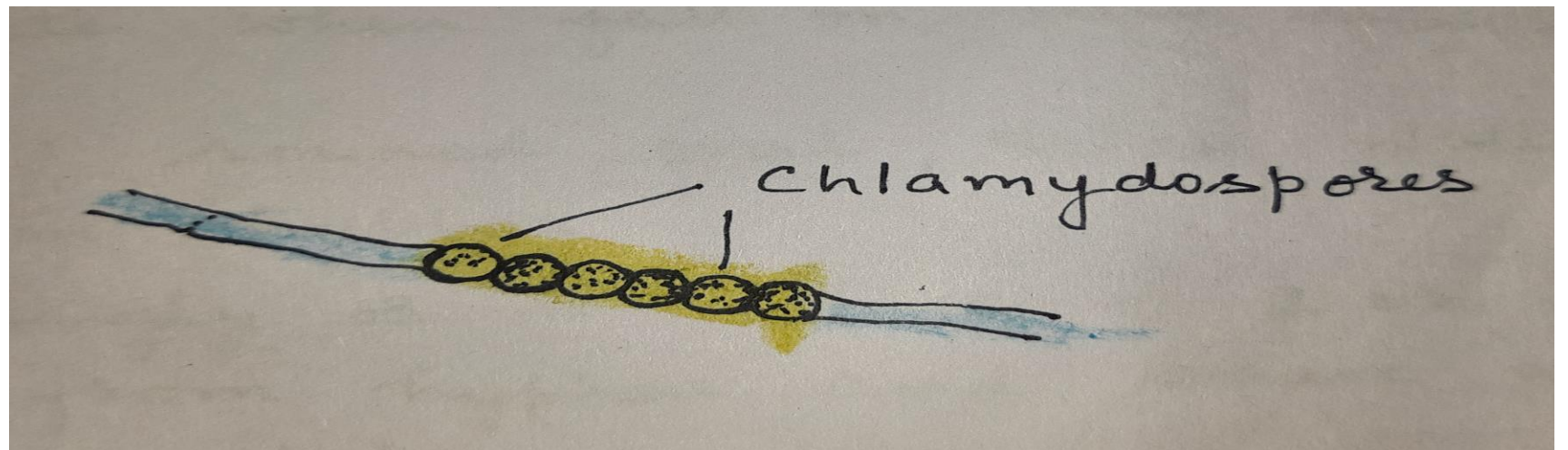
- Large in size
- Multicellular (2 to 4 celled)
- Elongated, sickle or crescent shaped
- Produced at the tip of simple or sparingly branched conidiophore, which assemble to form sporodochium type of fructification
- Germinate when fall on new substratum





# Chlamydospores

- Rounded, oval, thick walled, formed in hyphae
- Formed singly or in chains of 2 or more
- Separate from hyphae and behave as resting spores
- Under favourable conditions, germinate by means of germ tube to form new mycelium



# Sclerotia

- Sclerotia are compact resting bodies of thick walled hyphae
- Function as means of perennation and Vegetative propagation

# Sexual reproduction

Sexual reproduction is ABSENT

In few species Sexual reproduction has been reported.

Example: *Fusarium moniliforme*. The perfect or Sexual stage of this fungus is named ***Gibberella fujikuroi***.