Glossary

ABPA

allergic bronchopulmonary aspergillosis

adiaspore

a spherical spore with a rigid cell wall (chlamydospore) produced in the lungs by the enlargement of an inhaled conidium of Emmonsia

aecidium

vegetative fruiting body of the Uredinales at the end of the haploid stage containing dikaryotic aeciospores

agaric

fungus belonging to the Agaricales

anamorph

structure of the asexual cycle and name of the fungus within the artificial Deuteromycota

anisogamy

copulation of gametes with unlike morphology

anthropophilic

fungus prefers to grow in humans

apomictic propagation

propagation without karyogamy and meiosis

apomixis

development of sexual cells into spores without being fertilized

apothecial

a cup- or saucer-like ascoma in which the hymenium is exposed at maturity

arbuscular mycorrhiza

a symbiotic, non-pathogenic or feebly pathogenic endoinfection formed by zygomycetes of the order Glomales. The penetrating hyphae produce finely branched haustorial structures (arbuscules) or coils and commonly vesicles as well

arthroconidia

segments developed by breaking up at the septal

sites of a hypha; infectious parasitic form in tinea

Arthrospores

a spore derived from the disarticulation of hypha

ascocarp

an ascus-containing morphological structure (ascoma)

ascoma

see ascocarp

ascospore

meiotic spore of the Ascomycota

ascus

meiotic sac-like cell within the ascoma of the Ascomycota

aspergilloma

a 'fungus ball' of hyphae of Aspergillus, found in the upper lobe of the lung

auricularioid

transversely septate (commonly four) cylindrical meiosporangium of the Basidiomycota

autodiploidization

self-inducing fusion of nuclei

autogamy

self-fertilization; fusion of nuclei without cell fusion

bacteriophage

virus that infects bacteria

ballistoconidium

forcibly discharged vegetative spore

ballistospore

forcibly discharged basidiospore

basidia (pl.)

meiosporangium of the Basidiomycota

basidiocarp

meiotic fruiting body (basidioma) of the Basidiomycota

basidiolichen

symbiosis between an alga and a basidiomycete

basidiospore

meiospore of the Basidiomycota

basidium

meiosporangium of the Basidiomycota, organ diagnostic for the Basidiomycota

Bioaerosol

biological airborne particle(s), for instance fungal spores, pollen etc.

blastospore

a conidium formed by budding

body trama

hyphal layer within fruiting bodies

budding

process of reproduction by which the daughter cell separates from the parent cell leaving a bud scar

carpophore

- (1) stalk of sporocarp;
- (2) basidiocarp

chitinous fungi

fungi with chitin in their cell walls

chlamydospore

thick-walled conidium, often formed as a resting form in unfavorable conditions; depending on the site on a hypha, chlamydospores are called laterales (on the side), terminales (on the tip), or intercalares (centrally located)

chloroplast

photosynthetic organelle with chlorophyll a and b

choanoflagellate

unicellular flagellates with phylogenetic relationships to animals and fungi

clade

monophyletic group of organisms

clavarioid

club- or coral-like fruiting structure

cleistothecium

a closed fruiting body having no predefined opening within the Ascomycota

coenocytic

non-septate multinucleate mass of protoplasm

collarette

a cup-shaped structure at the apex of a conidiogenous cell

conidiophore

specialized conidiogenous hyphal structure

conidiospore

an exogenous, nonmotile vegetative spore

conidium

asexual spore

corticioid

flat fruiting body of the Basidiomycota which develops directly on the substrate with the hymenium on the outer side

crozier

the hook of an ascogenous hypha before ascus development

cvstidium

a sterile cell, frequently of distinctive shape, between basidia of the Basidiomycota

dematiaceous

fungi with brown or black pigment in the cell wall, thus appearing brown or black microand macroscopically

denticle

a small tooth-like projection especially one on which a spore is produced

dicotyledonous plants

plants with two seed leaves

dikaryotic

a cell or hyphal compartment having two genetically distinct haploid nuclei

dimitic

fruiting body of Basidiomycota having

two types of hyphae (generative hyphae commonly with clamps, skeletal hyphae commonly thick-walled, aseptate, and of limited length)

dimorphic

having two forms; in mycology often meaning the yeast (often saprophytic) and the hyphal (often parasitic; e.g. Ustilago maydis) stage

dolipore septa

septa of higher Basidiomycota with a barrel-shaped structure in the middle portion

ectomycorrhizal fungus

fungus with a hyphal sheath on the surface of the roots of trees. Hyphae extend outward into the soil and inward between outer cortical cells forming a 'Hartig net'

ectothrix

fungus growing on the outside of a hair shaft, destroying the cuticula

endocytobiotic theory

see endosymbiotic theory

endosymbiotic theory

theory stating that mitochondria and chloroplasts have been once free living bacteria and became symbiotically included in the cytoplasm of the host cell thus leading to the origin of the eukaryotes

endophyte

an organism that lives within a plant

endothrix

fungus growing inside the hair shaft

eukaryotic

cells having a membrane-bound true nucleus

exoskeleton

outer skeleton found in insects and other arthropods

filamentous phage

virus infecting a bacterial cell with a variable length of the tail

fissitunicate

asci with two functional wall layers (bitunicate), splitting at discharge

flagellum

cylindrical extension of an eukaryotic cell responsible for active movement, bound by a plasma membrane

fungi imperfecti

fungi without known sexual reproduction (Deuteromycota)

fungus ball

ball-like hyphal aggregates of Aspergillus, found in the upper lobe of the lung

gametangiogamy

fusion of sexually differentiated hyphae

gastroid

basidia which do not actively discharge their basidiospores

geophilic fungus

fungus growing on or in soil

germ tube

a hypha growing out of a spore

gleba chambers

hymenial cavities within a fruiting body where gastroid basidia are produced

gloeoplerous

hypha with hyaline or yellowish and highly refractile fluid

halotolerant

tolerant of higher salt concentrations

haplophase

the part of the life cycle where the cells are haploid

haustorium

a special hyphal branch which extends in the living cell of the host, for absorption of food

hemiascomycetous

fungi which belong to the class of the Hemiascomycetes

hetero-bifactorial

a mating system with two different factors. One codes for pheromones and their receptors and the other one for DNAbinding proteins

heterokont flagellae

two different types of flagellae which differ in length, type of motion and external appendages

heterothallism

condition of sexual reproduction in which conjugation is possible only through the interaction of different mating types

heterotrophic

organisms using organic compounds as primary sources of energy

holobasidium

a basidium which is not divided by primary septa

homothallism

a condition where sexual reproduction occurs without the interaction of two different mating types

hydnoid

producing basidia on spines or tooth-like projections

hymenium

meiospore-bearing layer of a fruiting body

hypha

septate or nonseptate vegetative filament

hypogeous

having subterranean fruiting bodies

hyphomycete

mitosporic fungus forming a mycelium with or without pigment

isogamy

conjugation of morphologically similar gametes

isogenized ramarioid inbreeding strains

haploid offspring which becomes morphologically similar (Ramaria-like) after crossing of morphologically similar parental strains

isoprene unit

chemical building block containing 5 C-atoms

karvogamy

fusion of genotypically different nuclei

lysotroph

to obtain food by extracellular enzymes (absorbtive nutrition)

macroconidium

larger asexual extracellular spore

meiospore

a spore produced in the meiosis

meristem

tissue at the tip of a growing plant structure, where cell division is most active, true meristems are absent in fungi

mesophilic fungi

fungi growing between 10 and 40°C

microconidium

smaller asexual spore

mitochondrial crista

structure of the inner mitochondrial membrane where the respiratory chain complexes are located

mitosporangium

a sporangium where spore formation occurs after mitosis

mitosporic

spore formation after mitosis

monadal

primitive type of morphological organisation in algae or unicellular flagellates

monocotylendonous plants

plants with one seed leaf

monoecious

male and female sex organs on the same mycelium

monokaryon

hyphal compartments with a single haploid nucleus, in Basidiomycota often the mycelium of a basidiospore

monophyletic

a group composed of a collection of organisms, including the most recent common ancestor of all those organisms

mvcelium

mass of hyphae

mycetoma

a fungal disease of the foot or other parts of the human body, especially in the tropics

mycophagy

the use of fungi as food

oligokaryotic

hyphal compartment with 3–10 nuclei

oogamy

heterogamy with a nonmotile female egg and a motile male sperm

opportunistic pathogens

pathogens that convert from a saprophytic to a parasitic form in a predisposed host

paraphysis

a sterile upward growing hyphal element in the hymenium of the Ascomycota

parenthesome

a curved double membrane (which may be perforate, continuous

or vesiculate) on each side of a dolipore septum in the Basidiomycota, septal pore cap

perithecium

a round or flask-like fruiting body of the Ascomycota with an opening at the top

phagemid

a bacterial plasmid that can be propagated both as a plasmid and a bacteriophage

phialoconidium

a conidium produced on a special conidiogenous cell (phialide)

phragmobasidium

a basidium which is divided by primary septa, usually transverse or cruciate

phragmoplast

cell division structure occurring only in higher plants

pileate

stalked fruiting body with a pileus (hymeniumsupporting part of the basidioma, cap)

pileitrama

hyphae within the cap of a basidiomycete

plectenchyma

fruiting body of firmly interwoven hyphae looking like a parenchyma of plants

polygenic

genetically controlled by many genes

polykariotic

hyphal compartment with more than ten nuclei

polyphyletic origin

a collection of organisms in which the most recent common ancestor of all the included organisms is not included

pseudohypha

hypha-like structure formed by budding yeasts, totally separated by septa without cytoplasmic exchange

pseudoparenchyma

see plectenchyma

ramarioid strains

haploid or dikaryotic fruiting bodies which resemble a Ramaria (coralloid basidiocarp)

resupinate

flat fruiting body of Basidiomycota directly on the substrate with the hymenium on the outer side

rhizopodial

type of morphological organisation forming amoeboid cells which lack a rigid cell wall

saprobe

an organism using dead organic material as food, and commonly causing its decomposition

scolvtid

fungus associated with beetles (Scolytidae, beetle family)

secotioid

the margin of the pileus does not break free from the stipe, gastroid basidiospores

septate basidium

a basidium having transverse or cruciate senta

shikimate-chorismate pathway

the most common biosynthetic pathway leading to aromatic compounds

siphonal

hyphal compartments without septa having many nuclei

solopathogenicity

a pathogenic monosporidial line (e.g. Ustilago maydis)

somatogamous autogamy

karyogamy without plasmogamy in vegetative cells

somatogamy

fusion of somatic cells or hyphae involving plasmogamy but not karyogamy

spermatium

non-motile male gamete

spermogonium

a walled structure in which spermatia are produced

spindle pole body

organelle for the division of nuclei in Zygo-, Asco- and Basidiomycota

sexually or asexually produced reproductive unit

stichic

horizontal orientation of the spindle of nuclei in the basidium

symbiosis

association between unlike organisms, which is advantageous for both organisms

sympodial

spore formation characterized by continued growth, after the main axis has produced a terminal spore, by the development of a succession of apices each of which originates below and to one side of the previous apex

synanamorph

two or more anamorphs of the same teleomorph

teleomorph

the perfect (sexual) form of an anamorph;

morphological structure of the sexual cycle

thallus

body of mold colony consisting of vegetative hyphae

tremelloid basidium

cruciate septate basidium of the Tremellales

trichal form

septate filamentous growth form

trichogyne

the receptive hypha of the female sexual organ

trimitic

fruiting body having three kinds of hyphae: generative (often with clamps), skeletal (often thick-walled) and binding hyphae (thinwalled)

unifactorial

heterothallism

a system in which the sexual propagation to the mycelia is controlled by two different mating types (e.g. + and - or a and α)

vegetative hypha

fungal thread without mitotic or meiotic fruiting bodies

xerophilic fungi

favouring habitats in which water is scarce

zoophilic fungus

fungus which prefers animals for growth

zoospore

a motile spore having one or more flagellae