Heterokaryosis

In most of the *Eumycota* the thallus is differentiated into a vegetative part and a reproductive part. Such fungi are called *Eucarpic.* But in some fungi there is no such differentiation, and the entire vegetative thallus gets converted into one or more reproductive structures. Such fungi are called *Holocarpic.*

The vegetative filaments of eumycotous fungi are called *hyphae,* and the collective mass of hyphae consisting the thallus or body of a fungus is called mycelium. The mycelium may attain a length from a few microns to many meters in different members. The hyphae are non-septate in Oomycetes and zygomycetes, but are septate in higher groups like Ascomycotina, Basidiomycotina and Deuteromycotina. Many nuclei are generally present in the non-septate hyphae, and such conditions are called *coenocytic.* Multicellular mycelium contains either uninucleate, binucleate or multinucleate cells.

The mycelium containing genetically identical nuclei is called *homokaryotic.* But if it contains the nuclei of different genotypes called *heterokaryotic.* The cell containing a single haploid nucleus is called *monokaryotic,* whereas a cell containing two genetically distinct haploid nuclei is called *dikaryotic.*