Differentiate among the three fungal phyla

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Differentiate Among the Three Fugal Phyla Differentiate among the three fugal phyla Zygomycota Reproduction methods Organisms in diverse phyla have different methods of reproduction. Some organisms in Zygomycota phylum reproduce sexually while others reproduce asexually. Those that reproduce in asexual ways have sporangia that contain reproductive spores. Organisms in this phylum also reproduce sexually using their hyphae. During the reproduction process, the hyphae of two organisms join to create gametangia. Joining of the gametangia leads to creation of Zygosporangium and zygospore. The zygospore creates haploid sporangial after undergoing division. An example of organism in this phylum includes the Rhizopus stolonifer. This organism is commonly referred to as the bread mold (Tortora, Funke & Case, 2012).

Means of obtaining nutrients

Organisms in this phylum obtain their nutrients through absorptions. They usually secrete hydrolytic enzymes that can break large molecules into simpler substances in a process of decomposition. They then absorb the simpler substances as their nutrients.

Importance to humans

Organisms in this phylum are important to humans because they are used in producing coloring agents and anesthetics. They are also important in agriculture because they help in decomposition that returns nutrients to the soil. They also increase the absorption of water and minerals from the soil by agricultural crops.

Ascomycota

Reproduction Methods

Organisms in this phylum reproduce both sexually and asexually. The

asexual reproduction process of ascomycetes involves conidia formation. The sexual reproduction these organisms differs from those of Zygomycotes. For example, unlike the zygomycota, the haploid stage of reproduction of the ascomycetes involves joining of male and female gamete producing cells. The sexual reproduction of these organisms leads to the formation of Ascospores. An example of organism in this phylum includes the baker's yeast

Means of Obtaining Nutrients

The ascomycetes obtain their nutrients the same ways as zygomycetes. For example, they decompose the surfaces of their surrounding using their strong digestive enzymes. The decomposed substances are them absorbed into their cells in form of molecules. They obtain their nutrients from dead matter or through a symbiotic relationship with some living organisms.

Importance to Humans

Ascomycetes are also used in food production. For example, the baker's yeast is used in making many products such as bread and wine. In addition, their ability to decompose substances makes them important in agriculture just like the zygomyotes. In addition, they provide nitrogen to some plants during symbiosis.

Basidiomycota

Reproduction method

Unlike the other phyla, organisms in this phylum only reproduce sexually. They usually reproduce by forming basidiocarps in the fruiting body. This process takes place in basidia which is formed after the fusion of mycelia of two spores. This process is referred to as the plasmogamy. Examples of organisms in this phylum include mushrooms and rusts.

Means of Obtaining Nutrients

Organisms in basidomycota phylum obtain their nutrients by decomposing dead organic matter. Symbiosis with other living organisms also helps it obtain nutrients (Carris, Little & Stiles, 2012).

Importance to Humans

Basidiomycotes are sources of food for humans. A common example of organism used as food in this phylum includes cultivated and wild mushrooms. Like organism in other phyla, these organisms are useful in agriculture because of their ability to decay organic matter. Their enzymes are also useful in paper production.

References

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Tortora, G. J., Funke, B. R., & Case, C. L. (2012). Microbiology: An introduction. San Francisco, Calif: Benjamin Cummings.