

Ultracytochemical Localization of Acid Phosphatase in *Humicola lutea* Conidia and Mycelia

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Electron microscopic cytochemical procedures were used to determine the cellular location of acid phosphatase in the fungus *Humicola lutea* grown in casein-containing medium lacking in mineral orthophosphates. In our investigations acid phosphatase in nongerminating conidia was localized on the outer side of the cell wall, in the cell wall, and on the exterior surface of the plasma membrane. The reaction product of acid phosphatase in germinating conidia was seen in the outer wall layer while in young mycelium on the cell surface and in the exocellular space. The relationship between phosphatase activities localized in the cell wall and their role in the enzymatic degradation of the phosphoprotein casein providing available phosphates for cell growth is discussed.

Key words: Localization, Acid Phosphatase, Fungi