The morphology and structure of red pigment producing fungus: *Monascus purpureus*

ABSTRACT

Thered pigment producing, ascospore forming fungus *Monascus purpureuswas* obtained by monospore isolation and maintained on potato dextrose agar at 32°C for 7 days. *M. purpureusproduces* compact colonies of mycelia and accumulates large quantities of red pigment. Here we aimed to describe this newly isolated red pigment producing fungus using biochemical and microscopy technique. A newly isolated red pigment producing fungus from local red fermented rice was identified using Microbial Identification System based on fatty acids profiles.Thegrowth, morphology, and structure of *M. purpureuswere* characterized by Scanning Electron Microscopy (SME). We found that *M. purpureusreproduces* sexually (by the formation of cleistothecium with ascospores) and asexual (by the formation of conidia). In *Monascusspecies*, the formation of either asexual or sexual spores appears to be an effective growth strategy. On the basis of biochemical and all morphological investigations it could be concluded that the new strain isolated from red fermented rice belongs to species *M. purpureus*, labeled as *M. purpureus* FTCC 5391.

Keyword: *Monascus purpureus*; Microbial identification system; Scanning electron microscope (SEM); Morphology; Asexual; Sexually; Ascospore; Conidia