Identifikasi isolat-isolat khamir dari saluran pencernaan apis cerana (Fabricius, 1793) di apiari berdasarkan data sequence daerah ITS rDNA

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Abstrak

Penelitian bertujuan mengetahui keragaman spesies khamir dari saluran pencernaan lebah madu Apis cerana di apiari Desa Ciburial, Bandung. Sebanyak 48 isolat khamir dari saluran pencernaan Pollen-collecting bee (PCB) (27 isolat) dan Nectarcollecting bee (NCB) (21 isolat) diidentifikasi berdasarkan data sequence daerah internal transcribed spacer (ITS) rDNA dan dikarakterisasi secara morfologi untuk melengkapi hasil identifikasi. Hasil identifikasi molekuler menunjukkan bahwa 48 isolat khamir tersebut terdiri atas delapan genus dan 16 spesies. Sebanyak 12 spesies khamir ditemukan pada PCB dan sembilan spesies khamir ditemukan pada NCB. Candida cf. apicola, C. etchellsii, Debaryomyces hansenii, Rhodotorula mucilaginosa dan Zygosaccharomyces rouxii ditemukan pada PCB maupun NCB. Spesies-spesies khamir yang diperoleh secara taksonomi heterogen, yaitu termasuk ke dalam class Hemiascomycetes dari phylum Ascomycota (13 spesies) dan class Urediniomycetes dari phylum Basidiomycota (3 spesies).
.....The aim of this study was to study the diversity of yeast species isolated from the digestive tract of honey bee Apis cerana in apiary in Ciburial, Bandung. A total of 48 yeast isolates from the digestive tract of pollen-collecting bees (27 isolates) and Nectar-collecting bee (21 isolates) were identified based on sequence data of internal transcribed spacers regions of ribosomal DNA (ITS rDNA). In addition of their sequence data, yeasts were also characterized morphologically. The results showed that those yeasts comprised of eight genera and 16 species. Twelve yeast species were found from PCB and nine yeast species were found from NCB. Candida cf. apicola, C. cf. azyma, C. etchellsii, C. naeodendra, C. orthopsilosis, Cryptococcus heveanensis, Debaryomyces hansenii, Rhodotorula mucilaginosa and Zygosaccharomyces rouxii were found both in PCB and NCB. Our molecular analysis showed that A. cerana harbors taxonomically diverse yeasts. They consisted of species belong to the class Hemiascomycetes of the phylum Ascomycota (13 species) and class Urediniomycetes of the phylum Basidiomycota (3 species).