Kemampuan antagonisme khamir filum basidiomycota dari tanaman saeh (Broussonetia papyrifera Vent.) asal trowulan terhadap Aspergillus spp. UICC = Antagonism activity of basidiomycota yeasts from saeh plant (Broussonetia papyrifera Vent.) from trowulan against Aspergillus spp. UICC

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Abstrak

Telah dilakukan penelitian untuk mengetahui kemampuan antagonisme enam khamir epifit filum Basidiomycota koleksi UICC yang diisolasi dari daun tanaman Saeh (Broussonetia papyrifera Vent.) asal Trowulan terhadap kapang Aspergillus spp. UICC. Keenam khamir tersebut, yaitu Cryptococcus flavescens UICC Y- 515, Cryptococcus flavescens UICC Y-525, Cryptococcus flavus UICC Y-534, Rhodotorula glutinis UICC Y-520, Rhodotorula mucilaginosa UICC Y-522, dan Rhodotorula mucilaginosa UICC Y-531. Pengujian dilakukan menggunakan metode co-culture pada medium PDB pH 5, selama empat hari inkubasi pada suhu 28°C. Keenam spesies khamir memiliki kemampuan antagonisme yang ditunjukkan melalui peningkatan jumlah sel khamir sebesar 26,91--98,76%, peningkatan ukuran sel vegetatif khamir (panjang sel rata-rata meningkat sebesar 1,11--19,59% dan lebar sel rata-rata sebesar 0,82--19,42%), penghambatan waktu sporulasi hingga inkubasi hari ke-3, reduksi lebar hifa kapang sebesar 7,84-- 20,26%, dan mortalitas kapang sebesar 100% pada inkubasi hari ke-4.

.....A study has been conducted to determine the antagonism activity of six epiphytic yeast species from phylum Basidiomycota against Aspergillus spp. UICC. The yeasts were isolated from Saeh plants (Broussonetia papyrifera Vent.) from Trowulan. The yeasts were Cryptococcus flavescens UICC Y-515, Cryptococcus flavescens UICC Y-525, Cryptococcus flavus UICC Y-534, Rhodotorula glutinis UICC Y-520, Rhodotorula mucilaginosa UICC Y-522, and Rhodotorula mucilaginosa UICC Y-531. Antagonism test was carried out by co-culture in PDB pH 5 for four days at 28°C. Results showed that all yeast species were antagonists and indicated by an increase in the number of yeast cells by 26.91--98.76%, an increase in the size of vegetative yeast cells (average cell length by 1.11--19.59% and an increase of the average cell width by 0.82--19.42%), inhibition of sporulation by day 3 incubation, reduced width of the hyphal mold by 7.84--120.26%, and mortality of molds by 100% at day 4 incubation.