

## Molecular identification of *Aspergillus* and *Eurotium* species isolated from rice and their toxin-producing ability.

### Abstract

Thirty milled rice samples were collected from retailers in 4 provinces of Malaysia. These samples were evaluated for *Aspergillus* spp, infection by direct plating on malt extract salt agar (MESA). All *Aspergillus* holomorphs were isolated and identified using nucleotide sequences of ITS 1 and ITS 2 of rDNA. Five anamorphs (*Aspergillus flavus*, *A. oryzae*, *A. tamarii*, *A. fumigatus* and *A. niger*) and 5 teleomorphs (*Eurotium rubrum*, *E. amstelodami*, *E. chevalieri*, *E. cristatum* and *E. tonophilum*) were identified. The PCR-sequencing based technique for sequences of ITS 1 and ITS 2 is a fast technique for identification of *Aspergillus* and *Eurotium* species, although it does not work flawlessly for differentiation of *Eurotium* species. All *Aspergillus* and *Eurotium* isolates were screened for their ability to produce aflatoxin and ochratoxin A (OTA) by HPLC and TLC techniques. Only *A. flavus* isolate UPM 89 was able to produce aflatoxins B1 and B2.

**Keyword:** Rice; *Aspergillus*; *Eurotium*; DNA sequencing; Aflatoxin.