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Aspergillus section *Flavi*, morphologic, clinical aspects, and extrolite production

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Despite intensive investigation, the taxonomy of *Aspergillus* is still highly complex. Recent data indicate that several of the species of this genus cannot be distinguished based on morphological or molecular methods, alone. *Aspergillus* section *Flavi* includes more than 25 species and this number is likely to increase significantly in the near future because of increasing application of the phylogenetic species concept based on DNA sequence data rather than on visible morphological characters. *A. oryzae* and *A. sojae* species have been used for centuries to make traditional foods and are generally regarded as safe. The data support the concept that they are derived (domesticated) from the naturally occurring *A. flavus* and *A. parasiticus* through adaptation in food industry fermentation. These two latter species produce the potent carcinogen aflatoxin and show many phenotypic similarities with the non-aflatoxigenic species. The source of *A. parasiticus* is soil and it has not been isolated from infections. *A. flavus* is the major agent responsible for fungal sinusitis, keratitis and onychomycosis in tropical and subtropical areas and surpasses *A. fumigatus* (belongs to section *Fumigati*) a common etiologic agent of aspergillosis. The genomic size of *A. flavus* is bigger than the *A. fumigatus* and that is believed the latter has lost some parts of its genome during the lifetimes. Identification of the organisms are more complex and a combination techniques including morphological characterization, physiological behaviors and molecular methods or an ITS based sequencing strategy are necessary to identify them.

Biography

Parvin Dehghan has completed her MS and the PhD in Medical mycology from Tehran University of Medical Sciences, in Iran. She is the Director of Mycology & Parasitology Department in Isfahan University of Medical Sciences. She has published more than 18 papers in reputed journals in English and Persian.

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