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Identifying pathogenic yeasts from fruit surfaces

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Infections caused by treatment-resistant non-albicans *Candida* species, such as *C. tropicalis*, have increased, which is an emerging challenge in managing fungal infections. Previous studies have isolated *C. tropicalis* of the same diploid sequence type (DST) from human and soils. However, the routes of spreading remain elusive. In the present study, we isolated and characterized pathogenic yeasts on the surface of fruits from supermarkets. 291 isolates of 83 species from 24 different types of fruits were recovered. Of the 83 species, 7 common pathogenic *Candida* species were detected. They included 16 *C. guilliermondii*, 15 *C. famata*, 3 each of *C. parapsilosis* and *C. tropicalis*, 2 each of *C. krusei*, *C. lusitaniae*, and *C. orthopsilosis*. The drug susceptibilities of 162 of the 291 isolates were determined. Totally, 158 (97.5%), 104 (64.2%), and 102 (63%) isolates were susceptible to amphotericin B (MICs ≤ 4 mg/L), fluconazole (MICs ≤ 8 mg/L), and triadimenol (MICs ≤ 8 mg/L), respectively. One *C. tropicalis* isolate (F91) from wax apple had MICs at 64 mg/L for both fluconazole and triadimenol. It belongs to DST149, a genotype found in isolates from human as well as soil. Thus, extra caution shall be taken when providing fruits or juice to severely immunocompromised patients since drug resistant pathogenic yeasts may be on the surface of fruits.

Biography

Yun-Liang Yang has completed his PhD from Indiana University, Bloomington, Indiana, USA. He has his postdoctoral studies from Indiana University, Bloomington as well as Brigham and Women's Hospital, Harvard Medical School. Since 1999, he is a faculty member of the College of Biological Science and Technology, National Chiao Tung University, Hsinchu, Taiwan. He has published more than 50 papers in reputed journals in the fields of microbiology and infectious diseases.

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