

JOINT EVENT

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Multiplex detection of *Aspergillus fumigatus* mycoviruses

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Mycoviruses are viruses that naturally infect and replicate in fungi. They are widespread in all major fungal groups including plant and animal pathogenic fungi. Different dsRNA mycoviruses have been reported in *Aspergillus fumigatus*. Multiplex PCR amplification is a version of PCR, which enables amplification of different targets simultaneously. This technique has been widely used for detection and differentiation of viruses especially plant viruses such as those which infect tobacco, potato and garlic. For rapid detection, multiplex RT-PCR was developed to screen new isolates in terms of presence of *A. fumigatus* mycoviruses. AfuCV, AfuPV-1 and AfuTmV-1 dsRNAs were amplified in separate reactions using a mixture of multiplex primer pairs. It was demonstrated that in the presence of a single infection, primer pair mixtures only amplify the corresponding single virus infection. Mixed infections using dual or triple combinations of dsRNA viruses were also amplified simultaneously using multiplex RT-PCR. Up until now methods for the rapid detection, *Aspergillus* mycoviruses have been restricted to small scale dsRNA extraction approaches which are laborious and for large numbers of samples not as sensitive as RT-PCR. The multiplex RT-PCR assay developed here will be useful for the studies on determining the incidence of *A. fumigatus* mycoviruses. Moreover, it could be useful to detect mycovirus infection rapidly for further studies on the impact of mycoviruses on fungal pathogenicity. This is the first report on multiplex detection of *A. fumigatus* mycoviruses.

Biography

Selin Ozkan Kotiloglu was awarded a Turkish Government Scholarship and earned her PhD in Molecular Biology/Molecular Mycology from Imperial College London. She is currently working as an Assistant Professor at Ahi Evran University, Department of Molecular Biology and Genetics. Her main research areas are gene expressions and polymorphism in various diseases caused both by biological and chemical agents; RNA silencing; profiling of small RNAs and microRNAs using bioinformatics; silencing pathways in various organisms.

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