

## Mating Type Assays of *Monilinia* Pathogens in Turkey

Ece Silan (Kübra Arslan, Gözde Yildiz, Muhammed Rasit Durak, Hilal Ozkilinc\*  
Canakkale Onsekiz Mart University, Faculty of Arts and Sciences, Dept. of Molecular  
Biology and Genetics, Canakkale/ Turkey)

\*Corresponding author: [hilalozkilinc@comu.edu.tr](mailto:hilalozkilinc@comu.edu.tr)

*Monilinia* is a plant pathogenic fungal genus including different species causing brown rot disease peach. It has been recently observed that the disease is one of the most important limiting factors for peach fruits in one of the largest peach production area in Turkey. It has been known that these pathogens has potential for sexual reproduction but there is no any direct or indirect evidences for reproduction mode of the pathogen in Turkey. PCR-based mating type assays were conducted by using primers which were designed in this study. Even though clonal structure expectation due to asexuality of these pathogens and some previous data, based on genetic diversity studies, both idiomorphs were detected within the populations from different species. Distribution of mating types according to the geographic region, pathogen species, and over the country were analyzed. Heterothallic structure in these pathogens have been observed, given that only one mating type gene is confirmed to be carried in each isolate. Overall ratio of mating types was 1:1 for the both species of *Monilinia*, but the ratio differed among the provinces. Presenting both mating types within suggests a potential for sexual reproduction of *Monilinia* pathogens in Turkey. This study firstly represents mating type data of main brown rot pathogen populations of peach throughout Turkey. Mating type genes as well as diversity and distribution of mating types of these pathogens will be further discussed.