

## عنوان مقاله:

Molecular identification of formae specialis and racial identity in Iranian strains of *Fusarium oxysporum* f. sp. lycopersici: detection of avirulence genes

## محل انتشار:

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## خلاصه مقاله:

*Fusarium oxysporum* f. sp. lycopersici (Fol) is the causal agent of vascular wilt in tomato, an important plant disease in Iran. Four monogenic resistance genes in tomato are used for identification of races of Fol and their corresponding avirulence genes Avr<sub>1</sub>, Avr<sub>2</sub> and Avr<sub>3</sub> were identified in pathogen one of which, Avr<sub>2</sub>, is f.sp. specific. Hence they can serve as reliable markers for racial identity and f.sp discrimination. These markers have been used for strains from other countries except Iran. Furthermore, a point mutation in Avr<sub>3</sub> can lead to enhanced virulence of Fol on a susceptible tomato cultivar. To identify forma specialis and racial identity, Avr genes were studied in a collection of Iranian strains. Results revealed that PCR assay is very efficient in distinguishing between non-pathogenic and low virulence strains and in the vast majority of strains, avirulence genotype was consistent with Fol race<sub>1</sub>. Furthermore, to determine whether allelic variation of Avr<sub>3</sub> could separate strains of different degrees of virulence, Avr<sub>3</sub> was sequenced in Fol strains with high and low virulence. The results revealed that allelic variation of Avr<sub>3</sub> was not correlated with degree of virulence in Iranian strains.

## کلمات کلیدی:

Avirulence genotype, effector gene, tomato wilt, molecular detection

## لینک ثابت مقاله در پایگاه سیویلیکا:

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