



# Occurrence of tomato brown rugose fruit virus in tomato in Iran

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Tomato is a valuable crop around the world and a host for many viruses. Tomato brown rugose fruit virus (TBRFV) from the genus *Tobamovirus* in the family *Virgaviridae* was first reported from greenhouse-grown tomatoes in Jordan (Salem et al. 2016). TBRFV is rapidly spreading via seeds and mechanical transmission. In July 2021, unusual symptoms of chlorosis, severe mosaic, and blisters were observed in tomatoes cultivated in several greenhouses around Tehran, Iran. In addition, yellow spots and rugose were observed on mature tomato fruits. These symptoms were noticed on approximately 15 ha of greenhouse-grown tomatoes. Twelve young leaf samples were collected from symptomatic tomato plants in 12 different greenhouses, and used for total RNA extraction with the RNX Plus Kit (SinaClon, Tehran) and RT-PCR with random hexamers and specific primer pairs TBRFV-F-5722 and TBRFV-R-6179 to characterize a fragment of the TBRFV coat protein (CP) gene (Panno et al. 2020). Amplicons of the expected size (458 bp) obtained from the symptomatic samples were directly sequenced. The TBRFV sequences obtained in this study were deposited in GenBank as accession numbers OK483340 and OK483341. Sequence analyses showed 99.8% nucleotide identity among the CP gene sequences of Iranian TBRFV isolates. In addition, the Iranian isolates of TBRFV had a high nucleotide sequence identity (99.3 to 99.6%) with TBRFV isolates from tomato in Turkey, the Netherlands, and the USA. Phylogenetic analyses based on CP gene sequences generated by Neighbor joining in MEGAX confirmed that the Iranian TBRFV isolates grouped with isolates from Turkey, the Netherlands, and the USA. To the best of our knowledge, this was the first report

of TBRFV in tomato in Iran. However, during the final review stages of this Disease Note, we noticed the publication by Ghorbani et al. (2021). Consequently, our research confirms the occurrence of TBRFV in greenhouse-grown tomato in Iran.

## Declarations

**Conflict of interest** The Authors declare that there are no conflict of interest.

## References

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