

## IDENTIFICATION AND PARTIAL MOLECULAR CHARACTERIZATION OF GRAPEVINE VIROIDS IN FARS PROVINCE \*

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### Abstract

Grapevines in several locations in Fars province were sampled and tested for the presence of viroids. Total nucleic acid was extracted from leaves and subjected to RT-PCR using specific primers for reported grapevine viroids. PCR products were cloned and sequenced. Results showed that sampled vines were infected with *Grapevine yellow speckle viroid 1 (GYSVd1)*, *Grapevine yellow speckle viroid 2 (GYSVd2)*, Hop stunt viroid (HSVd) and Australian grapevine viroid (AGVd). GYSVd1 was the most abundant viroid while AGVd was the least frequent. No sample was found infected with citrus exocortis viroid. Iranian isolates of GYSVd1 were similar to the symptom inducing isolates of GYSVd1 and were associated with yellow speckle symptoms in the infected vines. However, severity of symptoms increased in the mixed infection with *Grapevine fanleaf virus*. Iranian isolates of GYSVd2 and HSVd were different from other isolates of these viroids in pathogenicity and left terminal domains. AGVd is reported for the first time from Iran. It is different from the known isolates of the viroid in biological and molecular properties.

**Keywords:** Grapevine viroids, *Grapevine yellow speckle viroid*, *Hop stunt viroid*, *Australian grapevine viroid*, Grapevine.

See persian text for figures and tables (Pages ۶۹-۶۲).

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