

DISEASE NOTE

***XYLELLA FASTIDIOSA* subsp. *PAUCA* ST69
IN OLIVE IN ARGENTINA**

P.A. Tolocka¹, M.F. Mattio¹, M.A. Paccioretti¹, M.L. Otero¹, M.E. Roca², F.A. Guzmán¹ and R.M. Haelterman¹

¹Instituto de Patología Vegetal, IPAVE-CIAP, INTA, Camino 60 cuerdas km 5,5, X5020ICA Córdoba, Argentina

²SENASA, Beccar Varela 1006, 5300 La Rioja, Argentina

In Argentina, the bacterium *Xylella fastidiosa* was detected in late 2013 in traditional olive orchards of more than 50 years of age, in the provinces of La Rioja, Córdoba and Catamarca; plants showed marked decline, desiccated branches and apical necrosis in leaves. Olive cultivar Arauco was the most severely affected, whereas the bacterium was detected only in isolated individuals of the cultivar Frantoio. There are few reports of the bacterium in olive, having been reported the subspecies *pauca* strain CoDiRO (ST53) in Italy, and strain ST16 in Brazil. Multilocus sequence typing (MLST) was used to determine the allelic profile corresponding to this host in Argentina, according to the protocol of Yuan *et al.* (2010). Amplification of the involved genes was performed from total DNA of infected plants, then PCR products were purified and sequenced. The comparative analysis of the sequences of the seven genes coincided with the sequences of the alleles *leuA7*, *petC6*, *malF7*, *cysG9*, *holC23*, *nuoL17*, and *glT8*; the type sequence (ST) 69 was assigned to the obtained allelic profile. Coletta-Filho *et al.* (2017) obtained the same ST in an analysis of citrus from northeastern Argentina (Misiones and Corrientes). This ST has been found only in Argentina. In Brazil, the strain ST16 is present in olive and coffee, but not in citrus, whereas the hosts of ST69 from Argentina are olive and citrus. The strain CoDiRO from Italy was detected in several hosts (Saponari *et al.*, 2014) but not in citrus.

- Coletta-Filho D.H, Francisco C.S., Lopes J.R.S., Muller C., Almeida R.P.P., 2017. Homologous Recombination and *Xylella fastidiosa* Host-Pathogen Associations in South America. Ecology and Epidemiology. *Phytopathology* **107**: 305-312.
- Saponari M., Boscia D., Loconsole G., Palmisano F., Savino V., Potere O., Martelli G.P., 2014. New hosts of *Xylella fastidiosa* strain CoDiRO in Apulia. *Journal of Plant Pathology* **96**: 611.
- Yuan X., Morano L., Bromley R., Spring-Pearson S., Stouthamer R., Nunney L., 2010. Multilocus sequence typing of *Xylella fastidiosa* causing Pierce's disease and oleander leaf scorch in the United States. Ecology and Epidemiology. *Phytopathology* **100**: 601-610.

Corresponding author: R.M. Haelterman
E-mail: haelterman.raquel@inta.gob.ar

Received May 5, 2017
Accepted July 8, 2017

DISEASE NOTE

**FIRST REPORT OF GRAPEVINE
VIRUS D (GVD) IN AUTOCHTHONOUS
GRAPEVINE VARIETIES IN TURKEY**

N. Buzkan, M.K. Öztürk and S.C. Balsak

Department of Plant Protection, Faculty of Agriculture, University of Kabramanmaraş Sütçü İmam, 46100 Kabramanmaraş, Turkey

Rugose wood is a complex of graft-transmissible disorders of the grapevine (*Vitis* spp.). At least six different viruses belonging to the genera *Vitivirus* and *Foveavirus* in the family *Betaflexiviridae* are associated with the disease which is distributed worldwide (Martelli, 2015). Among these viruses, grapevine virus A, grapevine virus B and grapevine rupestris stem pitting-associated virus were reported in Turkish vineyards (Martelli, 2014; Buzkan *et al.*, 2015), whereas no information is available on the occurrence of grapevine virus D (GVD). Therefore, the presence of GVD was investigated in autochthonous grapevine cultivars from two viticultural areas in Turkey, i.e. Eastern Mediterranean and Southeast Anatolia. Total RNA was extracted from 142 samples and tested for the presence of GVD by RT-PCR using primers CP7V/CP471C (Abou-Ghanem *et al.*, 1997). A 474 bp product corresponding to a fragment of the coat protein gene was amplified from 13 samples, accounting for a prevalence of 9%. The nucleotide sequence obtained from PCR amplicons was subjected to BLASTN analysis to confirm the identity of the target virus. The Turkish isolates showed 90% nucleotide sequence identity with a GVD isolate from Italy passed onto a herbaceous host (*Nicotiana occidentalis*) (GenBank accession No. Y07764) and 98% with a GVD isolate from Brazil (JQ031716). GVD was only detected in grapevines from Southeast Anatolia, where it is a very common practice to establish vineyards with propagation material exchanged among growers without any pathogen testing. To our knowledge, this is the first report on the occurrence of GVD in Turkish grapevines.

This research was granted by Research fund of Kabramanmaraş Sütçü İmam University (Project No: 2016/6-8YLS).

- Abou-Ghanem N., Saldarelli P., Minafra A., Buzkan N., Castellano M.A., Martelli G.P., 1997. Properties of grapevine virus D, a novel putative Trichovirus. *Journal of Plant Pathology* **78**: 15-25.
- Buzkan N., La Notte P., Karadag S., Aktan A., Saldarelli P., Minafra A., 2015. Detection of *Grapevine rupestris stem pitting-associated virus* in autochthonous grapevine cultivars in Turkey. *Journal of Plant Pathology* **97**: 387-389.
- Martelli G.P., 2014. Directory of virus and virus-like diseases of the grapevine and their agents. *Journal of Plant Pathology* **96**: 1-136.
- Martelli, G.P., 2015. Grapevine virology: a historical account with an eye to the studies of the last 60 years or so. *Proceedings of the 18th Congress of the ICVG, September 7-11, Ankara, Turkey* 2015: 16-21.

Corresponding author: N. Buzkan
E-mail: nbuzkan@gmail.com

Received May 16, 2017
Accepted July 27, 2017