

DISEASE NOTE

FIRST REPORT OF *GRAPEVINE LEAFROLL ASSOCIATED VIRUS-4* STRAIN 5 IN ITALY**D. Rizzo¹, A. Luvisi², L. Stefani¹, M. Paoli¹, G. Marchi³, A. Panattoni² and A. Materazzi²**¹*Servizio Fitosanitario Regionale, servizi agroambientali di vigilanza e controllo, Regione Toscana, Via dei Fiori 8, 51010 Pescia (PT), Italy*²*Department of Agriculture, Food and Environment, University of Pisa, Via del Borghetto, 80, 56124 Pisa, Italy*³*Department of Crop, Soil and Environmental Science, University of Florence, Piazzale delle Cascine 28, 50114 Firenze, Italy*

Leafroll is one of the most harmful viral diseases affecting grapevine worldwide. Historically, a dozen of viruses, named grapevine leafroll-associated viruses (GLRaVs), belonging to genera *Closterovirus* and *Ampelovirus* (Family *Closteroviridae*), have been found associated with the disease. Recent studies showed that GLRaV-4, -5, -6, -Pr, De and -Car are in fact strains of the same virus species (Abou Ghanem-Sabanadzovic *et al.*, 2012) prompting taxonomic and nomenclatural revision of these viruses. Among these viruses, GLRaV-4 strain 5 has been reported from many viticultural areas in the world. In 2012-2013, surveys for virus detection disclosed the identification of GLRaV-4 strain 5 in 768 samples collected in Tuscany. The virus presence was ascertained by real-time (RT)-PCR as reported by Osman *et al.* (2007).

GLRaV-4 strain 5 was found in 2 samples (0.63% rate, 2012) and in 4 samples (1.16%, 2013) in cvs Sangiovese and Canaiolo. Further molecular analysis revealed that one infected vine hosted a single GLRaV-5 infection, while other infected vines were infected with multiple viruses, including GLRaV-3, GVA, GFkV and GRSPaV.

The GLRaV-4 strain 5 sequences obtained from the positive samples shared 96% nucleotide identities with the corresponding fragment of a reference GLRaV-5 isolate (GenBank accession No. JX559639.1). The nucleotide sequence was deposited in GenBank as accession No. KM252726.

To the best of our knowledge this is the first report of the occurrence of GLRaV-4 strain 5 in Italian vineyards.

Abou Ghanem-Sabanadzovic N., Sabanadzovic S., Gugerli P., Rowhani A., 2012. Genome organization, serology and phylogeny of Grapevine leafroll-associated viruses 4 and 6: taxonomic implications. *Virus Research* **163**: 120-128.

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FIRST REPORT OF A DISEASE CAUSED BY *FUSARIUM GLOBOSUM* ON GIANT CANE IN IRAN**A.M. Heydari-Nezhad, V. Babaeizad, H.A. Mirhosseini and M. Khaksari***Department of Plant Protection, Sari Agricultural Sciences and Natural Resources University, P.O.BOX 578, Mazandaran, Sari, Iran*

Giant cane (*Arundo donax*) is a monocotyledonous plant belonging to the family Poaceae, whose stems are used in handicrafts and paper industry (Dudley, 2000). Blight of leaf sheaths and stem lesions with a light brown coloured center, surrounded by a darker brown line were observed on *A. donax* plants in different regions of the Mazandaran province (Iran). Fragments from symptomatic tissues were washed, surface-disinfected with 70% ethanol and a 1% sodium hypochlorite (NaClO) solution and plated on potato dextrose agar (PDA). Fungal cultures displayed a white floccose mycelium that turned often violet with age. A violet pigment that darkened with age was released in the medium. Microconidia were abundant, oval or globose shaped whereas a limited number of 3-5 septate macroconidia was produced. Micro- and macroconidia were *ca.* 5-10×1 and 15-30×2-3 µm in diameter, respectively. Based on morphological features, the disease agent was identified as *Fusarium globosum* (Leslie and Summerell, 2006), a result that was confirmed by amplifying by PCR the translation elongation factor (TEF) region (Jurado *et al.*, 2010) and sequencing the obtained product (a 600 bp amplicon). This sequence was then compared with related sequences from GenBank. BLAST analysis of a 600 bp fragment showed 100% similarity with *Fusarium globosum* (accession No. KJ746615). Pathogenicity tests were conducted by placing mycelial plugs taken from the margins of 3-day-old colonies on the stem of healthy plants. The same symptoms appeared one week after inoculation. *Fusarium globosum* was previously reported on corn, wheat and barley in Iran (Darvishnia *et al.*, 2005). This is the first report of Giant cane *Fusarium* sheath blight in Iran.

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