



First report of grapevine red blotch virus infecting grapevine in Argentina

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Argentina is the fifth wine producer worldwide and 10th global grapevine producer, with over 2,100,000 tons of grapes harvested in 2017. So far, 12 viruses have been identified in grapevine in Argentina (Debat et al. 2019). *Grapevine red blotch virus* (GRBV) is the type member of the genus *Grablovirus*, in the family *Geminiviridae* (Varsani et al. 2017) and the causal agent of the red blotch disease (RBV, Yepes et al. 2018). RBV was first reported in California in the USA and is responsible for significant reduction of berry quality and ripening, and thus, an emerging threat to grapevine cultivation. GRBV has been described in the USA, Canada, Mexico, Korea, India and Switzerland, thus far. In order to assess the presence of GRBV in Argentina, a total of 188 plants were surveyed, including wine and table cultivars, and rootstock genotypes from five regions of Mendoza and San Juan provinces of Argentina in 2018. Total RNAs from cambial scrapings of grapevine samples were purified using the Spectrum Plant RNA Miniprep Kit (Sigma-Aldrich, USA). The extracted RNA was random primed, retrotranscribed and subjected to PCR using primers

GRBaV-F: GCCTTGTCAGTTTGCATTCC and GRBaV-F: CTTCCGCTGTTATCACTACC, targeting a 270 nt region of the V1 protein encoding open reading frame (ORF) of GRBV. One sample of *Vitis vinifera* cv. Flame Seedless rendered an amplification product of expected size which was cloned, bi-directionally Sanger sequenced. Nucleotide sequence analyses revealed that GRBV-MZ (MK575527) had a 98.3% identity with GRBV isolate CYCS45 (MF795153) from *Vitis vinifera* cv. Cabernet Sauvignon from Washington, USA. To confirm our findings we tested the aforementioned sample with additionally designed primers GRBaV1097F: ACGAGGAATCGTTTGAATCG and GRBaV1331R: TAAACGTATGTCCACTTGCAG for the amplification by PCR, cloning and sequencing of a 235 nt fragment of the 3' region of V1 ORF of GRBV. The sequence (MK575528) showed 99.5% identity with GRBV CYCS45, confirming that the detected virus corresponded to GRBV. The Argentinean isolate of GRBV was found in a plant with no obvious symptoms of viral diseases. To our knowledge, this is the first report of GRBV in Argentina.

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