First report of grapevine virus L in grapevine in Turkey

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Grapevine virus L (GVL) is a new member of the genus *Vitivirus* in the family *Betaflexiviridae*, which was recently identified with the application of high throughput sequencing (Debat et al. 2019). Even though other well-known vitiviruses such as grapevine virus A (GVA), grapevine virus B (GVB) and grapevine virus D (GVD) were previously reported in Turkish vineyards (Cığsar et al. 2002, Buzkan et al. 2017), no information exists on the occurrence of the newly identified GVL. Therefore, the presence of this virus was investigated in a total of 38 samples, which were collected from vines that showed yellowing, leaf deformation, and necrosis symptoms, from several grapevine areas of Tekirdag province in Turkey, during fall of 2019. Total RNA was extracted from leaves and cambial scrapings of all symptomatic plants and was tested by RT-PCR using primers GVL_F_6750 (5'-AGCDGGTGAKCCTCTTAAT-3') / GVL_R_6938 (5'-GTCATCTTCCTAGCYAGRC-3') that amplify a 189 bp fragment of the coat protein gene (ORF4). GVL was identified in one sample of Ugni blanc cultivar (1/38). In order to further confirm the virus presence another virus-specific RT-PCR was applied using primers GVL_F_7225 (5'- TCT CAG

GTG GGG GAG AC -3') / GVL_R_7562 (5'- TAC TCA GAC TTC CCC GAT CTA -3') that amplify a 298 bp part of the RNA binding protein (ORF5). Both amplicons were sequenced and partial sequences from ORF4 and ORF5 were deposited in GenBank under accession numbers MT358868 and MT456280, respectively. The obtained CP gene and RNA binding protein sequences showed 97.4% and 95.3% nucleotide sequence identity with a Croatian GVL isolate "VL" (MH681991.1). To our knowledge, this is the first report of GVL in the Tekirdag province of Turkey. This finding is further increasing the current information on the geographic distribution of this vitivirus in the Mediterranean region and the world. Further large-scale surveys will unveil the incidence and impact of GVL in the vineyards of Turkey.

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