

**Special Issue:**

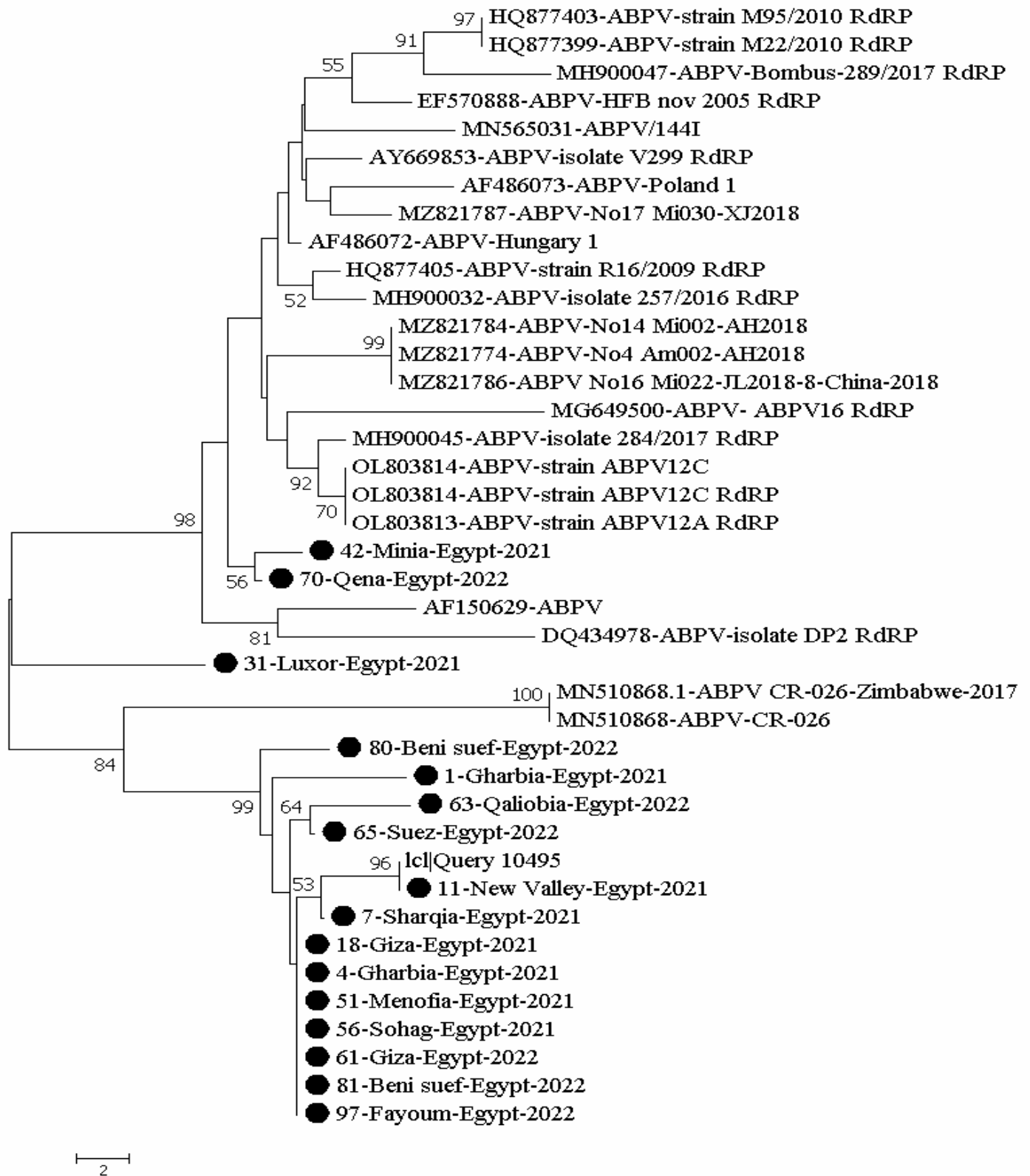
Veterinary Medicine between Sustainable Development and Public Health to Confront Global Changes

Molecular Identification of Honey Bee Viruses in some Egyptian Governments during 2021-2022

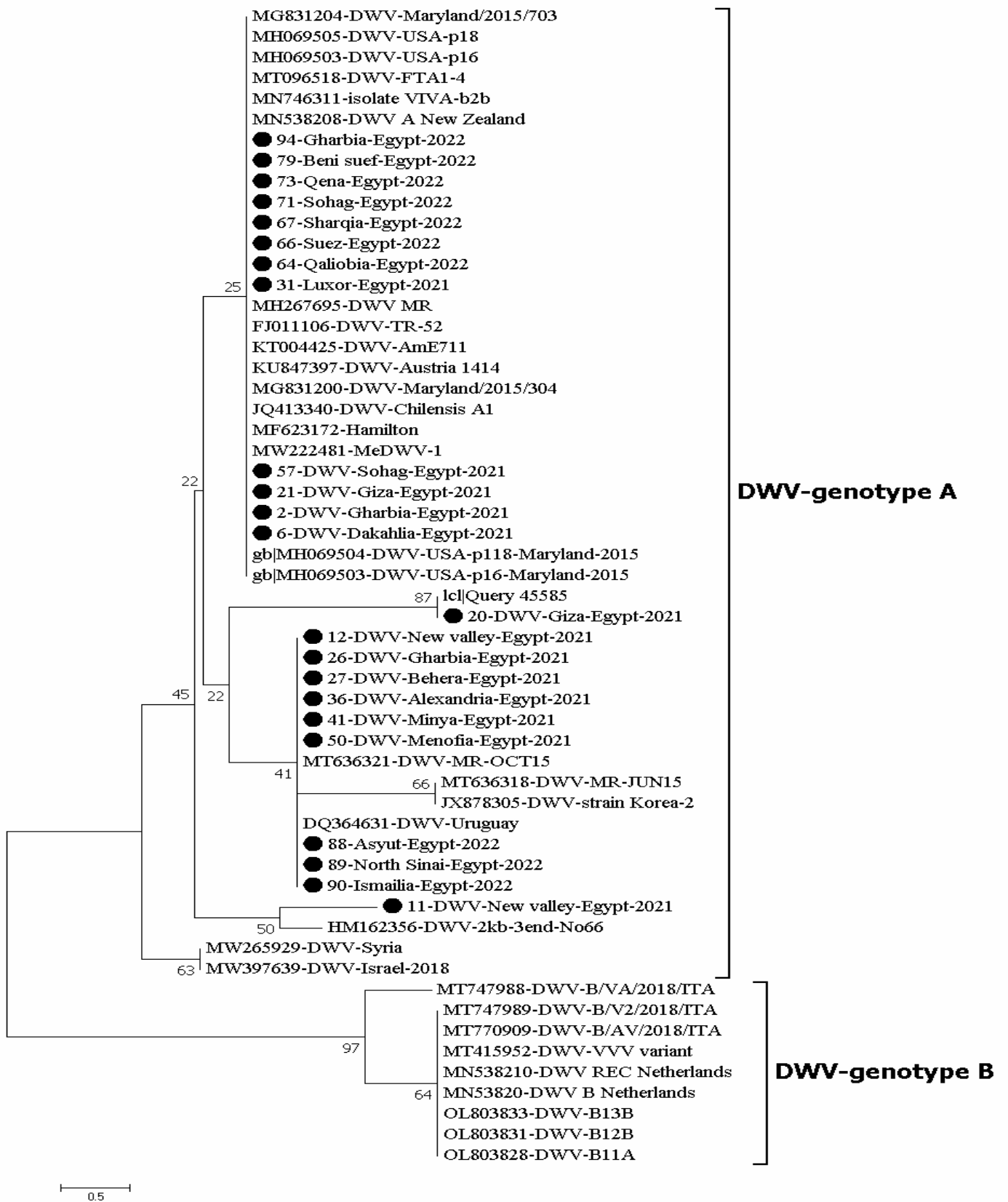
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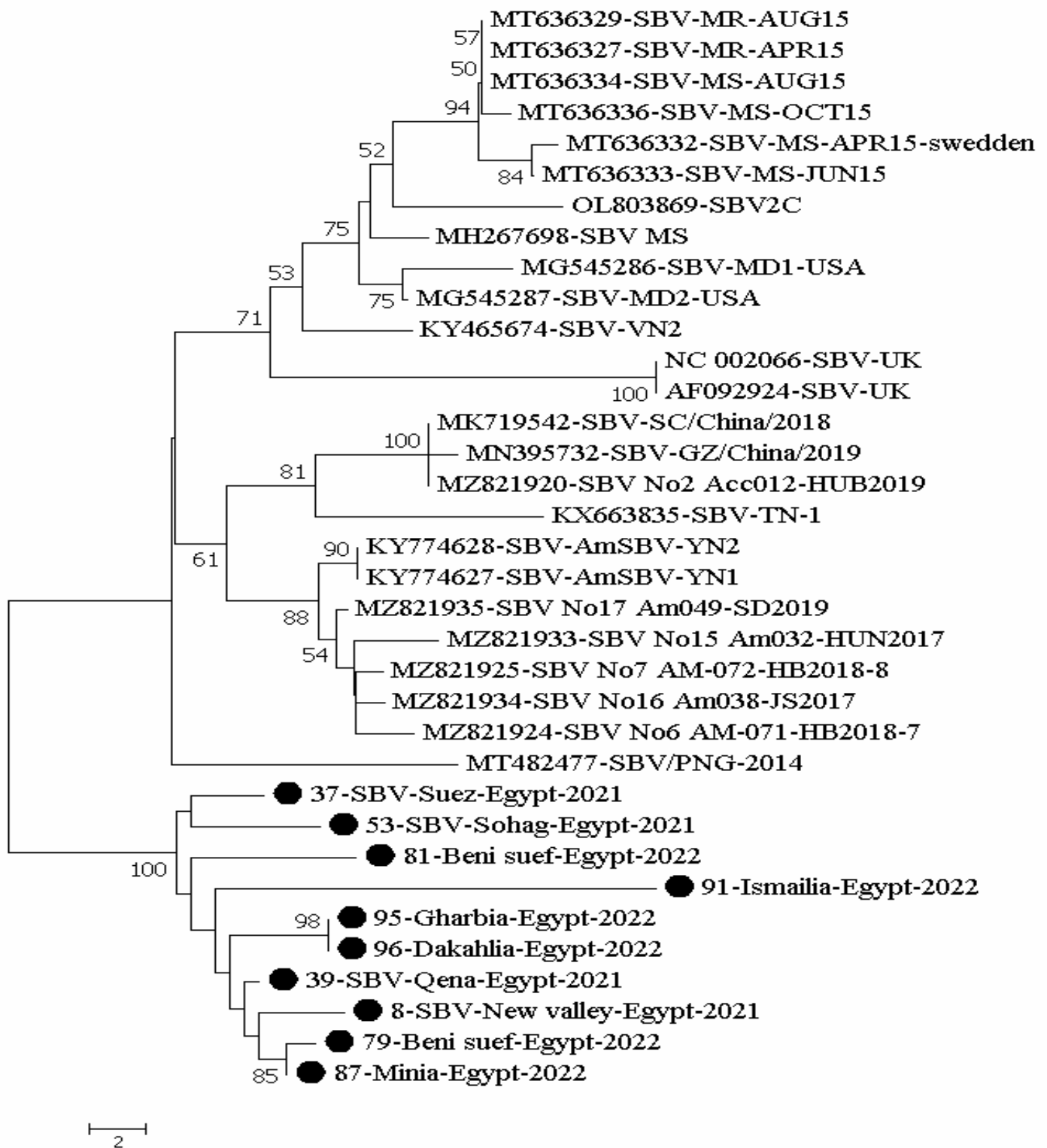
Received | May 18, 2024; **Accepted** | July 29, 2024; **Published** | August 28, 2024***Correspondence** | Dalia M.A. Elmasry, Nanotechnology Research Unit, Animal Health Research Institute, Agricultural Research Center (ARC), Giza, Egypt; Email: dr_daliaelmasry@yahoo.com**Citation** | Elmasry DMA, El-Husseini DM, Eissa AA, Elkanawati ZR, Shahein MA, Adel A (2024). Molecular identification of honey bee viruses in some Egyptian Governments during 2021-2022. Adv. Anim. Vet. Sci. 12(s1): 55-66.**DOI** | <https://dx.doi.org/10.17582/journal.aavs/2024/12.s1.55.66>**ISSN (Online)** | 2307-8316; **ISSN (Print)** | 2309-3331**Copyright:** 2024 by the authors. Licensee ResearchersLinks Ltd, England, UK.This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



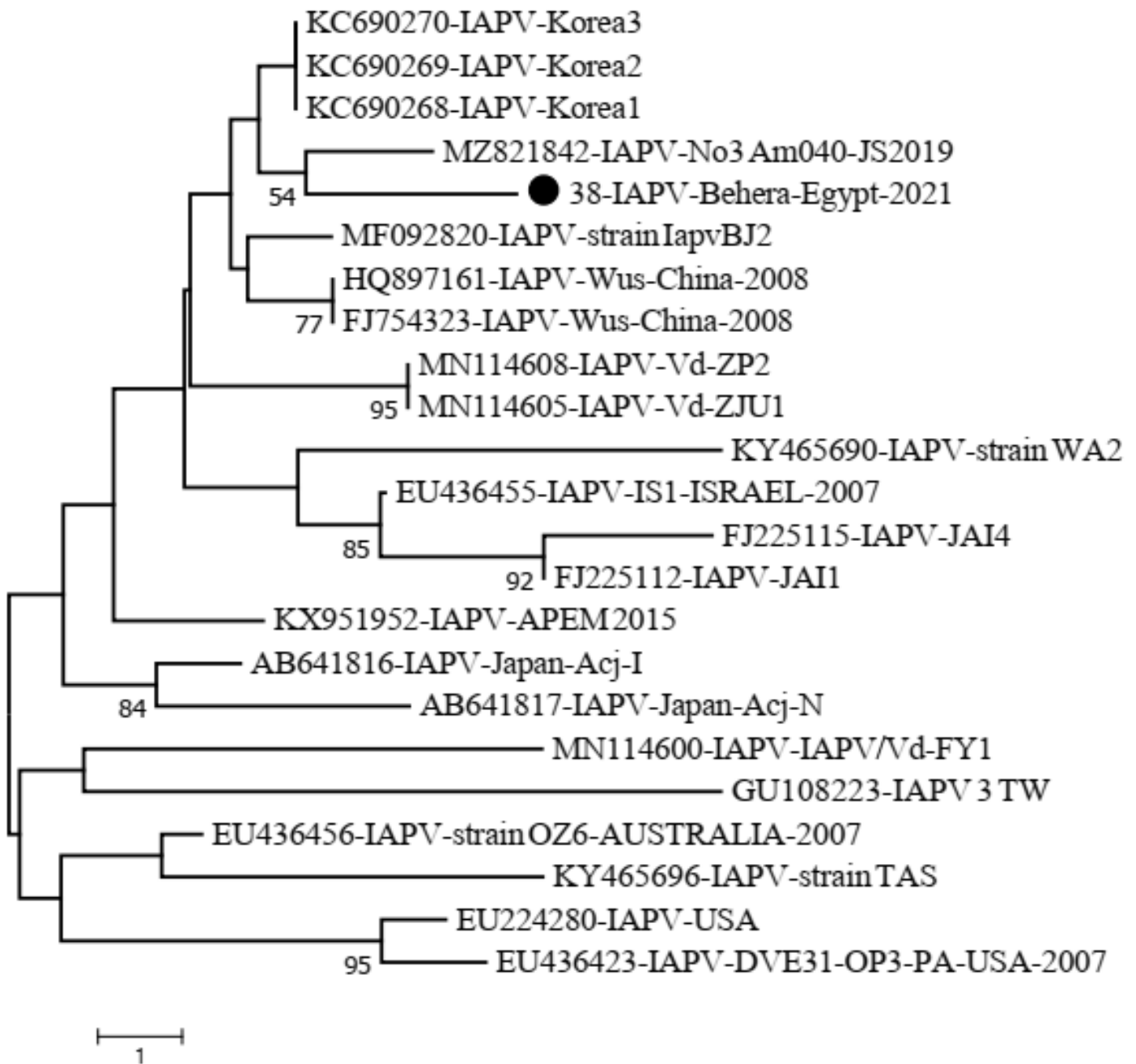
Supplementary Figure 1: Phylogenetic analysis of partial nucleotide sequence for the nonstructural polyprotein gene (Replicase gene) of Acute Bee Paralysis Virus (ABPV), we have got sequences of sixteen (16) viruses from the positive examined samples representing the geographical distribution in Egypt. We have observed that all the Egyptian viruses have been gathered in the same group closely related to each other and genetically related to CR-026-Zimbabwe virus -2017, except the Egyptian strain 42-ABPV-Minya-Egypt-2021 which is genetically related to viruses from china, Poland and Hungary. The taxa of all the Egyptian viruses have been labeled with black circle.



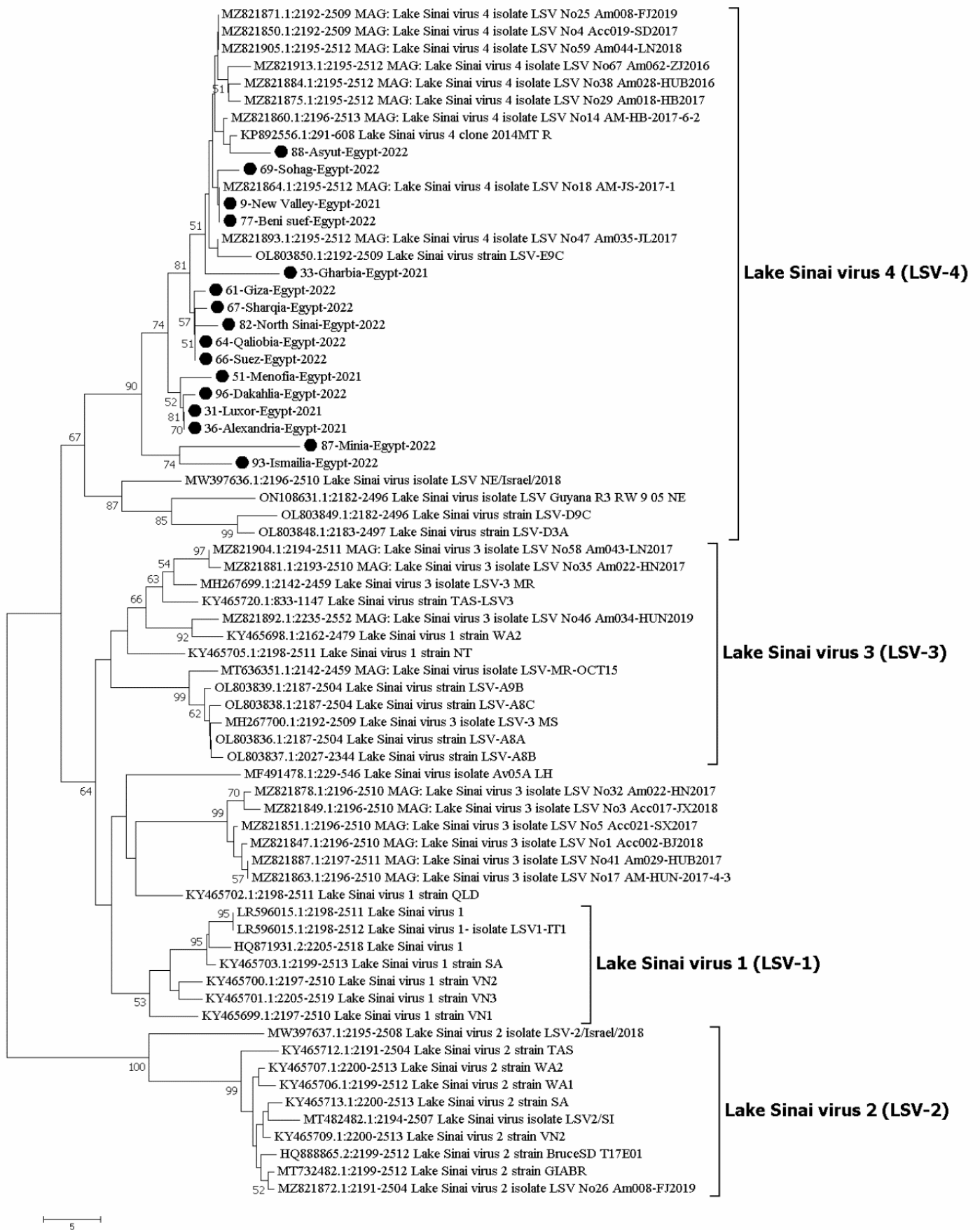
Supplementary Figure 2: Phylogenetic analysis of partial nucleotide sequence for the nonstructural polyprotein gene (Replicase gene) of deformed wing virus (DWV), we have got sequences of twenty three (23) viruses from the positive examined samples representing the geographical distribution in Egypt. We have observed that all the Egyptian viruses have distributed in different groups, clustering with the worldwide viruses and not related to each other. The taxa of all the Egyptian viruses have been labeled with black circles and bold font.



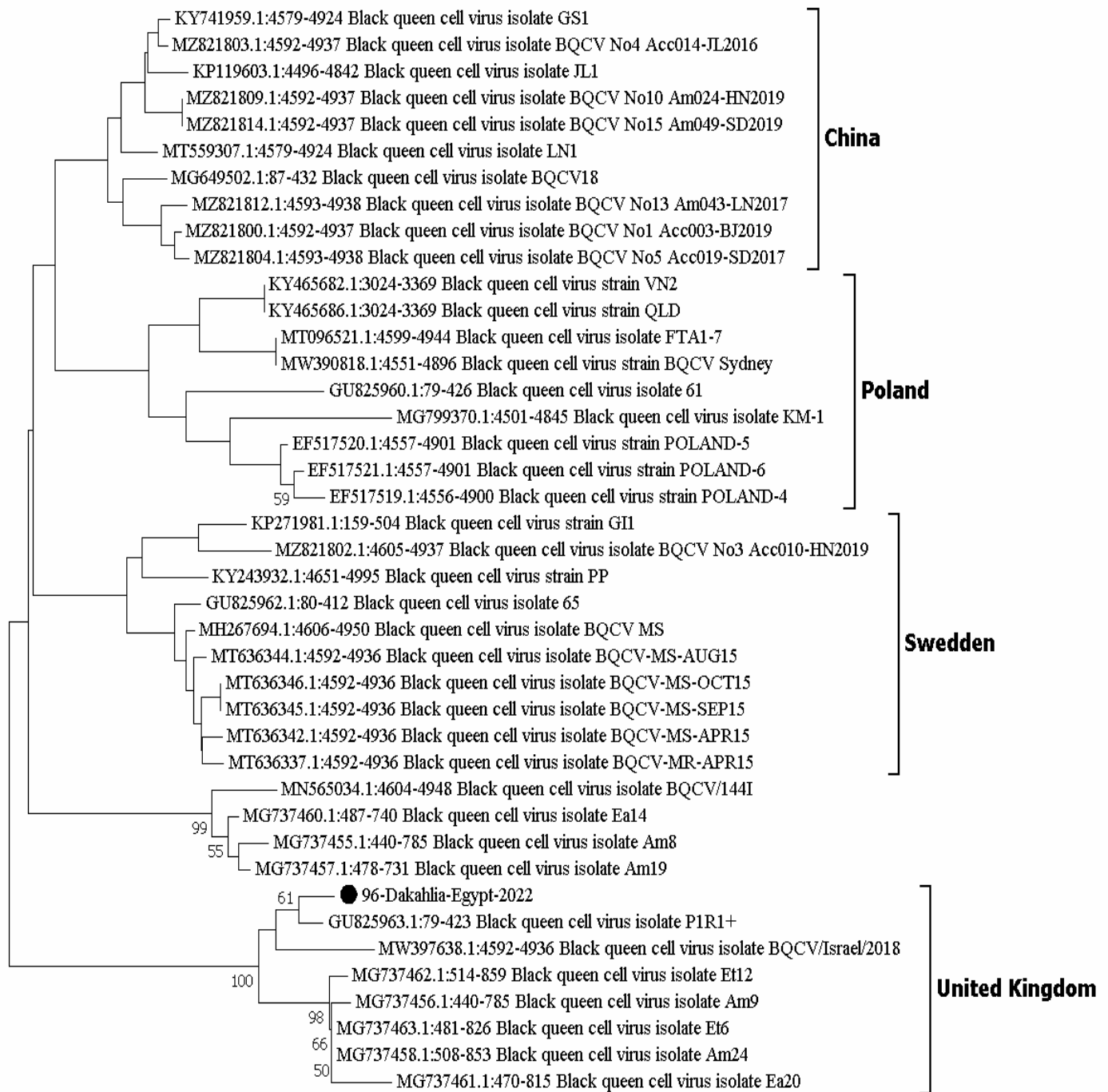
Supplementary Figure 3: Phylogenetic analysis of partial nucleotide sequence for the nonstructural polyprotein gene (Replicase gene) of Sacbrood virus (SBV), we have got sequences of ten (10) viruses from the positive examined samples representing the geographical distribution in Egypt. We have observed that all the Egyptian viruses have gathered in the same cluster and are genetically close related to each other. The taxa of all the Egyptian viruses have been labeled with black circles and bold font.



Supplementary Figure 4: Phylogenetic analysis of partial nucleotide sequence for the nonstructural polyprotein gene (Replicase gene) of Israeli acute paralysis virus (IAPV), we have got sequence of one virus only from the positive examined samples. We have observed that the Egyptian virus is genetically related to the viruses from Israel 2007, Korea, and China. The taxon of the Egyptian virus has been labeled with a black circle.



Supplementary Figure 5: Phylogenetic analysis of partial nucleotide sequence for the nonstructural polyprotein gene (Replicase gene) of Lake Sinai virus (LSV), we have got sequences of 16 viruses from the positive examined samples. We have observed that the Egyptian viruses are genetically related to the genotype LSV-4 including viruses from China 2021. The taxa of the Egyptian viruses have been labeled with a black circle



Supplementary Figure 6: Phylogenetic analysis of partial nucleotide sequence for the nonstructural polyprotein gene (Replicase gene) of Black queen cell virus (BQCV), we have got sequence of one virus only from the positive examined samples. We have observed that the Egyptian virus is genetically related to the viruses from Israel 2018, and United Kingdom strains. The taxon of the Egyptian virus has been labeled with a black circle.