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Comparison of Coat Protein Nucleotide and Amino Acid Sequences of an Iranian Isolate of *Pelargonium Leaf Curl Virus* Infecting *Pelargonium* with Available Coat Protein Sequences in Gene Bank

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Mahallat which is located in Markazi province of Iran has 900 hectares under grown of ornamental plant. More than 22 million florist crops are harvested in this city each year. Geranium spp. with South Africa origin is cultured in Mahallat widely. Vegetative propagation of pelargonium makes it compatible to viral infection. During March to November of 2008 a survey was performed on commercial geranium greenhouses of Mahallat and resulted in detection of Pelargonium leaf curl virus which is a member of genus Tomusvirus and belongs to the Tombusviridae family. PLCV infected plants showed pale chlorotic spots on leaves which later become stellate and necrotic and finally lead to leaf crinkling and plant degeneration. *Nicotiana clevelandii* plant, inoculated by PLCV and used for total RNA extraction using Rneasy Plant Mini Kit (Qiagen). RT-PCR carried out using total RNA extracted from infected plant by a primer pair of , CPPLCVf, CPPLCVr, corresponding to the flanking region of the virus Coat Protein (CP) resulted in amplification of a DNA fragment in expected size around 1.3kbp. The PCR product was extracted from agarose gel by QIAquick PCR Purification Kit Protocol and then its sequence determined by Cinagen Company. Amplified segment nucleotide sequence and amino acid sequence of Mahallat PLCV isolate compared with other available PLCV coat protein sequences in gene bank (There are only 3 PLCV in this database) by means of DNAMAN software. Coat protein nucleotide sequence of Mahallat PLCV isolate showed 97.8% identity with another isolate from Iran, accession number EF532328.1, and its amino acid sequence revealed 99% homology with an isolate from Germany, accession number AF290026 (Coat protein nucleotide sequence of Mahallat PLCV isolate differs at 27 positions with another Iranian isolate and its amino acid sequence varies in 4 position with Germany isolate). As a result the available PLCV isolates in gene bank are close to each other.

Keywords: Pelargonium leaf curl virus, Coat Protein