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High-throughput targeted microsatellite marker development in *Vuralia turcica* (Piyan)Dilek Tekdal¹, Stuart James Lucas² and Selim Cetiner³¹ Department of Biotechnology, Faculty of Science and Letters, Mersin University, Mersin, Turkey² Nanotechnology Research and Application Centre, Sabanci University, Istanbul, Turkey³ Biological Sciences and Bioengineering Program, Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey

Vuralia turcica (Piyan) is a member of the Fabaceae family and is a critically endangered endemic plant species in Turkey. The species' most striking characteristic is its multicarpellate ovaries. Worldwide, the majority of human nutrition is derived from plant products. Turkey is a significant exporter of legume products. Cultivating highly productive plants using breeding techniques offers an important opportunity to increase production and exports. Therefore, *V. turcica* is a valuable genetic resource for breeding programs aiming for the development of high-yield legume species. Besides, *V. turcica* is the only species of the Papilionoideae subfamily that grows naturally in Turkey. Since *V. turcica* is an endangered plant species with little known about its genetic diversity, the development of a protection strategy is essential. For this reason, The identification of simple sequence repeats (SSRs) was carried out, and the SSR marker system was improved using Illumina sequence data from *V. turcica*. The literature on *V. turcica* to date includes no study regarding the determination of SSR loci in *V. turcica* and the design of SSR markers to identify these loci. This research is expected to enable the population genetics of this important species to be assessed for the first time.

Acknowledgments: The authors express appreciation to the Ali Nibat Gökyiğit Foundation, Neşahat Gökyiğit Botanical Garden for providing research materials for the study. The work was fully supported by the Scientific and Technological Research Council of Turkey (TÜBİTAK) (Project No. 117Z797)

Keywords: Fabaceae, Illumina sequencing, Neşahat Gökyiğit Botanical Garden, SSR, *Vuralia turcica*