



Interspecific hybridization between *Tigridia pavonia* and *T. augusta* through ovary slice culture

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ABSTRACT. *Tigridia pavonia* is the most popular species in the *Tigridia* genus, and is currently marketed in Europe, Asia, and Australia as a landscape plant. Although it is native to Mexico, there are no breeding programs for it. In this study, we attempted to increase its flower color spectrum and growth habit by interspecific hybridization with *T. augusta*. Interspecific hybrids between *T. pavonia* and *T. augusta* were successfully obtained for the first time using the cut-style pollination and ovary slice culture techniques. On the contrary, no hybrids were obtained from a reciprocal cross. At three, four, and five days after pollination (DAP) ovaries were sliced and cultured on Murashige and Skoog medium without growth regulators and ammonium nitrate, but were supplemented with 6% sucrose, 50 mg/L yeast extract, and 0.25% Gelrite. After 80 days of culture initiation, the germination of only 10 embryos was observed in ovary slices cultured at three DAP. After

transfer to identical fresh medium, six hybrid embryos developed into seedlings. All obtained hybrid seedlings were transplanted successfully to soil, and grew normally. The progenies investigated were identified as true hybrids based on randomly amplified polymorphic DNA analysis.

Key words: *Tigridia pavonia*; *T. augusta*; Cut-style pollination; Ovary slice culture; Interspecific hybrids; Genetic analysis