ANDRONIC, Larisa and Svetlana SMEREA. In Vitro Direct Embryogenesis as a Biotechnological Way of Virus Elimination From Seedless Grape. In: Biotechnological tools for horticultural sustainability through the promotion of non-traditional species such as mini-kiwi (Actinidia arguta Planch.) in thecontext of climate change: International Scientific Conference, October 29-30,Tbilisi, Georgia. Tbilisi: Scientific-Research Center of Agriculture SRCA, 2025, pp. 8-14. Disponibil: https://doi.org/10.52340/conf2025.24.10

Seedless grape is much appreciated by consumers and of perspective in the Republic of Moldova, in the context of climate change. Stenospermocarpic cultivars (11) were selected as the parental forms in crosses for creating seedless grapes using immature embryo rescue technology. Our results indicate that the rate of the viable embryos and of the recovered plantlets was dependent on seedless degree and phytosanitary status, especially of the maternal genitor. Embryo rescue technique partially overcomes limitations caused by the stenospermocarpy in obtaining hybrid varieties and the eradication of phloem-limited viruses. The optimized protocol included immature ovule isolation at 35-40 days after anthesis, ovule cultivation for 30 days in total darkness conditions at 25±2 0C with the following transfer for 55-118 days on “recovery” medium in dependence of the cross combination. The proposed protocol may be useful for increasing the efficiency of seedless grape species breeding programs.