SUMMARY

In vitro somatic embriogénesis protocol for *Rhyncholaelia glauca* (Lindley) Schltr. regeneration.

Rhyncholaelia glauca (Lindl.) Schltr, is a wild epiphytic orchid endemic from Mexico, distributed in the states of Veracruz, Chiapas and Oaxaca. It has a great ornamental potential because of its attractive large star shaped flowers, that give off a special smell of citrus fruits and raspberries, which has generated the excessive collection and illegal trade, situating it as a threatened specie in the Appendix II of The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Therefore, it is necessary to develop efficient protocols of massive propagation, which allow the sustainable use of the species and reduce its extraction of the habitat. Plant micropropagation is an efficient technology for *in vitro* multiplication of a wide variety of plant species, and within it, the route of high frequency somatic embryogenesis. The motive of the present study was to guarante the obtention of sufficient material; so that, a somatic embryogenesis protocol for *R. glauca* was developed. Initially embryogenic callus was induced from PLBs In in the Murashige & Skoog and Vacin & Went culture media supplemented with Kinetin + naphthaleneacetic acid + 6-benzylaminopurine at a concentration of 2 mg L^{-1} each. Incubation conditions, combination of growth regulators in the multiplicative capacity of somatic embryos, multiplication index, subculture frequency and complete seedling formation time were evaluated. The best culture medium was Vacin & Went. At the end of three subcultures, at 30 day intervals, a production of 490 somatic embryos in average, was achieved under photoperiod conditions of 16 h, 33.8 µmol m^{-2} s^{-1}; continuing the *in vitro* development, in the same culture medium, somatic embryos were converted to complete plants in approximately three months. When they reached a height of 3 cm, they were considered suitable for their acclimatization under greenhouse conditions, obtaining 90 % survival rate in a period of 30 days.

Key words: orchid, embryogenic callus, PLBs, somatic embryos.