Agravitropic Growth of the Early Leaves of Apogamous Sporophytes of *Dryopteris tyrrhena*.— *Dryopteris tyrrhena* Fraser-Jenk. & Reichst., a Western Mediterranean endemic, is a threatened species represented by a few populations in Spain, France, and Italy (Magrini and Scoppola, Inform. Bot. Ital. 42(2):595–597. 2010). The relict type of its distribution (rare and scattered with big gaps between different localities, mostly in crevices and caves) suggests that *D. tyrrhena* is an old species of the Tertiary flora of the Mediterranean mountains (Fraser-Jenkins et al., Fern Gaz. 11(2–3):177–198. 1975; Bernardello and Martini, *Felci e piante affini in Liguria e in Italia*. Le Mani-Microart’s Edizioni, Recco-Genova. 2004). It is an allotetraploid species (2n = 164) originated by interspecific hybridization between the diploid species *D. oreades* Fomin (2n = 82) and *D. pallida* (Bory) Maire & Petitm. (2n = 82) with subsequent chromosomes doubling (Fraser-Jenkins et al., 1975).

This study on the in vitro development of apogamous sporophytes of *Dryopteris tyrrhena* (Magrini, *Plant Biosystems* 145(3):635–637. 2011; Magrini et al., *Studi Trent. Sci. Nat.* 90:165–169. 2012) was undertaken in summer 2008 at the Tuscia Germplasm Bank of the Botanic Gardens of Viterbo (Italy) in order to learn about its reproductive biology, and for conservation purposes, to obtain information on the biological factors that may have contributed to the strong fragmentation of its distribution. Fresh spores were collected in September 2007 from a wild population of *D. tyrrhena* growing within the Cinque Terre National Park (Riomaggiore, La Spezia, Italy). Studies of gametophyte and sporophyte development were carried out according to the protocol of Menendez et al. (*Plant Cell Rep.* 25:85–91. 2006; Quintanilla and Escudero, *Ann. Bot.* 98:609–618. 2006; Magrini et al., 2012). All the spores were separated from sporangia using sieves with a mesh size of 71 μm, and then were soaked in Eppendorf tubes with 1.5 ml of distilled water for 24 h. After, they were surface sterilized for 3 min. in a 0.5% NaOCl solution, supplemented with a drop of Tween 20 to improve the efficiency of the sterilization. They were then rinsed three times with sterile distilled water and centrifuged at 6,000 rpm for 3 min. between rinses. The spores were sown with three replicates in sterile plastic Petri dishes (6 cm diameter) containing 15 ml of MS medium (Murashige and Skoog, *Physiol. Plant.* 15:473–497. 1962) (*PhytoTechnology Laboratories*® Shawnee Mission, KS, USA), supplemented with 0.7% agar (Plant tissue culture grade, *AppliChem*, Darmstadt, Germany) and a Nystatin solution (100 Uml⁻¹), which was added as a fungicide (*AppliChem*, Darmstadt, Germany). The cultures were maintained under cool-white fluorescent illumination (Osram Dulux L 36W/840 Lumilux, 2900 lm), a 12-h photoperiod, and a temperature of 20 ± 1°C (Sheffield et al., Amer. Fern J. 91(4):179–186. 2001; Magrini et al., 2012). The dishes were examined daily for spore germination (defined as the first emergence of the rhizoid) and weekly for gametophyte growth and sporophyte development.