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Botanical, histochemical and propagation studies of taloangi (*Curculigo orchioides* Gaertn.): An endangered ethno-medical plant**Harold M Carag and Lourdes B Cardenas**
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Curculigo orchioides Gaertn. is a popular Ayurvedic medicinal plant significantly utilized as a nutritive tonic. The traded drug is its underground axis. This study was conducted to determine the botanical characteristics of Curculigo orchioides morpho-anatomically and histochemically, to document the presence of key constituents contributing to its therapeutic value. The underground axis was identified as a fleshy, vertical rhizome which is pulled firmly by contractile roots to the ground. The stele arrangement showed an atactostele, typical in most monocot stems. Histochemical tests revealed the presence of saponins, in considerable amount and traces of alkaloids. The presence of these constituents of potential therapeutic values was further verified through thin layer chromatography (TLC). Five major bands (Rf: 0.14, 0.24, 0.26, 0.50 and 0.82) were detected in the profiling of saponins. No alkaloid registered in the chromatograms. Anatomical observations also revealed the abundance of starch grains and mucilage cells in the ground tissue. Saponins, mucilage and starch account for both the nutritive and therapeutic value of the plant. The low level of alkaloid is advantageous because this group can potentially cause harm. Attempts on seed germination were not successful as a means of propagation due to the plant species' deep physiological dormancy. Rhizome cuttings (83% shoot development) proved to be a better alternative in addressing the shortage in supply of this drug plant. Whether the generated shoots can develop new rhizomes is still to be ascertained.

Biography

Harold M Carag is presently pursuing his Master of Science in Botany at the University of the Philippines Los Banos, Laguna, Philippines and is currently working on his masters thesis on the local food and medicinal plants of a major ethnic-group in the Philippines. He also has plans to pursue a PhD in the fields of ethnobotany and taxonomy of important endemic food and medical flora utilized by the locals. He had published some articles relevant to the field in peer-reviewed journals.

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