

Title: FIRST REPORT OF ENDOPHYTIC FUNGI ISOLATED FROM *Aristolochia triangularis* Cham.

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ABSTRACT

Endophytic microorganisms live inside inter and intracellular regions of healthy plants, without causing any visible disease symptoms. They develop a symbiotic relationship with their hosts that can be beneficial for both. These microorganisms (mainly bacteria and fungi) attracted attention of scientific community based on their potential to produce biologically active metabolites like alkaloids, terpenoids, flavonoids, steroids, among others. Many of these compounds present direct application in medicine, industry and agriculture. Endophytic fungi were found in almost all the plants studied until now, and it is believed that all plants should have the potential to be host of one or more endophytes. Thus, in this work, we evaluated the presence of endophytic fungi in *Aristolochia triangularis* tissues. Popularly known as *cipó-mil-homens*, this plant is largely used in traditional medicine as anti-inflammatory, antiseptic, anti-rheumatism, anti-helminths, sedative, antipyretic and emmenagogue. To achieve the endophytic community of *A. triangularis*, we collected the vine, fruit, stem, adult and young leaves of plants grown in an Atlantic forest region (Almirante Tamandaré, PR, Brazil). Plant material was submitted to superficial disinfection with hypochlorite and alcohol, fragmented and subsequently placed onto Sabouraud culture medium. Plates were incubated for 48 hours at 28°C in a biochemical oxygen demand (BOD) incubator. After that, two hundred and seventy two endophytes were obtained from *A. triangularis*. The frequency of isolation related to each plant material was: vine – 82%, fruit – 94%, young leaf – 97%, adult leaf – 100% and stem – 65%. We observed that the number of fungi isolated from leaves (young and adult) was statistically different (F: 100.12; df: 19; $p < 0.01$) from the other plant materials (vine, fruit and stem). There was no statistically difference between young and adult leaves, indicating that aging did not affect the isolation. As next steps, we will identify these fungi based on their micromorphology and phylogenetic relationship through sequencing of ITS1-5.8S-ITS2 regions. Additionally we will evaluate their potential to produce bioactive molecules.

Key words: endophytes, *cipó-mil-homens*, Atlantic forest

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