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Isolation of an endophytic fungus from *Ophiorhiza mungos* L. (Rubiaceae), producing camptothecin, an anti cancer agent

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Camptothecin (CPT) derived compounds are widely used clinically for chemotherapy of human cancer. This effective anticancer drug supplied for pharmaceutical use is extracted from intact plants of *Camptotheca acuminata* and *Nothapodytes foetida.* CPT and its derivatives are also produced by several species of *Ophiorrhiza. O. mungos* grown in South East Asia including in Sri Lanka is also known to produce this alkaloid. Overexploitation of naturally occurring sources to meet the increased world demand of CPT based drugs has threatened the survival of these species. Therefore, investigation into alternative sources of CPT has become important in recent years. Endophytic fungi isolated from CPT producing plants were reported as potential sources of CPT. In the present investigation, endophytic fungi were isolated from greenhouse-grown *O. mungos*. Root, stem and leaf tissue transplants in Potato Dextrose Agar (PDA) medium resulted in the isolation of a total of 59 individuals that belonged to seven distinct species based on their colony characters. All 59 fungi were sub cultured in 100 ml Potato Dextrose Broth (PDB) and grown at 27 °C. Both the broth and mycelia were analyzed by HPLC for presence of CPT. Of the seven species of endophytic fungi, only one species produced CPT which was detected in the mycelium but not in the broth. The CPT was detected in two-week as well as in three-week old cultures. The approximate content of CPT produced by the fungus (0.005 % dry weight basis) was similar to that produced by its host, *O. mungos*. Further, the production of CPT was also observed in subsequent culture of the in-vitro grown fungus, indicating that the production of CPT by the fungus is somewhat stable. This is the first report of the isolation of a CPT-producing endophytic fungus from *O. mungos.*