

**CHEMISTRY OF SOME SECONDARY METABOLITES FROM
AN ENDOPHYTE ISOLATED FROM THE SEEDS OF
*POUTERIA CAMPECHIANA***

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Endophytic fungi are organisms that colonize in internal plant tissues without causing apparent harm to their host. Presence of several novel and pharmacologically active molecules have been reported from endophytic fungi. *P. campechiana* is a golden yellow popular edible fruit of the family Sapotaceae growing in tropical countries. Some carotenoids and polyphenolic compounds have been reported from fruits of *P. campechiana*. We have previously reported taxifolin, galocatechin, quercetin and 4-hydroxyacetophenone from the seed extracts of *P. campechiana*. As a continuation of our studies on *P. campechiana*, chemistry and bioactivity of endophytes in the seeds of *P. campechiana* was investigated.

Seeds of *P. campechiana* were triple sterilized and pieces of inner part of seeds were placed on PDA plates. After 3-4 days an endophytic fungi was isolated and identified as *Penicillium purpurogenum* of the family Trichocomaceae by its microscopic and morphological characteristics. This fungus is characterized by its dark green conidia and intense red colour soluble pigment. To further confirm the identity of fungi, molecular studies are in progress. Pure culture of fungi in PDA media was inoculated in PDB media in large scale (20-1 L conical flasks) and incubated at room temperature while shaking on laboratory shakers. After 4 weeks, media was filtered. The filtrate was partitioned with EtOAc/H₂O to give EtOAc extract. The residue was crushed into small pieces and sequentially extracted into EtOAc and MeOH using sonicator to give EtOAc and MeOH extracts. All three extracts were found to be with antioxidant (DPPH) and phytotoxic activities (*Lactuca sativa*) while only EtOAc extracts were toxic to brine shrimps (*Artemia salina*). The EtOAc extracts were chromatographed over silica gel, sephadex LH-20 and preparative thin layer chromatography (PTLC) to give two UV active compounds **1** and **2**. These compounds were identified as talaroconvolutin A (**1**) and 4-hydroxyacetophenone (**2**) by detail analysis of ¹H & ¹³C NMR data. Talaroconvolutin A has been reported from fungus *Talaromyces convolutes* and its hydroxyl derivative has been reported from *Penicillium rubrum*. This gave further evidence that our endophyte belongs to the genus *Penicillium*. Further we have reported the *p*-hydroxyacetophenone from seed extract of *P. campechiana*, thus it is significant that compound **2** was found in both in seeds as well as in the endophytic fungus *Penicillium purpurogenum* from *Pouteria campechiana*.