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**BIOACTIVITY OF METABOLITES OF TWO ENDOPHYTIC FUNGI ISOLATED FROM SEEDS OF *Pouteria campechiana*****K. G. E. Padmathilake<sup>1,2</sup>, N. S. Kumar<sup>1</sup>, U. L. B. Jayasinghe<sup>1</sup>**<sup>1</sup>*Institute of Fundamental Studies, Kandy*<sup>2</sup>*Postgraduate Institute of Science, University of Peradeniya*

Endophytic fungi colonize internal plant tissues without causing apparent harm to their host. These fungi produce secondary metabolites in small quantities through secondary metabolic pathways, and are not directly involved in normal growth, development or reproduction. Their major role is thought to be in plant defence. Several novel and pharmacologically active molecules have been isolated from endophytic fungi. However, no chemical or biological investigations have been reported on the endophytic fungi of *Pouteria campechiana* (local name - *Lavulu*).

*P. campechiana* is a golden yellow popular edible fruit of the family Sapotaceae growing in tropical countries. Some carotenoids and some antioxidant polyphenolic compounds have been reported from fruits of *P. campechiana* and some bioactive compounds have been reported from the genus *Pouteria*.

Surface sterilized pieces of seeds of *P. campechiana* were placed on potato dextrose agar (PDA) plates and incubated for 3 days at room temperature. Two fungi (SGR and SW) were isolated. SGR and SW were cultured separately on potato dextrose broth (PDB) in large scale and incubated with shaking for 21 days at room temperature and filtered through cotton wool. The filtrates were then partitioned with EtOAc/H<sub>2</sub>O separately to give EtOAc extracts (SGREP, 0.6158 g and SWEP, 0.2812 g). The residues were crushed into small pieces and sequentially extracted into EtOAc and MeOH (30 min. x 3) separately using a sonicator to give EtOAc extracts (SGRES, 1.1549 g and SWES, 0.1268 g) and MeOH extracts (SGRMS, 3.4512 g and SWMS, 2.9303 g).

All extracts (SGREP, SGRES, SGRMS, SWEP, SWES, SWMS) were subjected to bioassays for antioxidant activity against DPPH (2,2'-diphenyl-1-picrylhydrazyl) radicals using the spectrophotometric method; cytotoxicity against brine shrimps (*Artemiasalina*) using the micro-well bioassay and  $\alpha$ -amylase inhibition activity using a spectrophotometric method. LD<sub>50</sub> values for the cytotoxic assay were calculated (using Probit analysis) for each extract.

None of the extracts showed significant  $\alpha$ -amylase inhibition activity, while only SGREP was cytotoxic giving an LD<sub>50</sub> value of 481.2 ppm. All six extracts showed antioxidant activity with IC<sub>50</sub> values of 160 ppm for SGREP, 480 ppm for SGRES, 565 ppm for SGRMS, 310 ppm for SWEP, 380 ppm for SWES and 590 ppm for SWMS.