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Talarofuranone, a new fungal metabolite from an endophytic *Talaromyces purpurogenus* from *Pouteria campechiana* seeds

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Fungi play an important role in our lives and some fungi, such as mushrooms, have been used by humans as food from time immemorial. It can be categorized mainly in to two groups, epiphytic fungi and endophytic fungi. Epiphytic fungi grow on the surface of the host. Endophytes are microorganisms that live in the intercellular spaces of stems, petioles, roots and leaves of plants causing no discernible manifestation of their presence and have typically remained unnoticed. Some endophytic fungi have the ability to produce the same compounds that are produced by their host plant. Camptothecin, huperzine A, podophyllotoxin, taxol, vinblastine and vincristine are some examples of such compounds. We have previously reported several compounds with interesting bioactivities isolated from the endophytes of some Sri Lankan plants. In a continuation of our studies on bioactive secondary metabolites produced by fungal endophytes associated with Sri Lankan plants, we investigated metabolites of an endophytic fungus isolated from the seeds of the *Pouteria campechiana* (Local name: Lavulu) of the family Sapotaceae. An endophytic fungus isolated from the seeds of the *P. campechiana* was identified as *Talaromyces purpurogenus* (syn. *Penicillium purpurogenum*). The pure culture of the *T. purpurogenus* was grown on potato dextrose agar (PDA) media. After four weeks fermentation fungal medium was extracted with ethyl acetate. Chromatographic separation of the EtOAc extract over silica gel, Sephadex LH-20 and preparative thin layer chromatography (PTLC) furnished four UV active (λ 254 nm) compounds **1**-**4**, which were identified by detail analysis of their ^{1}HNMR, ^{13}CNMR, 2D-NMR and FABMS as talaroconvolutin A (**1**), a furanone analog of talaroconvolutin A (**2**), 4-hydroxyacetophenone (**3**) and tyrosol (**4**). We have previously reported the isolation and structure elucidation of compounds **1**, **3** and **4**. Here we report the isolation and characterization of compound **2**, which was found to be a new natural product and named as talarofuranone (**2**). It is noteworthy that 4-hydroxyacetophenone (**3**), which was obtained from the extract of *P. campechiana* seeds in our previous study, has now been isolated as a secondary metabolite of the endophytic fungus *T. purpurogenus* from *P. campechiana.*