

**Fumigaclavine C and monomethylsulochrin from an endophytic fungus  
*Aspergillus fumigatus* from *Solanum insanum* fruits**

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The objective of this investigation is to study the chemistry and bioactivity of secondary metabolites produced by endophytic fungi from fruits of *Solanum insanum* (elabatu). An endophytic fungus isolated from the fruits of *S. insanum* was identified as *Aspergillus fumigatus* of the family *Trichocomaceae*, by molecular methods using Internal Transcribed Spacer (ITS) region 1 and 4 of the rDNA gene. *A. fumigatus* was mass cultivated on potato dextrose broth (PDB) medium in 1 L Erlenmeyer flasks containing 400 mL of the medium (24 L) were allowed to stand at room temperature for 10 days, and then incubated while shaking (95 rpm) every other day for another 18 days on laboratory shaker. The culture medium was filtered and the filtrate was extracted with EtOAc. The residual mycelium was crushed and extracted with EtOAc using a sonicator. Based on thin layer chromatography (TLC) analysis the two EtOAc extracts were combined. The extract was subjected to preliminary screening for antifungal activity against *Cladosporium cladosporioides* with TLC bioautography method, radical scavenging activity against DPPH, brine shrimp lethality assay against *Artemia salina* and  $\alpha$ -amylase inhibition assays. Chromatographic separation of the extract over silica gel, Sephadex LH-20 and PTLC furnished two UV active compounds, which were identified as fumigaclavine C and monomethylsulochrin by detail analysis of NMR data and comparison with reported NMR data. Strong antifungal activity of fumigaclavine C was observed against *C. cladosporioides*. Bioinhibitory effect of *A. fumigatus* was observed against the endophytic fungi *Xylaria berteri* and *Colletotrichum siamense* isolated from *Piper nigrum*. Fumigaclavine C belongs to an ergoline group of alkaloids. Monomethylsulochrin is a benzophenone derivative, which could be biosynthesized via an anthraquinone through polyketide pathway. Endophytic strains of *A. fumigatus* have been isolated from several plant species and the production of both compounds by the fungi has been reported. This is the first report of the isolation of endophytic fungus *A. fumigatus* from *Solanum* species.

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