

International Conference on  
Organic and Inorganic Chemistry

8<sup>th</sup> World Congress on  
Green Chemistry and Technology  
February 18-19, 2019 | Paris, France

### The endophytic fungus *Trametes hirsuta* as a novel alternative source of podophyllotoxin and related aryl tetralin lignans

Vijeshwar Verma

Shri Mata vaishno Devi University, India

The aryl tetralin lignans are synthesized by Podophyllum spp. and are in great demand worldwide due to their use in synthesis of topoisomerase inhibitors. However, the sustained production of these aryl tetralin lignans requires large-scale harvesting from the natural environments, which has resulted in the plant-endangered status. In view of the difficulties in their total chemical synthesis, cultivation and failure of metabolic engineering approaches, there is a need to search for alternative sources of production of aryl tetralin lignans. We unequivocally

established the methodology for isolation, identification, and characterization of a novel fungal endophyte (*Trametes hirsuta*) that produces aryl tetralin lignans consistently as shown by HPLC, LC-MS, LC/MS-MS and <sup>1</sup>H NMR. The lignans produced by the microorganism are biologically active, and exhibit potent antioxidant, anticancer and radioprotective properties. This strategy promises to improve the production of these therapeutically important compounds at lower costs.

e: Verma211@gmail.com



Notes: