OMICS Group Conferences
Accelerating Scientific Discovery

Global Biofuels & Bioproducts Summit

November 19-21, 2012 Hilton San Antonio Airport, USA

# Mushroom: A bioproduct and mycoremediation tool

**Shweta Kulshreshtha[1], Nupur Mathur[2] and Pradeep Bhatnagar[3]**
[1]Amity University, [2]University of Rajasthan, [3]The IIS University, India

Mushroom, a macrofungi, is a bioproduct which has attracted a great deal of attention in last few decades due to their potential application as a tool in mycoremediation. Mycoremediation is a spontaneous or controlled process in which fungi or mushrooms are used to remediate pollutants from the environment. Mycoremediation through mushroom cultivation is mainly relying on biodegradative and biosorption abilities. Many researchers have reported that mushrooms can degrade or convert pollutants to less or non- toxic products by secreting various enzymes (biodegradation) and sometimes, absorb the pollutant in their mycelium mat (biosorption) and thus reduce the environmental pollution. Besides remediation, mushroom produces not only biomass in the form of mycelium which could be further exploited as fodder but also produces fruiting bodies which can be used for consumption if found safe in toxicity assays. In this context, an experiment was conducted using handmade paper and cardboard industries waste alone and in combination with wheat straw. In this experiment, it is important to state here that increase in biological efficiency, absence of mutagenicity and morphologically perfectly normal basidiosomes were observed. Thus, there is a need for further research towards the exploitation of potential of mushroom as bioremediation tool and its safety aspects for consumption. Mycoremediation through mushroom cultivation is an easily accessible, economical, and simple solution that will help alleviate two of the world's major problems i.e. waste accumulation and production of proteinaceous food simultaneously.

## Biography

Shweta Kulshreshtha has completed her PhD at the age of 30 years from University of Rajasthan, Jaipur, India. She is lecturer in Amity University of Rajasthan, Jaipur which is leading education group of India. She has published more than 10 papers in reputed journals and invited lectures in conferences. She is serving as an editorial board member of Journal of Bioremediation and Biodegradation.

shweta_kul17@rediffmail.com