Biotechnology-2013

OMICS Group Conferences
Accelerating Scientific Discovery

4th World Congress on
Biotechnology

September 23-25, 2013 Raleigh-North Carolina, USA

# Decolorization of Synthetic dyes by six white-rot fungi, isolated from nature Abbas

**Kavita Vasdev**

*University of Delhi, India*

## Abstract

Synthetic dyes represent a large group of chemically different compounds. Due to their low biodegradability, they can cause serious environmental pollution, besides being toxic to aquatic life. The decolorization of four such, chemically different synthetic dyes (Acridine orange, Congo red, Xylidine and Crystal violet) by the six basidiomycetous fungi KV9, KV10, KV11, KV12, KVA5 and AKCH was investigated . All the six fungal isolates were able to decolorize all dyes tested. All of them except AKCH showed considerably high rate of decolorization, removing more than 90% of the colour within 144 hours. Among the four dyes tested, Crystal violet was decolorized fastest, showing 90% decolorization within 96 hours. Among the fungal isolates, KV10 and KV12 were most efficient in decolorizing the dyes, causing 74%and 72% decolorization of Crystal Violet within 48 hrs. Linear increase in laccase production by all six fungi, was observed with a simultaneous increase in extent of decolorization, irrespective of the type of dye. The presence of the dyes in liquid medium had little or no effect on the mycelial growth, at the concentration tested.

## Biography

Dr. Kavita Vasdev is Associate Professor In Department of Microbiology, Gargi College, University of Delhi, has done M.Sc (Biotechnology), J.N.U.,new Delhi, Ph.D from Department of Microbiology, University of Delhi ,1995.Besides 18 years of undergraduate teaching, Has been persuing research, in the area of decolorization and biodegradation of dyes,xenobiotics, by white-rot fungi, has 6 international publications in the field of biodegradation, is reviewer for international journal "Bioremediation", is life member of Association of Microbiologists of India and also member of ASM- American Society of Microbiology, has been recently associated with Synthesis, Charecterization of nanoparticles by green methodsand it's antimicrobial applications-an interdisciplinary research project in the area of nanotechnology.