Objectives of research study

- To understand the environmental states of a transboundary river, Subarnarekha river, India by estimate seasonal water quality parameters i.e. physical and chemical of the selected study sites along with the concentration of the selected heavy metals (viz. Cadmium, Lead and Mercury).
- To document the diversity of fungal strains from different eco-contrasting study sites.
- To identify and isolate heavy metal tolerant fungal strain (F12), *Aspergillus penicillioides* from the bottom soil of Subarnarekha riverian tract, India.
- To study simultaneous Pb (II) and Cd (II) removal efficiencies in the aqueous system by both fungal biomass and exopolysaccharide of *Aspergillus penicillioides*.
- To assess the heavy metal removing efficiency of fungal EPS by flocculation and emulsification activities.
- To undertake experimental analysis to justify the antibacterial activity of the suitable selected fungal strain.