7.3 Institutional Distinctiveness

Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust. Provide the web link of the institution in not more than 500 words.

"Biodiversity and Concentration of Airborne Fungi in different locations of Indore city." : *To investigate the Air mycoflora of different outdoor environment of Indore city and find their role in allergic diseases. This practice done by the college. To perform the activity following steps have been taken:*

i. Selection of sampling sites in Indore city.
ii. To perform Air monitoring in selected locations by passive sampling method.
iii. Collection of soil samples from selected locations.
iv. Calculation of CFU of Air samples and soil samples.
v. Isolation and identification of bacteria and fungi.
vi. Assessment of Antibiotic resistant strains of bacteria.

The study of aero mycoflora of particular region provides a clear view about interaction of fungal spores in the form of disease on plants and also occurrence of allergy in human being. It is of great clinical value to know the identity of the dominant airborne fungi in a particular area, as the fungal population varies from one place to another. Fungi live as saprophytes on organic material or as parasites (mainly plant pathogens), so the majority of fungal spores in the air outdoors come from farms, forest stands and decomposing plant matter. When sensitive individual inhaled the aerial fungal spores, allergic symptoms are noticed. In order to identify the dominant fungi, an aero mycology investigation had been conducted in the atmosphere of Indore.

In 2017-2018 the outdoor environment of Indore city was investigated for the occurrence and biodiversity of fungal flora which may be responsible for the allergic diseases and also find out the concentration of Air borne fungi after Swachh Bharat Abhiyan. Department of Microbiology, Govt. Holkar Science College, Indore had conducted a study which included microbiological assessment of air to monitor the presence of several species of fungi that are effectively used as pollution indicators for detecting the faecal contamination, human activity waste, heavy metals and crude oil. This study was conducted to evaluate the impact of Swachhta Abhiyan on local environment of Indore.

Present study was carried out between the months of December 2017- February 2018.Total 12 outdoor locations were selected as sampling sites which includes Temple campus, crowded areas, public places of Indore city. Air sampling of different locations was done by using passive sampling method (Settled plate method). Meterological parameters effecting fungal distribution and diversity were also monitored. Different fungi were identified on the basis of colonial morphology and microscopic studies by using standard literature. Then the Petri plates were brought into the laboratory and percentage frequency and percentage contribution of the total fungal flora were assessed.

% Frequency = (No. of observations in which a species appeared / Total no. of observations) X 100
% Contribution = Total No. of colonies of species in all the observations taken together / Total No. of colonies in all the species X 10

Total 155 colonies of fungi belonging to 7 different genera were studied from different locations of Indore. The highest prevalence of Aspergillus sp. and Alternaria sp. were found in

IQAC Inches

Coordinator (IQAC)
Govt. HOlkar (Model, Autonomous)
Science College, INDORE

PRINCIPAL

PRINCIPAL
Govt. Model Autonomous
Holkar Science College,
Indore (M.P.)