

Bioaerosols and its Health Perspective [†]

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Abstract: Air is filled with numerous aerosols with biological origins called bioaerosol. Exposure to bioaerosols has been linked with adverse effects on health. They cause toxic reactions and infections, hypersensitivity, asthma, pneumonitis, allergens, etc. Bioaerosols are released from the sources of composting industries, food, enzyme and biotechnology industries, waste recycling, wood dust, flour dust, etc. They are also components of great significance for cloud condensation and ice nucleation and influence climate. With this in view concentration of biological constituents of aerosols has been determined, and health risk assessment has been done. The annual mean concentration of PM₁, PM_{2.5}, and PM₁₀ was high. Bacterial concentration was higher than fungal concentration. About fifteen types of bacterial isolates were identified, and they were pathogenic. Gram –ve bacteria was higher than Gram +ve bacteria. Eight genera of fungi were identified, and amongst them, *Aspergillus* was dominant. The study reveals that climate components affect the concentration of biological components in the aerosol. Health risk analysis revealed an increase in hospital admissions with an increase in the concentration of aerosols and constituents microbial components.

Keywords: aerosols; *Aspergillus*; bacteria.

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Conflicts of Interest

The authors declare no conflict of interest.