بسمه تعالی

**فرم چکیده سخنرانی ژورنال کلاب دانشجویان دکترا ورودی**

دانشکده بهداشت – گروه مهندسی بهداشت محیط

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| **عنوان مقاله :**  **“One year record of bioaerosols and particles concentration in Indo-Gangetic plain: Implications of biomass burning emissions to high-level of endotoxin exposure”** |
| **چکیده :**  The one-year study, conducted from June 2015 to May 2016, reported on atmospheric abundance and variability of viable bioaerosols, organic carbon (OC) and particles number and deduced mass concentrations from Indo-Gangetic Plain (IGP; at Kanpur) in India. Among viable bioaerosols, the highest concentrations of Gram-positive bacteria (GPB), Gram-negative bacteria (GNB) and Fungi were recorded during December January (Avg.: 189 CFU/m3), November (244 CFU/m3) and September months (188 CFU/m3), respectively. Annual average concentration of GPB, GNB and Fungi were 105 ± 58, 144 ± 82 and 116 ± 51 CFU/ m3. Particle number concentration (PNC) associated with fine-fraction aerosols (FFA) predominates throughout the year. However, mineral dust (coarser particle) remains a perennial constituent of atmospheric aerosols over the IGP. Temporal variability records and significant positive linear relationship (p < 0.05) of GPB and GNB with OC and biomass burning derived potassium indicates their association with massive emissions from paddy-residue burning and bio-fuel burning. Influence of meteorological parameters on viable bioaerosols abundance has been rigorously investigated herein. Accordingly, ambient temperature seems to be more affecting the bacteria (anti-correlation), whereas wet-precipitation (1-4 mm) relates to higher abundance of Fungi. High abundance of GNB during large scale biomass burning emissions has implications to endotoxin exposure on human health. Field-based data-set of bioaerosols, OC, PNC and deduced mass concentrations reported herein could serve to better constraint their role in human health and climate relevance. |