

Study Area

Bioaerosol sampling was carried out in Delhi ($28^{\circ}25'$ latitude and $76^{\circ} 50'$ longitude), the capital city of India, situated in Northern part of India. It lies 160 km south of Himalayas at an altitude of 213.3 to 305.4 m above mean sea level. It is in the close vicinity of Thar Desert (Rajasthan) in the west and hot plain of central India. Delhi is a rapidly growing city, with its area extending over 1,483 km². Its population has rapidly increased from 3.5 million in 1970 to over 16 million presently (Census of India 2011). The climate of Delhi is sub-tropical with hot summers and moderately cold winters. The monthly mean temperature varies between 14.3°C (minimum 2°C) in January, which is the coldest month and about 34.5°C (maximum 48°C) in June, the hottest month.

Table S1: Bioaerosol Distribution in relation to temperature and relative humidity

Bioaerosol type	Site	Season →	Monsoon	Post Monsoon	Winter	Pre Monsoon	
Fungal Bioaerosol	Garbage Dump Site	Temperature (°C)	29.5	30.2	19.2	32.2	
		Relative Humidity (%)	67	47	69.3	21.5	
	Jhelum Mess	Temperature (°C)	28.3	28	16.1	30.1	
		Relative Humidity (%)	57.6	50	80	29.1	
	Munirka	Temperature (°C)	30	30.1	16.3	30.6	
		Relative Humidity (%)	71	49	74.1	24	
	Kaushambi	Temperature (°C)	29.5	32	15.1	35	
		Relative Humidity (%)	65.9	36	86.3	18.1	
	Gram Positive Bacterial	Garbage Dump Site	Temperature (°C)	29.8	32	15.2	35.5
			Relative Humidity (%)	23	53	50.2	37.3
		Jhelum Mess	Temperature (°C)	26	30	17.2	34.5
			Relative Humidity (%)	82	37.7	61	19.8
Munirka		Temperature (°C)	30.1	29	19.6	30.6	
		Relative Humidity (%)	69	49	47.8	24	
Kaushambi		Temperature (°C)	30.8	31.1	12.6	36.1	
		Relative Humidity (%)	60	37	59	15	
Gram Negative Bacterial		Garbage Dump Site	Temperature (°C)	30	32	12.2	35.5
			Relative Humidity (%)	57.2	52	60.5	22
		Jhelum Mess	Temperature (°C)	27	28	17.2	34.5
			Relative Humidity (%)	69	47	55.5	19.8
	Munirka	Temperature (°C)	27	30	19.6	30.6	
		Relative Humidity (%)	64	50	47.8	24	
	Kaushambi	Temperature (°C)	32	31	12.2	36	
		Relative Humidity (%)	52	36.5	59	15	

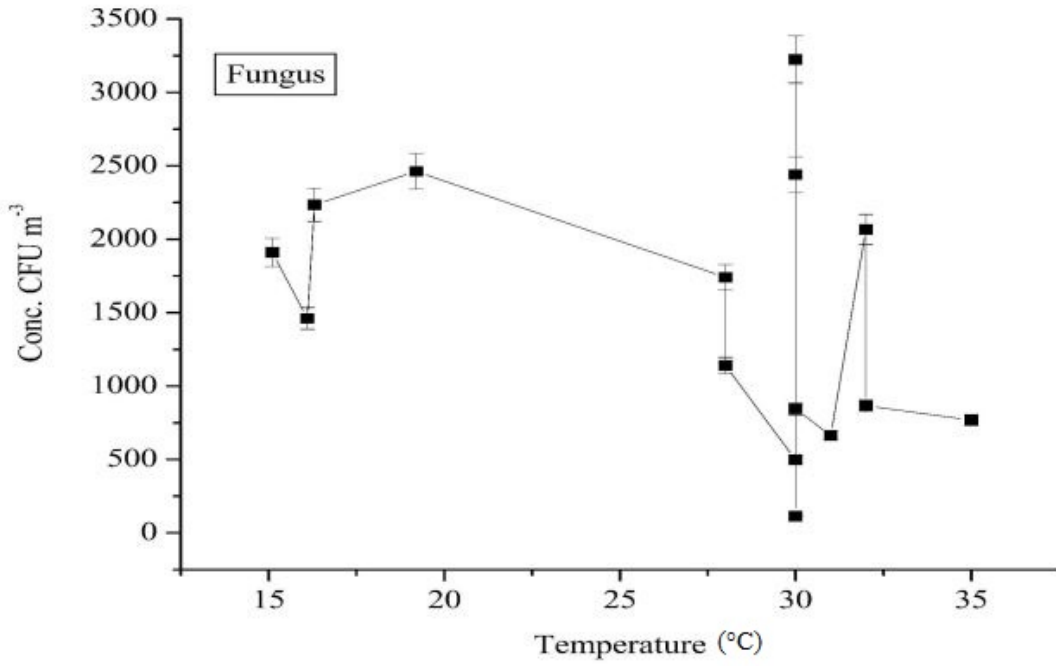


Figure S1: Variation of fungal concentration with temperature

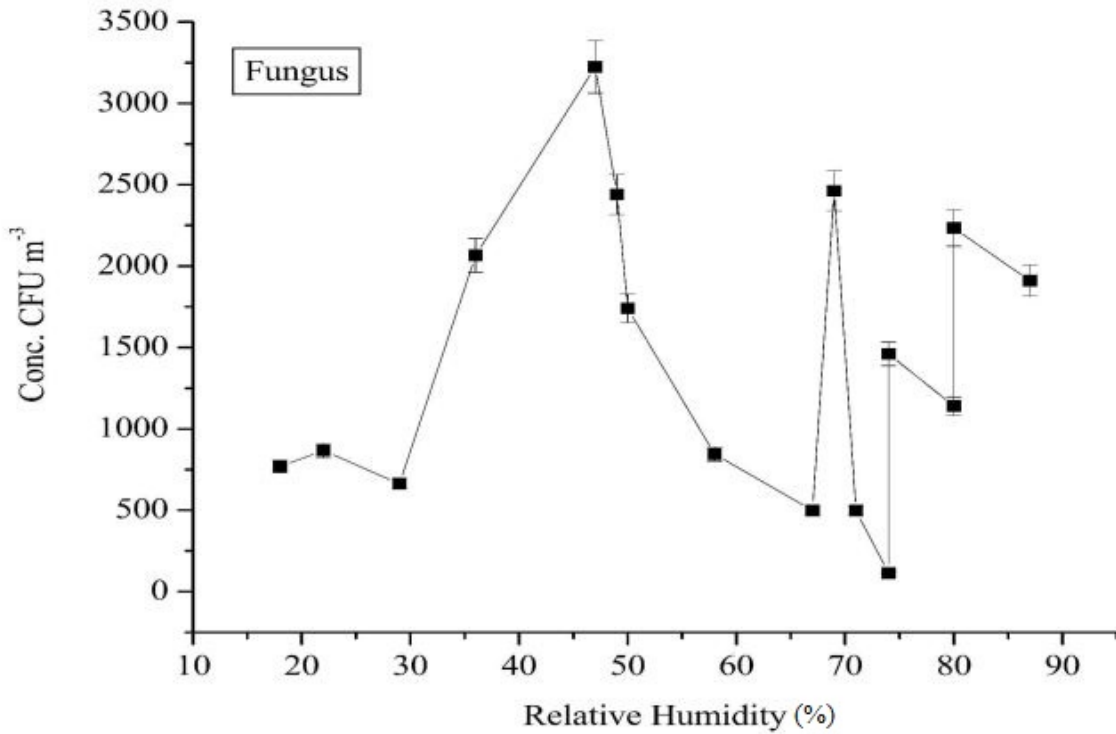


Figure S2: Variation of fungal concentration with Relative Humidity

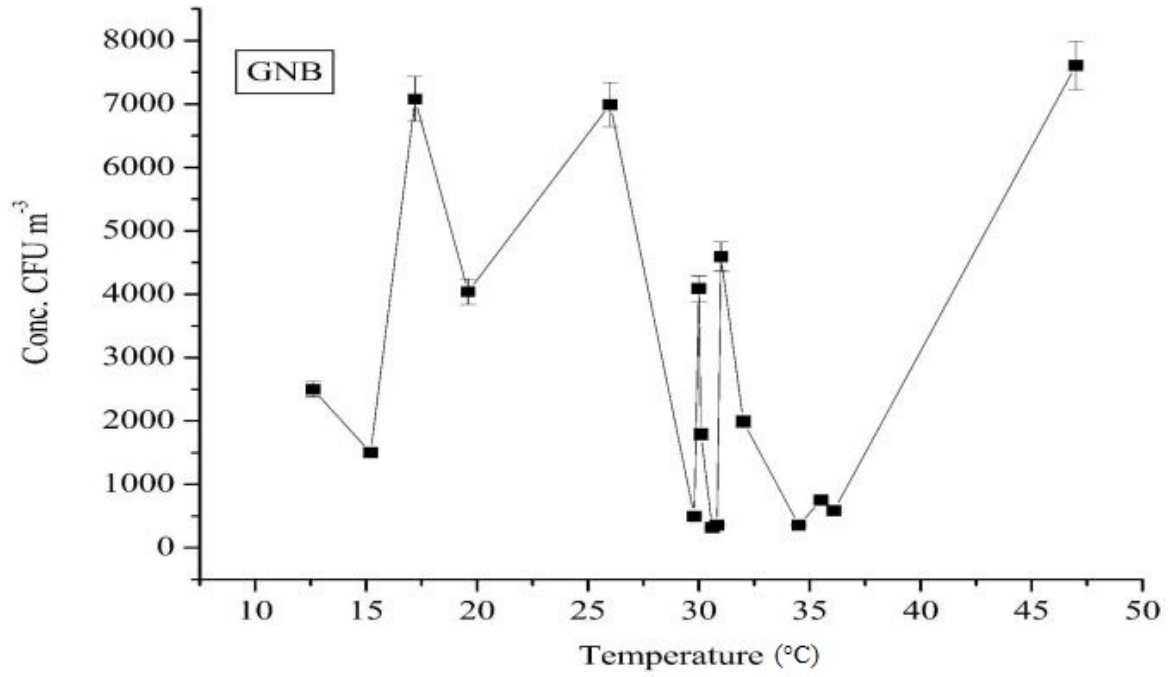


Figure S3: Variation of Gram Negative bacterial concentration with temperature

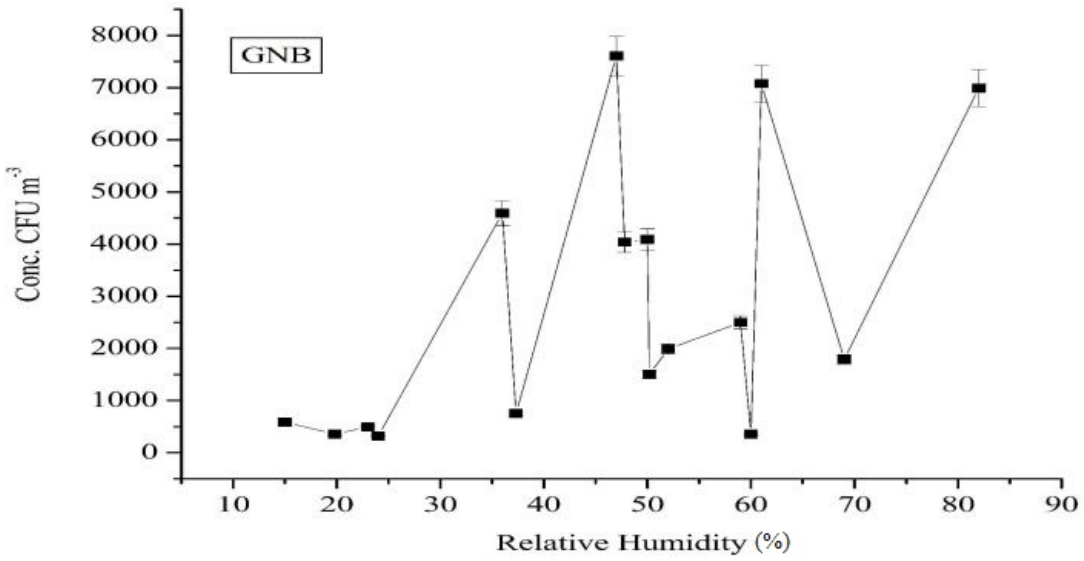


Figure S4: Variation of Gram Negative bacterial concentration with Relative Humidity

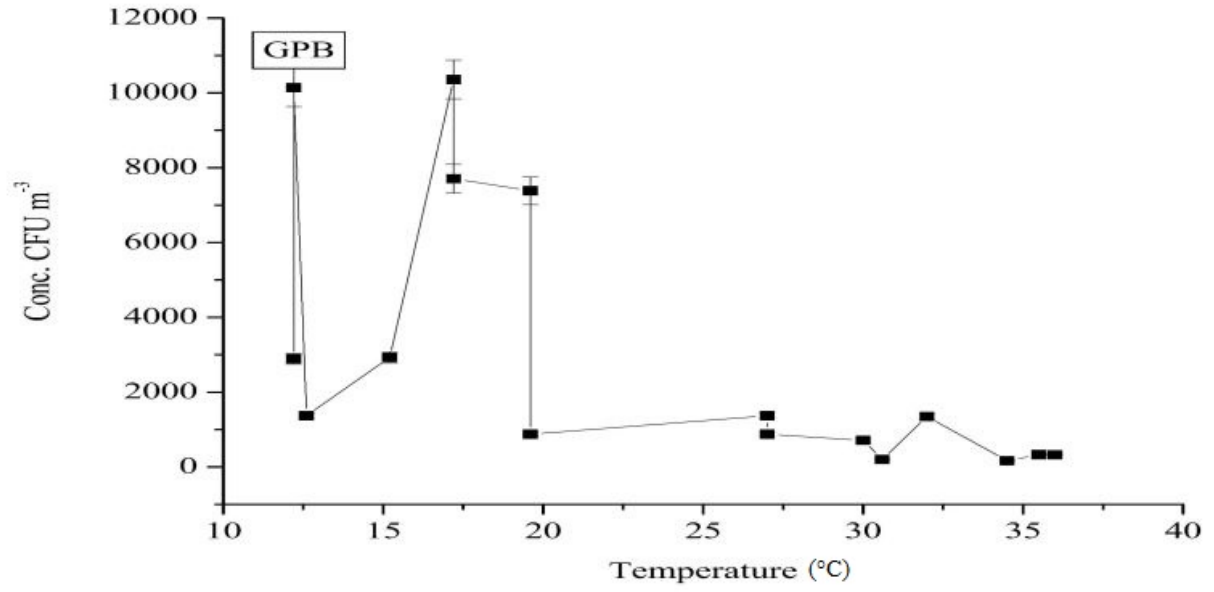


Figure S5: Variation of Gram Positive bacterial concentration with temperature

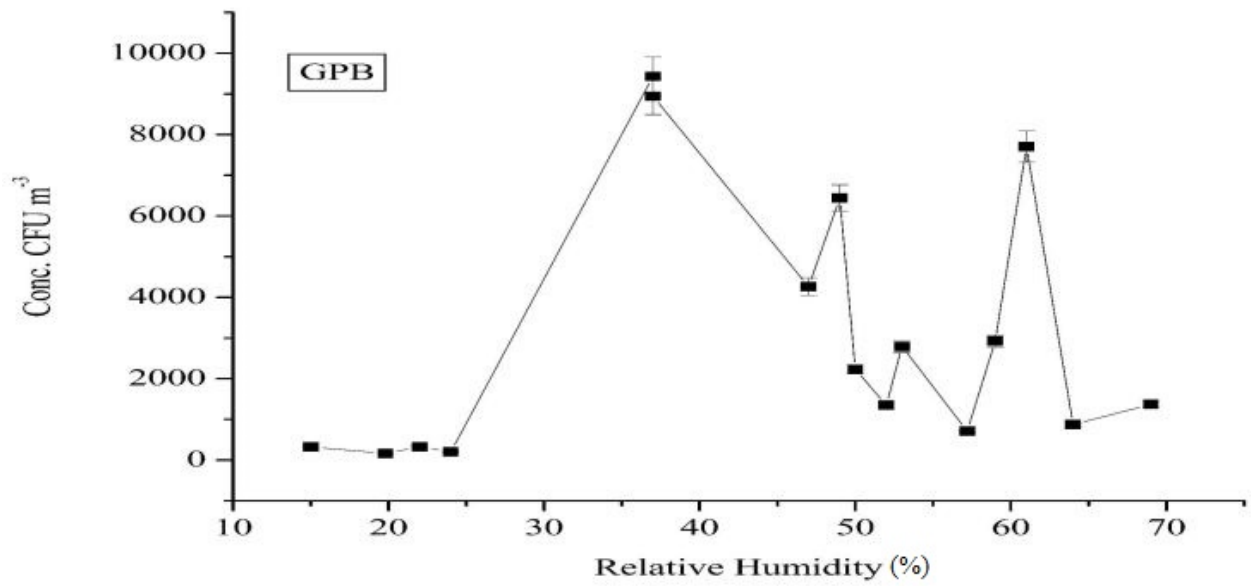


Figure S6: Variation of Gram Positive bacterial concentration with Relative Humidity