



Aerobiological study in Peruvian cities

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Background: The knowledge about seasonal and annual fluctuations in airborne pollen and fungal spores in any geographical area is essential for effective diagnosis and treatment of allergic diseases.

Objective: Our objective was to identify and register the most important aeroallergens in the atmospheres of three Peruvian coast cities.

Methods: The pollen and fungal spores' counts were made according to standardized technique with Burkard spore trap for 7-days and the analysis procedures recommended by the Spanish Aerobiology Network. The traps were installed on the roofs of buildings of urban areas, to 20 m high, in Lima, Chiclayo and Tacna cities. The sampling was performed from October to December 2014 (spring in Peru).

Results: The three most important fungal spores during the period of sampling were *Nigrospora*, *Cladosporium herbarum*, and *Alternaria alternata*. We found three leading taxa: *Poaceae*, *Oleaceae*, and *Compositae* (*Artemisia spp.*), with different percentages between cities. Also, were found other pollens in less counts.

Conclusions: The population of these Peruvian urban coast cities is exposed to several aeroallergens with predominance of fungal spores. The results of this study should be compared with data from the forthcoming years, to identify seasonal and annual fluctuations, and extend the traps to other locations. We report the first aerobiological comparative study of airborne pollen and fungal spores in different cities of Peru, performed with Burkard spore trap for 7-days technique.

Keywords: Aeroallergens; Airborne pollen; Fungal spores