



Airborne *Alternaria* spores in four monitoring stations from Romania in 2005

IANOVICI Nicoleta, DUMBRAVĂ Mălina – Universitatea de Vest Timisoara

A study of the aerobiology of fungal spores is of direct relevance to the medical community due to their role in respiratory diseases such as asthma, allergic rhinitis, chronic bronchitis, and hypersensitivity pneumonitis. The spores of the mitosporic-fungi *Alternaria* and *Cladosporium* are some of the most abundant allergens world-wide and the prevalence of allergical reactions to them shows great interregional variations. *Alternaria* species are parasites or saprophytes on plants and are widely distributed. *Alternaria alternata* is considered to be one of the most important aeroallergens. Because of its importance to human health, many studies have examined *Alternaria* and in conjunction with other fungal spores or with pollen. The aim of our study was to determine the concentrations of *Alternaria* spores in four urban areas in Romania: Brașov, București, Craiova and Timișoara. This investigation is the first for România. The sites differed in habitat characteristics, such as urbanisation level, vegetation and microclimate. In this study, a volumetric method and a Lanzoni sampler were used. The daily and maximum hourly concentrations in spores/m³ of *Alternaria* were recorded. The spore is present in large numbers throughout the summer. The higher fungal spore concentrations occur in Craiova. The recorded levels of airborne spores in București and Craiova were close the concentrations that are accepted as threshold levels for provocation of clinical responses. The *Alternaria* conidia is a large spore which is easy to identify, perhaps daily spore concentrations should be made more readily available to clinicians and the general public in the România.