European Respiratory Society
Annual Congress 2012

Abstract Number: 1218
Publication Number: P1035

Abstract Group: 6.2. Occupational and Environmental Health
Keyword 1: Environment **Keyword 2:** Allergy **Keyword 3:** Air pollution

Title: Penetration and remanence of pollen in dwellings

Prof. Denis 8837 Charpin denis-andre.charpin@ap-hm.fr MD , Mr. Christian 8838 Pichot pichot@avignon.inra.fr , Mr. Michel 8839 Calleja michel.calleja@supagro.inra.fr and Dr. Vincent 8840 Penel penelvin@wanadoo.ftr MD . [1] Department of Pneumonology & allergy, Aix-Marseille University, Marseille, France, 13015 ; [2] Unité de Recherches forestières Méditerranéennes, INRA, Avignon, France, 84914 ; [3] Institut des Hautes Etudes de la Vigne et du Vin, IMontpellier SupAgro, NRA, Montpellier, France, 34060 and [4] Laboratoire des Pollens, Laboratoire de Microenvironnement, Valence, France, 26001 .

Body: Indoor pollens come from outdoor pollination but the temporal relationship between both phenomenons is poorly documented. In this study, we ried to compute the influx and remanence of various pollen species throughout the pollen season. Material & methods Five families living in the same street of a suburban community volunteered to participate. Monitoring of indoor pollen counts was performed at 4 occasions (February, April, May and August 2008) through sampling of house-dust from the living room. During the same period, outdoor pollen counts were monitored using a Burkard pollen trap. Results Variation of pollen counts over time. Overall, there was a strinking increase in indoor pollen counts during each pollen season: cypress (February), plane tree (April), Poaceae and olive.tree(June).However, away from the pollination period, there was still high number of pollen grains for the main allergenic. Between species differences Two groups of species can be defined on the basis of these results: the first group includes Platanus, Quercus and Cupressaceae which exhibit high remanence (0.4) and a low penetration, and the second group contains species with high penetration but various remanences). Time period effect Increasing values were observed along seasons: from very low (2.6, p value=3%) in winter, to moderate in spring (13 to 15, p value=0.001% and 0.001%) and hudge in summer (204, p value=0.10%). Remanence coefficients were never significant. Discussion Both pollen species, housing and the sampling time period have bearing on penetration and remanence of pollen grains indoor. These pollen could then interact with the allergic patients who could get symptom away from the pollination period.