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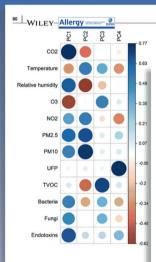
EUROPEAN JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY

Alergy

**Fditor-in-Chief** Cezmi Akdis

Abstracts from the European Academy of Allergy and Clinical Immunology Digital Congress, 06–08 June 2020

ABSTRACT



0756 | Can the birch pollen be more aggressive in the poll

Ziemianin M<sup>1</sup>; Myszkowska D<sup>1</sup>; Waga J<sup>2</sup>; Skoczowski A<sup>3</sup>; Czarnobilska E<sup>1</sup>

Czamouiska E<sup>-2</sup> <sup>1</sup>Department Of Clinical and Environmental Allergology, Jagiellonian University Medical College, Kraków, Poland; <sup>2</sup>University of Agricultu in Kraków, Kraków, Poland; <sup>3</sup>Pedagogical University of Kraków, Kraków Poland

round: Chemical components of air pollution can influ plant pollen in two different ways (i) directly, causing some chang in the surface morphology of pollen, facilitating the penetration inorganic particles and the release of the natural allergens; (ii) directly through the modification of secondary structure of bin anexty intogen the mountation of secondary structure of an pollen allergenic proteins. The aim of the study was to estimate variability in the protein content and their subunits composition pollen collected from the birch trees growing in environments of ferentiated regarding the air pollution levels.

Method: The study was performed in southern Poland in 20 2019. Male inflorescences were collected from the 20 selected sites (3 trees per each) before pollen release estimated based or

phenological observations. Protein composition was analysed by prenougcan observations, protein composition was anarysed by SDS-PAGE and densitometric analyses, while the concentration of Bet 11 was evaluated by fluoroenzymeinmunoassay. The obtained results were estimated at the background of the PM10 level and the hirth nollen ceasons in Krahw.

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Method. Pollen was harvested (in 2018 and 2019) from trees grow-OA5 29 ing in the urban area of Evars (I8575099, 79056 area 12 km outside the city, the Hordade da Mill the ESA sent using the TROPOM instrument. For pollen product the esh vas monitored by the ESA sent using the TROPOM instrument. For pollen product in plase II trees in each site. Anthers (3) from each inflorescent ensited in 70% ethanol. Microscopy sides with the site prevand and pollen extracts. B al expression was determining pollen extracts. B al expression pollen extracts. in pollen extracts. Pla a1 expression was determin ELISA. Immunoreactive bands were identified by w era from sensitized individuals sera from sensitized individuals. Results: Tropospheric NO<sub>2</sub> reached 2.40x10<sup>-05</sup> mol and 2.35x10<sup>-5</sup> mol.m<sup>-2</sup> in Mitra (fig. 1). The average tion was similar in both sites, but the dispersion of

higher in Évora (Évora: 10,977-39,273 pollen/anth 25,290 pollen/anther). Pollen harvested in Évora sho 23,249 poliervarturer), Polier narvesteo in Evora bit lower protein content (see table 1) and ~20% high (see table 1). Six IgE-reactive proteins have shown in pollen harvested in Évora (MW 73.7 ± 4.6; 47.8 ± 26.7 ± 0.4; 24.4 ± 0.9; 17.4 ± 0.6 kDa), three of thos to known allergens Pla a1 (~48 kDa confirmed by V Pla TLP (~24 kDa) and PLa a8 (~17 kDa). n: These results show that, despite

Conclusion: These results show that, despite to proximity, a higher concentration of air pollutants i environments and this is affecting plane pollen pro-chemistry, including the augmented expression of s It suggests that higher allergenic pollen in urban env cause of the highest prevalence of respiratory alle





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DPL normalized expression of genes associated with fibrosis, remodeling, and barrier function (Figure), DPL downregulated the treatment did not induce any significant gene expression Conclusion: In this phase 2 dupilumab study, EOE patients tered BL transcriptomes, consistent with previously published Treatment with dupilumab normalized expression of genes ciated with remodeling, fibrosis, and barrier function in adult Eol patients, in line with study findings of reduced symptoms and histo logical disease characteristics

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0959 | Serum levels of soluble interleukin-2 receptor and thymus and activation-regulated chemokine in non-IgE-mediated gastrointestinal food allergies

Arakawa N; Takizawa T; Yagi H; Ishige T; Yamada S; Sato K; Nishida Y; Tatsuki M; Arakawa H artment of Pediatrics, Gunma University Graduate School of Medicine, Maebashi, Japan

Background: Non-IgE-mediated gastrointestinal food allergies (non-IgE-GI-FAs) is characterized by gastrointestinal symptoms: vomiting, diarrhea and bloody stools. Although its pathology is unclear, non-IgE-GI-FAs are associated with elevated serum level of proinflam-Ige-to-1-As are associated with elevated serum level or promnammatory cytokines. During searching for genes specifically associated with pathology of non-IgE-Gi-FAs, we found that mRNA levels of interleukin (IL)-2 receptor (IL-2R)  $\alpha$  and thymus and activationregulated chemokine (TARC) were elevated in antigen-stimulated peripheral blood cells of non-IgE-GI-FAs patients. However, little is known about whether IL-2R $\alpha$  and TARC are elevated at protein levels in serum of patients with non-IgE-GI-FAs and associated with its disease status.

Method: Five patients with non-IgE-GI-FAs were retrospectively recruited at Gunma University Hospital from 2011 to 2015, whose serum had been collected at the onset and remission phases, and

#### ABSTRACT

stored. The patients were diagnosed based on the results of elimina tion and provocation test, and lymphocyte stimulation test. Serum tion and provocation of the and the samples from A heal they control several sources (2004) EUR (2014). 2R) and TARC concentrations were determined with enzyme-linked immunosorbent assay. Severity of the patients was graded according to the filterature (Yagi et al. Allergo int 2019). The study was approved na (!- ' +y Hospital. v the e\*' mitt

vmntomatic natients them was signifi-) (P = .016 and

### physiology and

ABSTRACT

1154 | Eosinophilic gastrointestinal therapy in a randomized contr

Chinthrajah RS; Fernandez-Becker N; Ka Cao S; Zhang W; Boyd S; Manohar M; Galli School of Medicine, Stanford University, Stan

Background: Oral immunotherapy (OIT) is p ment of food allergy; however, gastrointestin mon and eosinophilic esophagitis (EoE) is a potential co In a randomized controlled trial involving peanut OIT, we a characterized eosinophilic gastrointestinal responses Method: Twenty adult subjects with peanut allergy were rand onized to peanut OIT (n = 15) and placebo (n = 5); one additiona subject withdrew before randomization. Serial gastrointestinal bi opsies were obtained at baseline (n = 21, 0 weeks), following dose escalation (n = 10, 52 weeks), and maintenance (n = 12, 104 weeks). Exclanation (i) = 20, 32 weeks), and maintenance (i) = 22, 104 weeks), Endoscopic findings were characterized using the EOE endoscopic reference score (EREFS). Biopsies were assessed for eosinophils per high-power field (eos/hpf) and other pathologic features using EOE Histologic Scoring System (EOEHSS). Immunohistochemical staining for eosinophil peroxidase (EPX) was performed and quantified using

for essinghil peroxidase (EPX) was performed and quantified using automated image analysis. Results: No subjects reported gastrointestinal symptoms at base-line; however, all subjects had dilated intercellular spaces and as participants had s 16 sec/hyf (respongus). Peanut OT indued sig-nificant transient eosinophilic inflammation at 52 weeks in the proximal, middle, and distal esophagus; whereas no significant changes were seen in the placebo arm. These changes corresponded with

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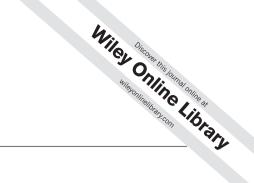
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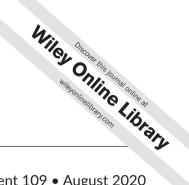
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