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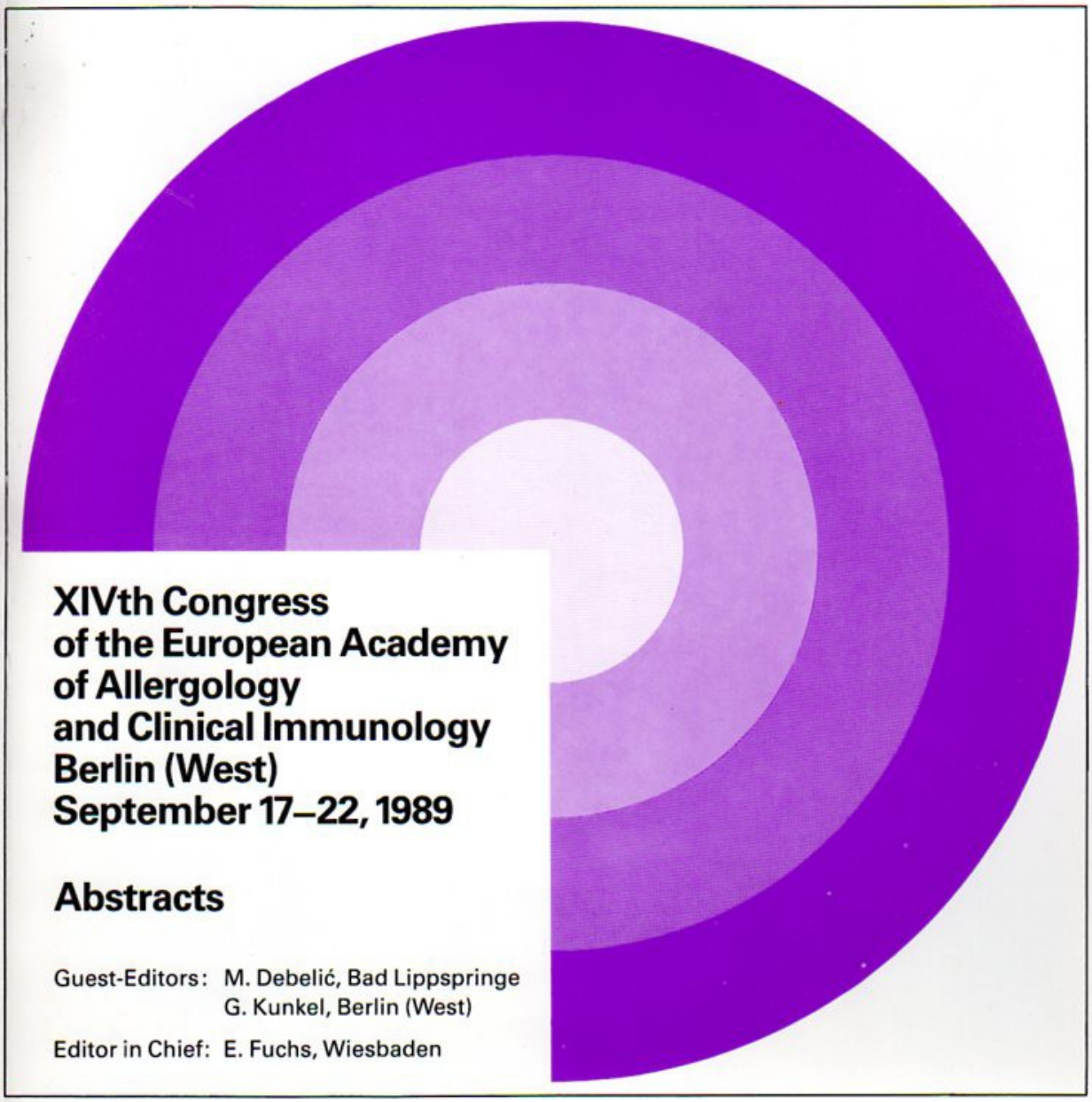

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Abstracts

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P2 16.15
Comparison between the Pharmacia CAP System and the Phadezym RAST in patients with common allergic diseases

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The Pharmacia CAP system represents a new testing methodology for the measurement of specific IgE in serum or plasma. To examine the concordance of both methods 468 determinations of patients with allergic diseases were titrated. The allergen specificity was evaluated by skin testing. Our investigations indicate that results revealed by the CAP system were evaluated one RAST score higher than those in Phadezym RAST. Both methods showed a correlation of 79.9 %. According to the RAST scores our results showed concordances for RAST score 0=86 %, score 1=78 %, score 2=75.7 %, score 3=87.7 % and score 4=100 %. Due to the fact that the CAP system ranked one RAST score higher than the Phadezym RAST, results were considered as deviation when ranked higher than three or lower than one RAST score in the CAP system. Total deviation of the CAP system to the Phadezym RAST was 5.6 %. The CAP system appears to show a higher sensitivity in comparison to the Phadezym RAST for clinically common high RAST scores. In summary our results indicate a slightly higher sensitivity for the CAP system. Therefore the new test system virtually provides additional information for the clinicians.

P2 16.16
Parallelism and hysteresis between mite control and disappearence of allergen-containing mite excreta resulting from the first and later mite populations in different textiles during more than three years

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The report concerns new results about mite control with acaricidal products based on solidified benzylbenzoate (Acarosan) in four textile objects in a house of an allergic patient. We assessed during 3-4 years the mite numbers in dust samples and the mite excreta contents of the textiles using the guanine detection method (Acarex-test) as an indication for the allergen content of the dust samples. In every case the existing mite populations were destructed completely in 1-2 weeks whereas the decrease of mite excreta needed a longer period of time depending on structure and volume of the textile: The guanine values dropped after 3-7 weeks by carpets and especially after 13 months by upholstery. For mattresses no essential changement was observed during 28 month.
After second treatments in the 10. resp. 4. month new mite populations were observed on the carpets between the 16. and 26. month. A further new mite population appeared on one of the carpets in the 38. month. The new mite populations are to be detected via guanine assessment too, if they existed during a certain time. Thus, not the mites represent the risk for patients, but mites as allergen producers over a period of time. Disappearence and appearence of allergen containing mite excreta follow mite control and new growing-up of mites, but in each case after a specific time-lag, depending on the textile structure and the permanence of mite presence.

P2 16.17
Allergic and pseudoallergic reactions to foods in atopic eczema patients

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The incidence of allergic and pseudoallergic reactions to foods and food additives was investigated in 55 atopic eczema (AE) patients and 20 healthy controls before and after challenge meals (CM). Food specific IgE-mediated reactions were recorded in 43 cases; the frequency of positive results and correlation with the clinical symptoms showed a significant increase after repeated CM. An activation of the complement system on the "alternative pathway" became evident in 29 patients with an obvious rise of the C3-activator fraction (factor B) 15 h after CM ($p<0.002$). This was associated with increasing serum IgE-CIC levels in 32 atopic patients after CM. Raised serum IgG-CIC concentrations ($p<0.005$) were detected in 22 patients and increasing levels of food-specific IgGA antibodies were further recorded in 42 % of the patients after CMs. By contrast, almost no changes were registered in the control group. The individual reaction pattern of food-specific IgE and IgG4 antibodies as well as the clinical significance of the above data are discussed. Serum acute phase proteins (α1-antitrypsin, α 2-macroglobulin, haptoglobin and caeruloplasmin) showed a significant increase after CM ($p<0.01$) in the atopic group, too. We also noticed higher plasma histamine levels (RIA-Test), 30 min following CM or oral provocation with lactose, sucrose, tyramine, serotonin or phenylethylamine. The intolerance reactions to sugars were associated with dramatic decreased dissacharidase activities ($p<0.001$) and significantly increased counts of pathogenic yeasts and bacteria in the small bowel of the AE patients. On the other hand the elevated plasma histamine levels in fasting AE patients and the intolerance reactions to the above biogenic amines suggested defective enzyme activities, (MAO, DAO, NMT) in these cases. Recent results from our laboratory demonstrate significantly reduced DAO ($p<0.001$ and MAO-B ($p<0.05$) activities in platelet-rich plasma of AE patients. The role of different enzyme inhibitors and activators as triggers of the above pseudoallergic reactions is emphasized.

P2 16.18
Activity of the PAF-antagonist WEB 2170 in several models of anaphylaxis

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The selective hetrazepinoic PAF-antagonist WEB 2170 has been used to study the pathophysiological role of PAF in several models of anaphylaxis in mice and guinea pigs.

Methods and results: (1) In actively sensitized mice the PAF-antagonist WEB 2170 (1.0 - 10 mg/kg p.o.) protected mice from anaphylactic death in a dose-dependent manner. (2) Using three different sensitization protocols (two modified from Andersson, ovalbumin (OA) in $Al(OH)_3$, in the absence and presence of cyclophosphamide; one protocol using 100 mg OA i.p and s.c.) active anaphylaxis in guinea pigs was induced by i.v. 100 mg/kg OA in the presence of small doses of the antihistamine mepyramine. In all three series additional treatment with oral or i.v. WEB 2170 protected not only from anaphylactic death, but also from the remaining anaphylactic bronchoconstriction and blood, pressure changes (including anaphylactic hypotension). (3) When guinea pigs were passively sensitized with a heterologuous antibody via the tracheal route, then challenged by i.v. ovalbumin (100 mg/kg) 24 h after sensitization in the presence of 0.003 mg/kg i.v. mepyramine, additional treatment with tracheal WEB 2170 at 0.1 - 1 mg/kg protected the guinea pigs not only from anaphylactic death but also from the remaining decrease in respiratory flow and changes of blood presure in a dose-related fashion. (4) Increased levels of PAF-like activity (20-50 ng paf/whole lung) could be detected in the lungs removed from antigen-challenged animals and analyzed from PAF-like activity according to Arch. Pharmacol. 338, Suppl. R56, 1988.
In conclusion the results suggest a causative role for PAF in active and passive anaphylaxis since (i) PAF cannot only mimick anaphylaxis but also (ii) anaphylaxis can be inhibited by the selective PAF-antagonist WEB 2170. Furthermore (iii) increased PAF-like activity can be detected in the lungs removed from antigen-challenged PAF-animals.