Introduction
The prevalence of food allergies has increased worldwide within the past decades. Commonly used *in vitro* routine diagnostic tests basically document sensitization, but it is known that they are not a safe proof of clinical relevance. Therefore, the oral food challenge is still considered as diagnostic gold standard despite being costly and potentially dangerous. As blood-circulating human basophils are critical in IgE-mediated allergic reactions their use in diagnostic measurements such as the basophil activation test (BAT) might improve risk assessment and management of allergic individuals. A major drawback, however, is that they represent less than 1% of total leukocytes within peripheral blood and thus are difficult to identify.

Methods
Due to its sensitivity and specificity, flow cytometric analysis of peripheral blood was developed to monitor basophil activation status after diverse antigen-specific stimulations. Different gating strategies for identification of human basophils have been established using various membrane surface markers and in general, consensus about the use of at least CD203c and CD63 exists. However, there is an ongoing debate which markers are mandatory and which ones are dispensable to unambiguously identify basophils from other blood cells. In times where cost reduction of diagnostic tests is essential, we revisited the idea of a minimum of marker usage without reducing the quality of human basophil identification or BAT.

Results
In combination with all possible light scattering properties (area, width and height) we are able to separate human basophils from all other leukocytes using CD45 and the Fc epsilon RI alpha (FcεRIα) subunit. To proof that these two markers are sufficient for basophil identification and to measure their activation (CD203c, CD63) within a BAT, we additionally
stained for classical basophil markers (e.g. CD123\textsuperscript{pos}, HLA-DR\textsuperscript{neg} and LIN\textsuperscript{neg}) and performed BATs with formyl-methionyl-leucyl phenylalanine, polyclonal goat anti-human IgE and PBS as controls.

**Conclusion**
Four markers (CD45, FcεRIα, CD203c and CD63) in combination with light scattering properties are highly sufficient for their usage within BATs: to identify human basophils from peripheral blood (CD45, FcεRIα) as well as their activation status (CD203c, CD63). Applying our new gating strategy ensures efficient cost control within human diagnostic tests.

**O2 Basophil Activation Test For Staphylococcus Enterotoxins In Severe Asthmatic Patients**

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Monaldi Hospital, Naples, Italy

**Keywords**: Basophil Activation Test, Staphylococcus, Enterotoxins

**Introduction**
Recent studies suggest that antibodies IgE to Staphylococcus aureus enterotoxin represent a risk factor for severe asthma even in asthmatic patients classically considered non atopic. Staphylococcus aureus enterotoxins can stimulate specific IgE responses but, acting as superantigens, they can also promote a polyclonal IgE response, airway inflammation, and bronchial hyperresponsiveness. In comparison with the measurement of serum specific IgE, the Basophil Activation Test (BAT) can give more relevant results because it measures only functional IgE capable of binding and activating basophils. BAT for staphylococcus enterotoxins has never been performed until to now.

**Methods**
We recruited 35 patients with severe asthma treated according to GINA guidelines. They were tested for skin prick test to common aeroallergens, total and specific IgE to staphylococcus enterotoxins (ImmunoCAP) were measured. Nasal swabs and sputum cultures were obtained. Basophil activation tests (BAT) using CD203c expression was done after stimulation with different concentrations of enterotoxins A, B, and toxic shock syndrome toxin (Sigma).

**Results**
BAT for at least one of Staphylococcus aureus enterotoxin was positive in 13 among 35 severe asthmatic patients (37%) while specific IgE to staphylococcus enterotoxins were detected in 18 patients (54%). The percentage of positive BAT for SA enterotoxins was higher in non atopic than in atopic severe asthmatic patients (42 \% vs 34\%). No relationship was observed between staphylococcus aureus nasal colonization and the presence of IgE and/or the positivity of basophil activation test for staphylococcus enterotoxins.

**Conclusion**
In this study we demonstrate the involvement of specific IgE mechanisms in severe asthmatic patients sensitised to staphylococcus enterotoxins. The potential benefit of anti-IgE therapy in this subgroup of severe asthmatic patients has to be investigated.
O3 Basophil Reactivity And Sensitivity To A Recombinant Birch Allergen Bet V 1.0101 In Untreated Birch Allergic Blood Donors

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2. Euroimmun AG, Lübeck, Germany

Keywords: Birch, Allergy, Bet V 1, Pollen, Basophil Activation Test

Introduction
Background and Aim: Reactivity of basophil granulocytes to pollen allergens can be measured in the follow-up of specific allergen immunotherapy (SIT) to pollen. The aim of our study was to assess basophil-related allergenicity of a recombinant Bet v 1 in untreated birch allergic blood donors before birch pollen season.

Methods
Probands and Methods: We tested 60 blood donors with self-reported symptoms of allergic pollinosis during previous birch seasons. Probands have never been treated with pollen SIT. Blood samples were collected before birch pollen season. To measure basophil degranulation we used Flow CAST® (Bühlmann Laboratories AG, Switzerland) with CD63 detection as degranulation marker. Basophils were stimulated with commercial birch extract t3 (Bühlmann Laboratories AG, Switzerland) in the standard concentration of 22.5 ng/ml and with Bet v 1 (Euroimmun AG, Germany) in concentrations of 10 000, 1 000, 100, 10, 1 ng/ml and 100, 10 and 1 pg/ml.

Results
Out of 60 probands tested, 2 were non-reactors (3.3 %). Out of 58 probands, 12 did not show any basophil reactivity to either t3 or Bet v 1. Forty-six probands showed the following reactivities: (in % of activated basophils; allergen; concentration; 25; 50; 75 percentil) birch extract t3; 15 ng/ml; 66.9; 75.9; 84.1; Bet v 1: 10 000 ng/ml; 56.1; 78.4; 86.8; Bet v 1: 1 000 ng/ml; 42.9; 67.7; 78.9; Bet v 1: 100 ng/ml; 36.0; 58.1; 70.3; Bet v 1: 10 ng/ml; 64.6; 76.8; 84.7; Bet v 1: 1 ng/ml; 70.6; 87.0; 89.8. Basophil sensitivity could be calculated in 8 individuals using three additional Bet v 1 concentrations 100, 10 and 1 pg/ml giving median value of effective concentration EC50 (pg/ml) 70.05 (min 23.8; max 418.6).

Conclusion
The recombinant Bet v 1 tested has a strong allergenic potency and can trigger basophil degranulation in birch pollen allergic individuals in concentrations down to picograms per milliliter. It can be a promising allergen molecule for in vitro testing of basophil reactivity during birch pollen SIT.
Oral Presentations, Session II – Drug Allergy 12:05 – 13:00

O4 Diagnosing Cefazolin Hypersensitivity: Lessons From Basophil Activation Test.

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Keywords: Allergy, Basophil, Cefazolin, CD63, CD203c

Introduction
In the absence of a cefazolin-specific IgE assay and provocation tests with intravenous cephalosporin being hazardous, diagnosis of immediate cefazolin hypersensitivity predominantly relies upon history and skin tests. Validation of cefazolin skin tests has focussed on assessing the irritating potential in healthy (exposed) control individuals and data on sensitivity of cefazolin skin testing remain scarce. Therefore, the availability of another cellular-based diagnostic test could be of interest.

In this study we sought to evaluate the basophil activation test (BAT) in cefazolin hypersensitivity, using CD63 and CD203c as activation markers.

Methods
18 patients suffering from perioperative anaphylaxis after intravenous injection of cefazolin and demonstrating a positive skin test for the drug were selected. 17 individuals exposed to cefazolin during anaesthesia with a negative skin test for the drug, and another identifiable cause served as exposed control individuals. Basophil activation with cefazolin was analysed flow cytometrically using both CD63 and CD203c as activation markers.

Results
Only patients demonstrated a dose-dependent up-regulation of one or both surface markers with the highest difference between patients and controls at a concentration of 1100 µmol/L. TG-ROC analyses between 16 patients responsive in BAT and 17 exposed control individuals at stimulation with 1100 µmol/L revealed a diagnostic threshold value of 5 % for both CD63 and CD203c net upregulation. However, for this threshold the CD63-BAT was positive in only 6/16 patients (sensitivity 38%, 95% CI 15%-65%) and 1/17 control individuals (specificity 94%, 95% CI 71-100%), whereas the CD203c read-out was positive in 12/16 patients (sensitivity 75%, 95% CI 47-98%) and 1/17 control individuals (specificity 94%, 95% CI 71-100%).
**Conclusion**

In the absence of a reliable sIgE assay, BAT is the sole *in vitro* diagnostic test for immediate drug hypersensitivity reactions to cefazolin. However, from our dual labelling experiments it appears that, unlike CD203c, appearance of CD63 is not a good marker for diagnostic use.

**O5 Autoimmunity Diagnosis In Cronic Spontaneus Urticaria**

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**Keywords**: Basophil, CD63, Urticaria

**Introduction**

The diagnosis of chronic Spontaneous Urticaria (CSU) is clinical. The physiopathology is still not fully known, but autoimmunity (AI) phenomena are evident in around 50% of the cases. Positivity of AI tests is associated with a bad prognosis.

**Methods**

90 patients with clinical diagnosis of CSU and 20 controls were studied. Autologous serum skin test (ASST) was performed in 79 cases and in 7 individual controls. Basophil activation test (BAT) was performed in 90 cases and 20 individual controls.

Four patients were treated with Omalizumab, and the immunological response was monitored by BAT along the treatment. In them, BAT was basally performed and repeated one, two and six months after treatment.

BAT was performed adding the serum of a CSU patient to a whole blood sample of healthy donor. Each serum is tested with 3 to 5 blood samples. Serum saline and FMLP were used as negative and positive controls, respectively. An activation of almost 15% of basophils was considered for a positive result.

**Results**

A sensitivity of 46.83% and 42.2% was obtained for ASST and BAT, respectively. The results were coincident for both tests in the 36.66% of cases (18 patients with both negative tests/15 patients with both positive tests). 57 patients had almost one positive test (63%,33%). BAT was negative in all the healthy controls, and one false positive result was obtained with ASST.

In three of the four monitored cases, the clinical evolution was favourable with omalizumab treatment and the BAT became negative after the first month of treatment.
Conclusion
The autoimmune study in SCU helps patients and their primary cares clarify about the “endogenous” origin of the disease and is useful for the diagnosis assessment in difficult cases. The BAT is easier to interpret than ASST and there is no risk of making mistakes while handling the samples. Adding the BAT to the routinely study increases the sensitivity, can be performed although taking antihistamines and can be used to monitor the efficacy of immunomodulatory treatments.

O6 Basophil Activation Test In The Diagnosis Of Argas Reflexus Allergy

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Introduction
The European pigeon tick, *Argas reflexus*, is an urban pest which parasites urban pigeons. The tick sometimes may bite humans, causing a wide range of reactions, from local (itching, edema, erythema) to severe, IgE mediated, systemic reactions. Pigeon tick allergy is not sufficiently taken into account in the differential diagnosis of severe anaphylaxis, as allergen extract for determination of specific IgE is not commercially available.

Methods
Because of the growing number of pigeons in Middle and Southern Europe cities, infestations of pigeon breeding sites by *Argas* may became a public health problem, we decided to perform Basophil Activation Test (BAT), together with IgE-immunoblot and ELISA, to assess whether the test can be useful to diagnose allergy to pigeon ticks. IgE-immunoblot, ELISA and BAT have been performed by using the recombinant allergen, r Arg r1, and whole body tick protein extract in three patients who reported anaphylaxis from pigeon tick's bite.

Results
In all the 3 patients skin prick tests and specific IgE to common inhalant, food and Hymenoptera allergens were negative. IgE antibodies to *Argas* whole extract were searched for by IgE-immunoblot.

Specific IgE were quantified by ELISA using the recombinant allergen, r Arg r1. Patient 1, who had grade 1 anaphylaxis, was found to have 3.4 kUa/L. Patients 2 and 3, who had grade 2 and 3 anaphylaxis, were quantified to have 33 and >100 kUa/L. BAT was performed both with protein extract and with r Arg r1 at three different concentrations and resulted in basophil activation in all three conditions. The maximum upregulation of CD63 on the patient’s basophils membrane, was obtained with 0.1 µg/ml for both recombinant allergen and protein extract, while it was negative in healthy controls (means of patients CD63 positive cells: non stimulated 0.03±0.05; IgE 19.8±11 vs r Arg r1 46.1±1.2, p=0.01; IgE vs protein extract 53.9±4, p=0.007; means of healthy controls CD63 positive cells: non stimulated 0.1±0.1; IgE 35.4±16.2; r Arg r1 0.1±0.1; protein extract 0.03±0.05).
Conclusion

Argas whole body extract and rArg r1, the major pigeon tick allergen, were able to activate basophils in 3 patients with allergy to Argas reflexus. As there is no commercial test available for quantification of specific IgE to Argas, BAT may be a useful test to diagnose Argas allergy.

O7 Differential Sensitization Patterns To Recombinant Antigen 5 Allergens From 7 Allergy-Relevant Hymenoptera Species In IgE And Basophil Activation Testing

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Keywords: Antigen 5, Hymenoptera Allergy, Yellow Jacket Venom, Basophil Activation Test, Cross-Reactivity

Introduction

Cross-reactivity between venoms of different species in insect venom allergy can be a diagnostic challenge with regard to the relevant hymenoptera species for immunotherapy. The basophil activation test (BAT) can be helpful to make a correct diagnosis in such cases.

Objective: To address immunological IgE cross-reactivity of 7 recombinant antigens 5 of the most important Vespoidea groups on a molecular level by different diagnostic setups including basophil activation test.

Methods

The antigens 5 of yellow jackets, hornets, European and American paper wasps, fire ants, white-faced hornets and Polybia wasps were recombinantly produced in insect cells, immunologically and structurally characterized. Their sIgE cross-reactivity was assessed by different serological tests (ImmunoCAP, ELISA, cross-inhibition). In the BAT (Flow CASTÒ) dose-response-curves with Ves v 5, Vesp c 5, Pol d 5, Pol a 5, Dol m 5, Sol i 3 and Poly s 5 were performed in 21 patients with yellow jacket venom (YJV) allergy.

Results

All recombinant allergens were correctly folded and immunoreactive. Structural models and patient reactivity profiles suggested the presence of conserved and unique B cell epitopes.
All CCD-free antigens 5 showed extensive cross-reactivity in sIgE analyses, inhibition assays and BAT. In BAT the YJV-allergic patients showed different activation profiles: 30% of the patients exhibited basophil activation in response to only Ves v 5 and/or Vesp c 5. The basophils of 55% patients were activated by either all or different combinations of antigen 5. Only for two patients the activation pattern was more distinct in response to other allergens than Ves v 5 and/or Vesp c 5.

**Conclusion**

In general the cross-reactivity of recombinant antigens 5 was more pronounced in ImmunoCAP measurements than in sIgE analyses and BAT. Dose-response-curves with the molecular allergens in BAT allowed a differentiated individual dissection of antigen 5 cross-reactivity.

**Oral Presentations, Session III – Food Allergy 15:20 – 16:15**

**O8 The Basophil Activation Test Reduces The Need For A Food Challenge Test In Children Suspected Of IgE-Mediated Cow’s Milk Allergy**

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**Keywords**: BAT, Cow’S Milk, Reduction Food Challenge Tests

**Introduction**

The golden standard for the diagnosis of cow’s milk allergy is the Double-Blind Placebo Controlled Food Challenge (DBPCFC) test. However, this test is not without risk, potentially causes discomfort, is time consuming and expensive. The objective of this study is to determine the reliability of the functional Basophil Activation Test (BAT) both for the initial diagnosis of cow’s milk allergy in infants and for determination whether the cow’s milk allergic child has outgrown the allergy. Consequently, the potential degree of reduction of challenge tests was determined.

**Methods**

97 cow’s milk BATs and specific IgE (sIgE) test were performed in 86 infants/young children (median 1.1, range 0.3-11.9 years), suspected of (persistent) cow’s milk allergy, who were qualified for a DBPCFC. The BAT was performed with cow’s milk extract and the major allergens casein, a-lactalbumin and b-lactoglobulin. Basophil activation was determined by CD63 up-regulation measured by flow cytometry.

**Results**

Most patients (66%) suspected of cow’s milk allergy had sIgE <0.35 kU/L. In cow’s milk IgE sensitized children the BAT had a positive and negative predictive value of 100%. All non-IgE sensitized children had a negative DBPCFC and BAT, except for 5 patients. These latter showed delayed and relatively mild symptoms in the DBPCFC with a negative BAT, supporting a non-IgE mediated allergy in these children.
**Conclusion**

The BAT is reliable and cost-effective to diagnose patients with an IgE-mediated cow’s milk allergy. A risky, time consuming and expensive DBPCFC is redundant in these patients. For patients with a negative sIgE test and/or BAT an expensive DBPCFC is not necessary; in these patients we propose to consider a (double blind) extended (time) challenge test at home.

**O9 Synthetic Alpha-Gal Oligosaccharide On A Polymeric Carrier Can Elicit Degranulation Of Basophils In Patient With IgE Mediated Red Meat Allergy**

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**Keywords**: Alpha-Gal, Basophil Activation Test, Red Meat Allergy

**Introduction**

**Background and Aim**: Basophil activation test can be used in the diagnostics of IgE mediated red meat allergy directed to alpha-gal disaccharide. Hitherto, a naturally glycosylated beef thyreoglobulin or/and cetuximab, a chimeric mouse–human IgG1 monoclonal antibody have been used for stimulation. The aim of this experiment was to assess if a pure synthetic alpha-gal molecule can elicit basophil degranulation in a patient with IgE mediated anti-alpha-gal red meat allergy.

**Methods**

**Patient**: A 58-year old man with anaphylaxis several hours after ingestion of red meat. His IgE concentrations (Immuno Cap, kU/L) were: total IgE 608; f27 beef 0,65; f26 pork 0,41; f88 mutton <0,35; f285 elk/moose meat <0,35; o215 Gal-alpha-1,3-Gal Thyroglobulin, bovine 48. The patient could not undergo a red meat provocation.

**Methods**: We used the commercial kit (Flow CAST®, Bühlmann Laboratories AG, Switzerland) to assess basophil reactivity using flow cytometric measurement of CD63 expression. Basophils were stimulated in patient’s EDTA blood sample using beef and pork allergen extracts (Bühlmann Laboratories AG, Switzerland) at concentrations of 22.5 ng/ml in the stimulation culture. Synthetic alpha-gal (BioVendor, Laboratorní medicína, Czech Republic) was used in concentrations of 10 000, 1 000, 100, 10 and 1 ng/ml.
Results
Beef and pork allergen extracts could not elicit basophil degranulation at standard concentrations. Reactivities (per cent of activated basophils) with synthetic alpha-gal at above concentrations were 67; 60; 56; 47 and 9,2 thus giving effective concentration (EC50) of 4,4 ng/ml and CDsensof 22,7 ml/ng.

Conclusion
This is the first case described so far to demonstrate a reactivity of patient’s basophils to a synthetic alpha-gal molecule. However, the synthetic molecule must be tested for basophil reactivity in more patients with allergies to alpha-gal, in patients with other allergies and in control persons to further evaluate its diagnostic performance for alpha-gal sensitization/allergy.

O10 Could Basophil Activation Tests (BATs) have a role in diagnosis of Food Allergies?
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Introduction
Due to the high prevalence of food allergy there are increasing demands in clinical practice for a great accuracy in diagnosis to properly manage this disorder. In this regard component resolved diagnosis (CRD) provides a major step in improving the accuracy and sensibility of diagnosing IgE-mediated food allergy and specific IgG4 (sIgG) could help to evidence the other sensitizations to food. But this progress alone is not always able to provide the clinician all the needed tools to manage the patients to the best. Basophil Activation Tests (BATs) can be a further valuable support for the diagnosis of food allergies, in particular for their capacity to investigate reactivity of basophils to food additives.

Methods
Here we briefly describe a case of a 49-years-old woman referring post-prandial disorders and recurrent dermatitis episodes. From the patient’s history we explored for sensitisation to cow’s milk, meat, egg performing Total and specific-IgE (sIgE) to these food extracts (beef, pork, cow’s milk, casein, α-lactalbumin, β-lactoglobulin, egg, egg yolk and egg white, hazelnuts, almond). Subsequently a CRD by microarray and the specific IgG4 (sIgG) to the same food panels were titrated. Finally we performed the BATs by CD63 and CD203c, stimulating basophils by the same food extracts and additives (Sodium-Benzoate, SodiumNitrite, Potassium-Metabisulfite, Sodium-Salicylate and Glutamate)

Results
sIgE evidenced no positivity, whereas CRD revealed weak positivity to two molecules, Bos d 4 (0,36 ISU-E) and Gal d 4 (0,34 ISU-E) that are respectively α-lactalbumin and Lysozyme. There was high positivity by sIgG for Cow’s milk, α-lactalbumin, hazelnut, casein, egg yolk, and a slight positivity for β-lactoglobulin and ovomucoid.
Finally BAT by CD63 was weakly positive for cow’s milk and casein; otherwise CD203c evidenced a strong positivity to cow’s milk and Na-salicylate, and slight positivity to α-lactalbumin.

**Conclusion**
Combining these data it seems clear that the patient is "sensitised" to cow’s milk and egg. Nevertheless slgG detected a possible sensitisation to hazelnut. BATs were able to detect sensitization to milk, α-lactalbumin and casein, but not egg. In addition CD203c evidenced a strong sensitisation to Na-Salicylate, too. This is an additive used in many cosmetics products and in different long-life food as preservative. In fact patient abused of these types of foods due to the fact that her job forces her to dine out every day.

**O11 IMMUNE PROFILE AFTER OIT IN CHILDREN WITH COW’S MILK ALLERGY**

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**Keywords**: Cow’s Milk Allergy, Oral Immunotherapy, Flow Cytometry, Immunological Profile, Regulatory T Cells

**Introduction**
Cow’s milk proteins allergy (CMPA) is the most common food allergy in childhood with a significant impact on daily routines of children and their caregivers. In children with CMPA, successful oral immunotherapy (OIT) protocols have been described. However, the underneath immunological mechanisms allowing tolerance remains unclear. Regulatory T cells (Treg) are known for mediating tolerance and immune suppression, and their dysfunction has been already related to CMPA. We aim to evaluate the immune profile of children after OIT, comparing to healthy controls.

**Methods**
28 children with CMPA after successful milk-OIT and healthy controls have been recruited. Immune profile was evaluated by flow cytometry (lymphocyte subsets and CD4+CD25+hiCD127 dim Treg) in peripheral blood. Relevant clinical data were assessed and analysed (years of milk avoidance; accidental milk exposure; age at OIT start, OIT extent, time after OIT). Statistical analysis was performed with Graph Pad Prism 6. Significance was defined by p-value <0.05.

**Results**
At OIT beginning, patients mean age was 6.7 (±3.8) years, with a similar time interval for milk avoidance from diagnosis to OIT, median OIT duration was 5 [2;15] months, and mean time after OIT was 3.4 (±2.1) years. For age and sex, patients and controls presented no significant differences. Regarding lymphocyte subsets, patients presented lower B cells and higher NK cells (% and absolute counts).
As for Treg no significant differences were identified comparing patients to controls, nevertheless, patients presented lower expression of CD25 in T cells. Overall, a tendency for higher eosinophil counts was observed in the group of patients (Table).

**Conclusion**

The decreased expression of CD25 observed in CMPA patients could translate the impact of OIT protocols in diminishing T cell activation. Even though Treg apparently didn’t undergo alterations with OIT, our results suggest that OIT may have an impact on B cells. We hypothesize that B cells may have a central role in tolerance induction, leading to switch of IgE to IgG4, but also with regulatory cytokines production. In the future, we aim to study the circulating B cell compartment, including regulatory B cells, of CMPA patients and correlate it to the levels of IgE and IgG4 before and after OIT.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>CMPA Patients (n=28)</th>
<th>Controls (n=33)</th>
<th>P-value</th>
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<tbody>
<tr>
<td>Eosinophils (cells/µL)</td>
<td>389 [85;2033]</td>
<td>293 [49;1345]</td>
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<tr>
<td>B cells (% of lymphocytes)</td>
<td>12.6 [7.0;22.1]</td>
<td>17.0 [8.0;24.0]</td>
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<td>B cells (cells/µL)</td>
<td>352 [189;717]</td>
<td>450 [170;838]</td>
<td>0.0219</td>
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<tr>
<td>NK cells (% of lymphocytes)</td>
<td>17.3 [9.5;30.72]</td>
<td>11.0 [5.0;33.0]</td>
<td>0.0024</td>
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<tr>
<td>NK cells (cells/µL)</td>
<td>473 [124;1207]</td>
<td>300 [143;1418]</td>
<td>0.0042</td>
</tr>
<tr>
<td>CD3⁺CD25⁺ T cells (% of T cells)</td>
<td>10.3 [5.5;23.9]</td>
<td>14.4 [7.2;24.9]</td>
<td>0.0020</td>
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<tr>
<td>CD4⁺CD25⁺ T cells (% of CD4 T cells)</td>
<td>17.4 [8.5;34.6]</td>
<td>24.5 [14.1;40.8]</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>CD8⁺CD25⁺ T cells (% of CD8 T cells)</td>
<td>1.4 [0.4;4.5]</td>
<td>2.4 [0.6;6.6]</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>CD3⁺CD25⁺ T cells (cells/µL)</td>
<td>204 [124;329]</td>
<td>280 [162;502]</td>
<td>0.0029</td>
</tr>
<tr>
<td>CD4⁺CD25⁺ T cells (cells/µL)</td>
<td>192 [118;309]</td>
<td>260 [151;431]</td>
<td>0.0010</td>
</tr>
<tr>
<td>CD8⁺CD25⁺ T cells (cells/µL)</td>
<td>14 [3;27]</td>
<td>20 [5;83]</td>
<td>0.0004</td>
</tr>
</tbody>
</table>

Results presented as median and range. Groups were compared using Mann-Whitney test.

CMPA - Cow's milk proteins allergy