

antibody stimulation. Appropriate fluorescently tagged antibodies were used for identification of CD4+ cells and their subpopulations among proliferating PBMC. T cells of AD patients initially exhibit an activated phenotype with increased rates of CD3+HLA-DR+, CD4+CD69+ and CD4+CD95+ subsets and, interestingly, lowered proportion of CD4+CD25+ regulatory T cells. We have also found that dynamic proliferative parameters of in vitro stimulated CD4+ lymphocytes from AD patients resemble those of younger healthy individuals; namely, the length of cell cycle is increased while the time required by the cells for transition from G0 to first G1 phase - decreased compared to these parameters seen in healthy elderly. Concluding, CD4+ T cells from AD patients show features of activation and characteristically changed dynamics of proliferation that may participate in the development of the disease.

#### 142.

### Immunotropic effects of antileukotriene therapy in children with bronchial asthma

Jung A.<sup>1</sup>, Dąbrowski M.P.<sup>2</sup>, Stankiewicz W.<sup>2</sup>, Dadas E.<sup>1</sup>, Kalicki B.<sup>1</sup>

1. Military Medical Institute, Pediatric Clinic, Warsaw, Poland
2. Military Institute of Hygiene and Epidemiology, Immunology Lab., Warsaw, Poland

Methods: 26 children with asthma was tested clinically and immunologically before and after three-months treatment with montelukast. The tests comprised: 1.) in microcultures of PBMC estimations of response to PHA and to Con A, saturation of IL-2 receptors, T-cell suppressive activity (SAT index), monocyte activity in IL-1 beta and IL-1ra monokine production (LM index), 2.) in microculture supernatants quantitative determination of chosen cytokines (IL-1 beta, IL-1ra, IL-4, IL-10, IL-13) (ELISA Quantikine kits) and 3.) in PBMC population detection of particular cellular phenotypes (CD4, CD8, CD16/56, CD19, CD3/HLA-DR) (flow cytometry). Results: The percentage of B cells (CD19) in PBMC population decreased from 18 to 15%, the IL-4 and IL-8 concentrations in PBMC culture supernatants dropped significantly (403 vs 305 and 75 vs 36 pg/ml, respectively) and IL-10 concentration increased from 2091 to 2622 pg/ml. The treatment did not decrease the elevated production of IL-1 beta observed in PBMC cultures. Conclusions: Binding to the leukotriene receptors, montelukast inhibits the effector, leukotriene-dependent phase of inflammation in asthma. Additionally, the other immunotropic effects of montelukast, namely the decrease in the number of B lymphocytes, decrease of the production of proinflammatory cytokines (IL-4 and IL8) and increase of immunoregulatory IL-10, may also contribute for the observed clinical improvement in the treated patients.

#### 143.

### Different effects of enoxaparine and fraxiparine on the angiogenic activity of serum in mice

Jung L.<sup>1</sup>, Sommer E., Siwicki A.K.<sup>2</sup>, Skopiński P.<sup>3,4</sup>, Augustynowicz J.<sup>5</sup>, Skopińska-Różewska E.<sup>6</sup>

1. Orthopaedic Department, Institute of Rheumatology, Warsaw, Poland
2. Department of Microbiology and Clinical Immunology, Warmia and Mazury University, Olsztyn, Poland
3. Second Department of Ophthalmology, Medical University, Warsaw, Poland
4. Department of Histology and Embryology, Center of Biostructure Research, Medical University of Warsaw, Poland

5. Department of Plant Morphogenesis, University of Warsaw, Poland

6. Department of Pathology, Medical University of Warsaw, Warsaw, Poland

Thromboembolism is frequent and serious postoperative complication. Enoxaparine and fraxiparine, low molecular weight heparins (LMWH) are frequently used as anti-coagulants. There are some data, that heparin and its LMW derivatives may interfere with angiogenesis process. Mouse cutaneous angiogenesis test, introduced by Sidky&Auerbach is good and reliable method for in vivo evaluation of various pro- and anti-angiogenic substances. The aim of this study was to evaluate angiogenic potential of sera of mice treated with enoxaparine or fraxiparine for 2 days. Results: Sera of enoxaparine treated mice induced enhanced neovascular response, sera from fraxiparine treated mice presented lower angiogenic activity and lower VEGF content than sera of control animals. Conclusion: Further studies are necessary for evaluating the effect of these two LMWH on regenerative and reparative processes.

#### 144.

### Expression of cytokine receptors in malignant cells from human tumor cell lines

Kaczmarek M., Mizera-Nyczak E., Frydrychowicz M., Żeromski J.

Chair and Department of Clinical Immunology, University of Medical Sciences, Poznań, Poland

The tumor cells are able to synthesis and secretion of some cytokines and this way probably can influence microenvironment: the immune system and themselves in autocrine manner. The action of cytokines however is receptor-depending. In this study we assessed receptors for some cytokines in tumor cells from 19 human cell lines. In the cells genes expression for: IL2 - Ra,b,g, IL4 - Ra, IL10 - Ra,b, IL18 - R1,2, TNF - R1,2, TGFβ - R1,2,3 was evaluated by RT-PCR. Intracellular and surface expression of : IL2 - Ra,b, IL10 - Ra,b, TNF - R1,2 and TGFβ - R2 proteins was evaluated by flow cytometry. Molecular analysis showed the presence of mRNA for IL4 - Ra, TGFβ - R1,2,3, TNF - R1, IL10 - Rb, IL2 - Ra,b,g, IL18 - R1 in almost all studied cell lines, the presence of mRNA for TNF - R2, IL10 - Ra in some cases. It was possible to demonstrate mRNA for IL18 - R2 in only one of established cell lines. Flow cytometric analysis performed in the cell lines confirmed similar pattern of expression but only in single cells, with higher cytoplasmic than surface intensity. The highest expression was for TGFβ - R2 protein. However, the differences between mRNA and proteins expressions were shown for some receptors. The study confirmed the possibility of expression of cytokine receptors by tumor cells, and the possibility of interaction with microenvironment via this way, but variable expressions between molecular and proteins levels were noticed.

#### 145.

### Qualitative and quantitative analysis of TAP1 and TAP2 genes in cancer cells

Kaczmarek M.<sup>1</sup>, Rubiś B.<sup>2</sup>, Frydrychowicz M.<sup>1</sup>, Żeromski J.<sup>1</sup>

1. Chair of Clinical Immunology, University of Medical Sciences, Poznań, Poland
2. Chair and Department of Biochemistry and Molecular Biology, University of Medical Sciences, Poznań, Poland

The function of TAP (Transporters Associated with Antigen



Vol. 30 • Supplement • I • 2005

Central European Journal of

# IMMUNOLOGY

## 12<sup>th</sup> Congress of Polish Society of Clinical and Experimental Immunology

Abstracts

Lublin, Poland  
19<sup>th</sup>-22<sup>nd</sup> May 2005

POLISH SOCIETY FOR IMMUNOLOGY and FOURTEEN OTHER  
CENTRAL EUROPEAN IMMUNOLOGICAL SOCIETIES