

# THE STUDY OF APOPTOSIS OF CD4<sup>+</sup>CD25<sup>+</sup> T-CELLS IN PATIENTS WITH ATOPIC ASTHMA

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## *Summary*

The aim of this study was to analyze the change of apoptosis level of CD4<sup>+</sup>CD25<sup>+</sup> regulatory T-cells in patients with atopic asthma having dust mite allergy. Peripheral blood mononuclear cells (PBMC) from patients with atopic asthma (n=6) and from healthy donors (n=6) were stimulated by specific allergen (*Dermatofagoides farinae*) and by phorbolmiristatacetate. PBMC were labeled with anti-CD4, CD25, CD95 and Bcl-2 monoclonal antibodies. AnnexinV-propidium iodide tests were performed. Lymphocyte subpopulations and apoptosis were analyzed by flow cytometry. There was no response of CD4<sup>+</sup>CD25<sup>+</sup> T-cells of non-atopic individuals to specific allergen. However, in the presence of specific allergen, CD4<sup>+</sup>CD25<sup>+</sup> T-cells from atopic patients demonstrated an increase in apoptosis. This study demonstrates that allergen-specific apoptosis of regulatory CD4<sup>+</sup>CD25<sup>+</sup> cells might be involved in the pathogenesis of atopic asthma.