
Abstract
An increased traffic of circulating CD34+ Hemopoietic Precursors Cells (HPC) is an important feature of systemic allergic inflammation. Bacteria and bacterial products are capable of stimulating the transcription of the maturational cytokines IL12 and IFNs through the activation of Toll-Like-Receptor and the subsequent nuclear translocation of the NF-kappaB factor. In this study the probiotics differentiation/maturational effect potential on CD34+ HPC has been investigated. Fourteen consecutive subjects, 9M and 5F, aged 6-48, with clinical symptoms of asthma and/or conjunctivitis, rhinitis, urticaria, atopic dermatitis, food allergy and irritable bowel syndrome were enrolled. Allergen-specific serum IgE were found in twelve patients. Flow-cytometric measurement of peripheral blood CD34dim/bright HPC values were assessed before and after 30 days of therapy, consisting in the oral administration of one sachet a day of ENDOLAC (UCB Pharma, Turin, Italy). Each sachet contained a mixture of Lactobacillus acidophilus, L. delbrueckii and Streptococcus thermophilus for a total of $1 \times 10^9$ live bacteria. Circulating CD34+ cell values significantly ($p < 0.001$) reduced after the treatment. ENDOLAC, thus, may improve the efficacy of the standard treatments of allergic diseases.