REVIEWS

R. Shumnalieva, R. Rashkov and Zl. Kolarov. MicroRNA – NEW BIOMARKERS IN AUTOIMMUNE RHEUMATIC DISEASES
Summary. Microribonucleic acids (miRNA) are a new class, noncoding, short, endogenous RNA sequences with a length of 19-25 nucleotides. Although at this stage hundreds of miRNA are found, their function is still poorly understood. It is found that they regulate the expression of some genes that determine the production of cytokines (eg. tumor necrosis factor-alpha), affect central signal pathways (eg. type I interferon pathway) and different immunoregulatory cells (such as regulatory T-cells and other). These qualities define miRNA as key molecules in various physiological processes and in the pathogenesis of some malignant, rheumatic and other diseases. The significant stability and resistance of miRNA, the opportunity to be proven in different materials (tissues, blood and other body fluids) and their specificity for various diseases make them potential biomarkers for diagnose, assessment of activity, severity and prognosis of a disease.
Key words: miRNA, biomarkers, tumor necrosis factor, type I interferon pathway, immunoregulatory cells

I. Sheytanov, R. Rashkov and Ts. Petranova. SIMPONI (GOLIMUMAB) – NEW POSSIBILITY IN TREATMENT OF INFLAMMATORY JOINT DISEASES
Summary. Inflammatory joint diseases express high rate of incidence and the consequences of them are with social and economical significance. Affected are middle-aged individuals and the aggressive development of the disease leads to loss of working capacity and life-long invalidisation. During the last decade, TNFα inhibitors showed good therapeutic efficacy in help of some patients to cope with the chronic disease. That class of drugs improve clinical outcome in patients with rheumatoid or psoriatic arthritis, and with ankylosing spondylitis. The progression of the disease is decreased due to data from roentgenographic examination, and quality of life is improved. Reviewed are the effects of the new TNFα inhibitor Simponi (Golimumab) in patients with rheumatoid arthritis, psoriatic arthritis, and Bechterew's Disease (ankylosing spondylitis). The conclusion is that Simponi is a reliable alternative of the other TNFα inhibitors. It has a comparatively acceptable way of usage (subcutaneous application once monthly) offering an effective control of the disease.
Key words: TNF-α inhibitors, rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis

V. Milanova, A. Toncheva, N. Ivanovska and P. Dimitrova. IL-17 AND NEUTROPHILS IN THE PATHOLOGY OF RHEUMATOID ARTHRITIS
Summary. Rheumatoid arthritis (RA) is a chronic systemic inflammatory disease with unknown etiology which results in the destruction of cartilage and bone. All main immunological components play a fundamental role in the initiation, dissemination and perpetuation of autoimmune process in RA. The precise control of cellular and immunological events leading to bone destruction is complex. In the present review, new evidences about the role of neutrophils in the pathogenesis of RA will be discussed. Neutrophils can express membrane–bound RANKL, RANK and OPG that determines them as important factors in osteoclastogenesis. They also can participate in the unique regulatory loop for synthesis and release of pro-inflammatory IL-17. Disturbance of the production and regulation of IL-17 has been observed in RA.
Key words: neutrophils, IL-17, rheumatoid arthritis, RANKL, osteoclastogenesis
CONTENTS


REVIEWS

R. Shumnalieva, R. Rashkov and ZI. Kolarov. MicroRNA – new biomarkers in autoimmune rheumatic diseases ...................................................................................................................................................................................... 22

I. Sheytanov, R. Rashkov and Ts. Petranova. Simponi (Golimumab) – new possibility in treatment of inflammatory joint diseases ........................................................................................................................................................................... 32

V. Milanova, A. Toncheva, N. Ivanovska and P. Dimitrova. IL-17 and neutrophils in the pathology of rheumatoid arthritis ........................................................................................................................................................................... 37