

## البحث السادس

### Association Between miR-155, Its Polymorphism and Ischemia-Modified Albumin in Patients with Rheumatoid Arthritis

Rheumatoid arthritis (RA) is a chronic immune-mediated inflammatory disease. We aimed to measure the level of miR-155 and its genetic variant rs767649 in patients with RA and to evaluate their relationship with ischemia-modified albumin (IMA). The study was performed on 79 patients with RA (group I) and 78 healthy control participants (group II). Quantitative real-time polymerase chain reaction was used to assess the expression of serum miR-155 in addition to its functional variant rs767649. IMA levels were measured by enzyme-linked immunosorbent assay. Significant overexpression of miR-155 and higher levels of IMA were detected in patients with RA compared with those in controls ( $P < 0.0001$ ). The fold change in miR-155 was significantly positively associated with IMA ( $r = 0.362$ ,  $P = 0.001$ ) in patients with RA. Significant differences in the frequency of miR-155 (rs767649) genotypes and alleles were noted between patients with RA and controls. MiR-155 and IMA levels were significantly associated with the genotype distribution of miR-155 (rs767649) in patients with RA and were higher in patients with the TT genotype. MiR-155 and its functional variant rs767649 might play an important role in susceptibility to the increased risk of RA, stressing the role of miR155 as a therapeutic target in the treatment of RA. In addition, IMA levels were increased and correlated with miR-155 and its single nucleotide polymorphism rs767649 in Egyptian patients with RA.

Keywords: miR-155, polymorphism, ischemia-modified albumin, rheumatoid arthritis, micro-RNA, Egyptian patients