



بسم الله الرحمن الرحيم

السيد الأستاذ الدكتور/ رئيس قسم الميكروبيولوجى الطبيه والمناعة

تحية طيبة وبعد،

برجاء التكرم بالموافقة على مجمل أبحاثي العلمية لتقديمها للجنة العلمية الدائمة (الأساتذة

والأساتذة المساعدين) للترقية لدرجة "أستاذ مساعد"؛

Research no 5

-Association Between miR-155, Its Polymorphism and Ischemia

Modified Albumin in Patients with Rheumatoid Arthritis

By

1. Olfat Gamil Shaker. Biochemistry Department, Faculty of Medicine, Cairo .

.University

2. Omima Awis Abd-Aleem. Biochemistry Department, Faculty of Medicine, Fayoum .

.University

3. Nermen Ahmed Fouad. Rheumatology Department, Faculty of Medicine, Fayoum.

.University

4. Amany Mohamed El-Amen. Physiology Department, Faculty of Medicine, Fayoum.

.University

5. Tarek Ibrahim Ahmed. Internal Medicine Department, Faculty of Medicine. .

.Fayoum University

6. Enas Gomaa Ibrahim. Microbiology Department, Faculty of Medicine, Fayoum .

.University

7. Noha Abd-Elghafar. Clinical Pathology Department, Faculty of Medicine, Fayoum .

.University

.Type of research: alone international

.Published in: Cytokine research & Journal of Interferon, 2019

Abstract

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