



بسم الله الرحمن الرحيم

السيد الأستاذ الدكتور/ رئيس قسم الميكروبيولوجى الطبيه والمناعة

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

للترقية لدرجة أستاذ مساعد

Research no 1

:B- cell disturbance in rheumatoid arthritis patients

Comparative study between treated and non-treated patients

By

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**Abstract**

Alterations in B cell homeostasis and B cell activation markers, namely B-cell activating factor (BAFF) and a proliferation-inducing ligand (APRIL), are described in rheumatoid arthritis (RA) patients. In the current study, 60 RA patients (30 receiving non-biologic disease modifying anti-rheumatic drugs (DMARDs) but have not received prior biological treatment and 30 treatment-naïve patients), and 30 healthy controls were enrolled. B cell count was determined by flow cytometry using the CD19-PE Kit (Immunotech, France). BAFF and APRIL blood concentration was measured using commercially available ELISA kit (Bosterbio, USA). B cell count diminished in RA patients compared to controls (p-value <0.05), however it was more pronounced in treated patients. Circulating BAFF levels increased in RA compared to healthy controls (p-value <0.05) with more increase in patients on treatment. Circulating APRIL levels were significantly lower (p-value <0.05) in treatment naïve rheumatoid arthritis patients ( $343.9 \pm 21.7$ ) than the control group ( $371.5 \pm 24.3$ ). Significant decrease in B cell count and increase in BAFF level were observed in RA patients on non-biologic DMARDs. Conversely, APRIL levels were not affected by the treatment.