

# **Immunogenetic profile of Lupus nephritis among Systemic Lupus Erythematosus Jordanian patients**

By  
**Rawan Mohammad Bdour**

Supervisor  
**Dr. Sawsan Khdair**

**Al-Zaytoonah University of Jordan, 2021**

## **Abstract**

Systemic Lupus Erythematosus (SLE) is chronic inflammatory autoimmune disease, characterized by the formation of antinuclear antibodies and anti-double stranded DNA antibodies. Genetic factor plays an essential role in the pathogenesis of SLE, HLA genes namely HLA-class II is one of the most candidate genes that increase the susceptibility to SLE. The aim of this study was to investigate the frequency of HLA- DRB1 and HLA-DQB1 genes among Jordanian patient diagnosed with SLE and Lupus Nephritis (LN), in comparison to control healthy group using PCR-SSP technique. Our results showed a significant association of HLA-DRB1\*1101 ( $P=0.041$ ), HLA-DRB1\*0401 ( $P=0.03$ ), HLA-DRB1\*1102 ( $P=0.02$ ), HLA-DRB1\*0301 ( $P=0.005$ ), and HLA-DQB1\*0601 ( $P<0.001$ ) with SLE patients in comparison to control group. Furthermore, HLA-DRB1\*1501 ( $P=0.0121$  and  $P=0.023$ ) and HLA-DQB1\*0601 ( $P=0.026$ ,  $p<0.001$ ) were found to be significantly associated with LN patients in comparison to SLE Jordanian patients and control group respectively. Understanding the role of HLA gene polymorphisms may help in developing better treatment strategies for SLE, LN and the other complications of the disease. In addition, it may help in early diagnosis, prevention, intervention, and management of the diseases.

**Keywords:** HLA class II genes, Systemic Lupus Erythematosus, Jordan