



الدراسات العليا



# **LncRNA HOTAIR as a Novel Biomarker in Psoriasis**

## **Thesis**

Submitted for the Fulfillment of M.Sc. Degree  
in Medical Biochemistry & Molecular Biology

By

**Rana Raafat Mohammed Saad**

*M.B.B.Ch*

## **Supervisors**

**Prof. Dr. / Amr Aly Zahra**

*Professor and Head of Medical Biochemistry & Molecular Biology  
Department,*

*Faculty of Medicine –Fayoum University*

**Dr. / Hassan Salem Elsayed**

*Lecturer of Medical Biochemistry & Molecular Biology  
Faculty of Medicine –Fayoum University*

**Dr. / Basma Hamada Mohammed**

*Lecturer of Dermatology, STDs and Andrology  
Faculty of Medicine –Fayoum University*

**Faculty of Medicine**

**Fayoum University**

**2022**





كلية الطب



The aim of our study was to assess the expression of the lncRNA HOTAIR in the serum of psoriatic patients compared to healthy subjects. This study was conducted at Medical Biochemistry & Molecular Biology Department, Faculty of Medicine, Fayoum University. After the approval of the ethical committee, 60 subjects were recruited from the dermatology outpatient clinic, Fayoum University Hospital and were divided into 2 groups; 40 psoriatic patients and 20 matched normal subjects.

All participants in the study were submitted to an informed consent, detailed history taking, and clinical examination to evaluate the degree of severity of psoriasis according to PASI score. Serum samples were collected, and lncRNA HOTAIR was measured by real-time PCR, in addition to biochemical blood investigations for measurements of CBC, ALT, AST, creatinine, urea, cholesterol, triglycerides, and HDL.

Results revealed a statistically significant up-regulation in HOTAIR gene expression in the serum of psoriatic cases in comparison to control subjects with a p-value < 0.001.

The biochemical blood investigations showed a significantly higher neutrophil/lymphocyte ratio (NLR) and lipid profile in psoriatic patients compared to control subjects.

Study findings suggest the possible involvement of lnc-HOTAIR in the pathogenesis of the disease and that it can serve as a potential diagnostic marker.