



جامعة الإمارات العربية المتحدة  
United Arab Emirates University

The College of Graduate Studies and the College of Humanities and Social Sciences Cordially Invite You to a

**Master Thesis Defense**

Entitled

*EXPLORING GENETIC BIOMARKERS IN A DEPRESSED POPULATION IN THE UAE*

by

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Abstract

This study focuses on exploring the expression of genes associated with depressive and anxiety disorders (AD) among depressed individuals. Anxiety and depression are well known to co-occur with each other. Growing research in the field of genetics has indicated moderate familial aggregation for these disorders. The aim of this study is to analyze gene expression among a depressed population residing in the UAE. The genes chosen to be studied (*PPARGC1A*, *CAMKMT*, *HSD11B1*, *SLC6A4* and *MAOA*) have previously been linked to depression and anxiety in other populations. The study employed a case-control design, where gene expression in blood samples of the depressed group (29 participants) were compared with a control group (30 participants). Initial screening of depression levels for all participants was done using the Beck Depression Inventory (BDI) and Patient Health Questionnaire – 9 (PHQ9), and formal diagnosis for participants in the depression group was given by psychiatrists using ICD-10 criteria. Results indicate that the expression of *PPARGC1A* gene is significantly higher among the depressed group. Results indicate that the expression of *PPARGC1A* gene is significantly lower among the depressed group. These results indicate a novel association of *PPARGC1A* with depression and open several possibilities for further research to study its role as a protective factor against developing depression.

**Keywords:** Depression, anxiety, gene expression, *PPARGC1A*, *HSD11B1*, *CAMKMT*, *SLC6A4*.

